



GROUP 3 HERBICIDE

Harrier® 4L

HERBICIDE

A selective preemergence surface-applied herbicide for control of annual grasses and many broadleaf weeds in:

- Landscape Ornamentals
- Container Grown Ornamentals • Field Grown Ornamentals • Drainage Areas Under Shadehouse Benches • Ornamental Bulbs • Ground Covers/Perennials
- Christmas Tree Plantations • Non-bearing fruit and nut trees and non-bearing vineyards • Noncropland and Industrial Sites • Established Warm Season Turf (including Bahiagrass, Bermudagrass, Buffalograss, Centipedegrass, St. Augustinegrass and Zoysiagrass) • Tall Fescue (warm season areas)

ACTIVE INGREDIENT:	BY WT.
Oryzalin: 3,5-dinitro- <i>N</i> ⁴ <i>N</i> ⁴ -dipropylsulfanilamide	40.4%
OTHER INGREDIENTS	59.6%
TOTAL	100.0%

Contains 4.0 pounds of active ingredient per gallon.

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 the label, find someone to explain it to you in detail.)

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

See inside for additional Precautionary Statements and complete Directions for Use.

NET CONTENTS: 2.5 Gallons

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

EPA Reg. No. 70506-44
EPA Est. No. 70815-GA-002

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First Aid

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Rocky Mountain Poison Control Center at 1-866-673-6671 for emergency medical treatment information.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Conditions of Sale and Limitation of Warranty and Liability at end of label booklet. If terms are unacceptable, return at once unopened.**

For emergency medical assistance, call the Rocky Mountain Poison Control Center at 1-866-673-6671.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Shake Well Before Using.

Precautionary Statements Hazards to Humans and Domestic Animals **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 the label, find someone to explain it to you in detail.)

Causes Eye Irritation • Prolonged or Frequently Repeated Contact May Cause Allergic Reactions In Some Individuals

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Mixers and loaders must wear a chemical-resistant apron in addition to other PPE.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements

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

User Safety Recommendations

Users should:

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

Environmental Hazards

This pesticide 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. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spills.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

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

Workers may enter treated areas without required PPE during the reentry interval following 1/2 to 1 inch of rainfall or irrigation, if they are performing tasks that do not involve contact with the soil subsurface; otherwise, PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- 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.

Entry Restrictions for Non-WPS Uses: Keep all persons, children and pets out of treated area until sprays have dried.

Storage and Disposal

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

Pesticide Storage: Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose of as waste.

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

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

[for containers less than or equal to 5 gallons] Triple rinse as follows:

Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

[for containers greater than 5 gallons] Triple rinse or pressure rinse as follows:

Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Turn the container over on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after flow begins to drip.

[all sizes] Offer for recycling if available, 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.

General Information

Phoenix Harrier 4L herbicide is a preemergence surface-applied product for the control of many annual grasses and broadleaf weeds in ornamental plantings, bulbs, ground covers/perennials, established warm-season turfgrass, Christmas tree plantations, non-bearing trees and vines, and non-cropland and industrial sites.

Harrier 4L is orange in color and may cause temporary discoloration of sprayed surfaces. If this discoloration is undesirable, it may be altered by using a commercially available colorant such as Blazon or removed by spraying surface with water or washing with an industrial cleaner immediately after application. Harrier 4L may also be applied with mulch colorants, such as Mulch Magic or Nu-Mulch.

Treatment of Plant Species Not Listed on the Label for Harrier 4L

Users who wish to use Harrier 4L on plant species not recommended on this label may determine the suitability for use by treating a small number of such plants at a recommended rate. Prior to treatment of larger areas, the treated plants should be observed for any sign of herbicidal injury during 30-60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from use of Harrier 4L on plant species not recommended on this label.

Aerial Application: Do not aerially apply this product.

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

For orchard crops, including citrus, pome fruits, stone fruits, and tree nuts, apply product only as a strip treatment in the tree rows; do not apply to row middles or drive rows.

Do not graze or feed forage from treated areas to livestock.

Precaution: Avoid spray drift to non-target areas when applying Harrier 4L. Spray drift may result in reduced emergence of non-target plants adjacent to the treated area. Poor weed control may result if directions are not followed. Over-application may result in crop injury or excessive soil residue.

Application

Soil Preparation

Harrier 4L controls weeds growing from seed. Harrier 4L will not control emerged weeds. Harrier 4L does not control established weeds, weeds growing from stolons, rhizomes, or root pieces. Therefore, areas to be treated should be free of emerged weeds. Weed residues, prunings, and trash should be thoroughly mixed into the soil or removed prior to treatment. In field applications, the soil should be in good tilth and free of clods at the time of application.

Ground Application: Apply Harrier 4L as a directed spray to the soil surface or over the top of plants. Use only a properly calibrated, low-pressure, herbicide sprayer that will apply the spray uniformly. Use screens no finer than 50 mesh in nozzles and in-line strainers. Apply the appropriate rate of Harrier 4L, as outlined in "Crop Specific Use Directions" section of this label. In all cases, use sufficient water volume to obtain uniform coverage and deliver the desired rate of Harrier 4L to the treated area. The volume of water used is not critical, as long as the desired rate of Harrier 4L is delivered uniformly across the area treated. When calibrating, determine the volume of water delivered by the sprayer to a given area (1,000 sq ft, 1 acre, etc.). Then mix the desired rate of Harrier 4L in the amount of water required to cover the entire area to be treated. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to ensure proper calibration and uniform application. Maintain continuous agitation from mixing through application. Avoid spray pattern skips and overlaps that may result in incomplete coverage or over-application.

Hand Held or Backpack Sprayer Application: The amount of water used to apply Harrier 4L herbicide is not critical, but should be sufficient for uniform coverage of the target area. Calibrate by determining the volume of water required to treat 1000 square feet. Use this calibration volume to determine the amount of water and Harrier 4L herbicide needed to treat the target area (see the following calibration example). **Note:** Sprayer calibration (volume of spray needed to treat 1,000 square feet) will vary with each individual operator.

Steps in Calibration:

1. Mark an area of 1,000 square feet (i.e. 20 by 50 feet, or 25 by 40 feet).
2. Place the sprayer on a level surface and add water noting the final level of water in the spray tank.
3. Spray the marked area with a sufficient volume of water to provide uniform coverage. Refill the sprayer to the same level as before measuring the amount of water added. The measured water added to the sprayer is the volume needed to cover 1,000 square feet.
4. Determine the application rate (fl oz/1000 sq ft) for Harrier 4L from the "Crop Specific Use Directions" section of this label.
5. To each volume of water used, as measured in step 3, add the amount of Harrier 4L as determined in step 4.

Example: If the sprayer used 2 gallons of water to cover 1,000 square feet and the desired application rate of Harrier 4L is 3 fluid oz/1,000 square feet, then you would add 3 fluid ounces of Harrier 4L to every 2 gallons of water to be used.

Mixing Directions

Shake Well Before Using

Precaution: Do not allow the spray mixture to siphon back into water source.

Harrier 4L - Alone

Make sure spray tank is clean and use only clean water. Fill spray tank 1/2 - 3/4 full. Start agitation and add the required amount of Harrier 4L. Continue agitation and finish filling the spray tank. Maintain continuous agitation until application is completed.

Harrier 4L - Tank Mix Combinations

Prior to mixing, read and carefully follow all label instructions and precautions for each product added to the tank mixture. Vigorous, continuous agitation is required for all tank mixes of Harrier 4L. Sparger pipe agitators generally provide the best agitation in spray tanks.

Mixing Order: Fill the tank 3/4 full with clean water. Start agitation and add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order: dry flowables (DF); wettable powders (WP); Harrier 4L and other aqueous suspensions (AS), flowables (F), and liquids (L); solutions (S); and emulsifiable concentrates (EC).

Continue agitation and finish filling the spray tank with clean water. Maintain agitation until application is completed. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be completely resuspended before spraying is continued. A sparger agitator is particularly useful for this purpose.

Premixing: When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by premixing with water (slurrying). Adding the slurried material to the spray tank through a wetting screen of 20 or 35 mesh will help assure good initial dispersion.

Equipment Cleaning

If a buildup of material occurs on the walls of the spray tank, it should be removed between fillings by washing with soap and water and rinsing thoroughly. Tanks, lines, screens, and nozzles should be cleaned thoroughly after each use.

Activation and Cultivation

Harrier 4L will remain stable on the soil surface up to 21 days following application. In the absence of timely rainfall, irrigation can be used to activate Harrier 4L. A minimum of one-half (1/2) inch of rain or its equivalent in sprinkler irrigation is necessary to activate Harrier 4L. If weeds begin to emerge due to lack of rainfall or irrigation, shallow cultivate 1-2 inches deep to destroy existing weeds, or remove them by hand. Shallow cultivation to a depth of 1-2 inches will enhance herbicidal effectiveness. Erratic weed control may result if Harrier 4L is not activated by rainfall, irrigation, or cultivation within 21 days of application, or existing weeds have not been removed.

Weeds Controlled by Harrier 4L

Annual Grasses:		Broadleaf Weeds:	
Common Name	Scientific Name	Common Name	Scientific Name
barley, little	<i>Hordeum pusillum</i>	bittercress	<i>Cardamine oligosperma</i>
barnyardgrass	<i>Echinochloa crus-galli</i>	carpetweed	<i>Mollugo verticillata</i>
(watergrass)		chickweed, common	<i>Stellaria media</i>
crabgrass, large	<i>Digitaria sanguinalis</i>	fiddleneck, coast	<i>Amsinckia intermedia</i>
crabgrass, smooth	<i>Digitaria ischaemum</i>	filaree, redstem	<i>Erodium cicutarium</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>	filaree, whitestem	<i>Erodium moschatum</i>
cupgrass, southwestern	<i>Eriochloa gracilis</i>	groundsel, common	<i>Senecio vulgaris</i>
foxtail, bristlegrass	<i>Setaria magna</i>	henbit	<i>Lamium amplexicaule</i>
foxtail, giant	<i>Setaria faberi</i>	knotweed, prostrate	<i>Polygonum aviculare</i>
foxtail, green	<i>Setaria viridis</i>	lambsquarters	<i>Chenopodium album</i>
(pigeongrass)		pigweed, prostrate	<i>Amaranthus blitoides</i>
foxtail, robust	<i>Setaria robusta</i>	pigweed, redroot	<i>Amaranthus retroflexus</i>
foxtail, yellow	<i>Setaria glauca</i>	pigweed, spring	<i>Amaranthus hybridus</i>
goosegrass	<i>Eleusine indica</i>	pigweed, tumble	<i>Amaranthus albus</i>
(silver crabgrass)		puncturevine	<i>Tribulus terrestris</i>
Johnsongrass	<i>Sorghum halepense</i>	purslane, common	<i>Portulaca oleracea</i>
(seedling only)		pusley, Florida	<i>Richardia scabra</i>
jungerice	<i>Echinochloa colonum</i>	(Florida purslane)	
lovegrass, Mexican	<i>Eragrostis mexicana</i>	(Mexican clover)	
lovegrass, orcutt	<i>Eragrostis orcuttiana</i>	(pusley)	
oat, wild	<i>Avena fatua</i>	rocket, London	<i>Sisymbrium irio</i>
panicum, browntop	<i>Panicum fasciculatum</i>	rockpurslane, desert	<i>Calandrinia ciliata</i>
panicum, fall	<i>Panicum dichotomiflorum</i>	shepherdspurse	<i>Capsella bursa-pastoris</i>
(spreading panicgrass)		spurge, prostrate	<i>Euphorbia humistrata</i>
panicum, Texas	<i>Panicum texanum</i>	woodsorrel, yellow	<i>Oxalis stricta</i>
(buffalograss)			
(Coloradograss)			
ryegrass, Italian	<i>Cenchrus incertus</i>		
signalgrass (Brachiaria)	<i>Brachiaria</i> spp.		
sprangletop, red	<i>Leptochloa filiformis</i>		
witchgrass	<i>Panicum capillare</i>		

Weeds Suppressed by Harrier 4L

Control of the following weeds may be erratic, ranging from poor to excellent, depending upon soil temperature, time of germination, depth of seed in the soil, and amount and timing of soil moisture:

Common Name	Scientific Name	Common Name	Scientific Name
horseweed	<i>Conyza canadensis</i>	nightshade, black	<i>Solanum nigrum</i>
ladysthumb	<i>Polygonum persicaria</i>	ragweed, common	<i>Ambrosia artemisiifolia</i>
lettuce, prickly	<i>Lactuca serriola</i>	smartweed	<i>Polygonum pensylvanicum</i>
mallow, common	<i>Malva neglecta</i>	sowthistle, annual	<i>Sonchus oleraceus</i>
milkweed, climbing	<i>Sarcostemma cynanchoides</i>	spurge, spotted	<i>Euphorbia maculata</i>
morningglory	<i>Ipomoea</i> spp.	teaweed (prickly sida)	<i>Sida spinosa</i>
mustard, black	<i>Brassica nigra</i>	velvetleaf	<i>Abutilon theophrasti</i>
mustard, wild	<i>Brassica kaber</i>	wheat, volunteer	<i>Triticum</i> spp.

Crop Specific Use Directions

Ornamental Plantings

Harrier 4L is recommended for use on certain landscape container- and field-grown established ornamental plants including: trees, shrubs, ground covers/perennials, flowers, non-bearing fruit and nut trees, non-bearing vineyards; and in the production of ornamental bulbs (See "Ornamental Bulbs" section for special use directions).

Broadcast Application Rates

Labeled Use Site	Length of Control	Harrier 4L		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre)
		(qt/acre)	(fl oz/1000 sq ft)		
Landscape Ornamentals	2 - 4 months	2	1.5	2	8
	3 - 6 months	3	2.2	4	12
	4 - 8 months	4	3	4	12
Field-grown and container-grown ornamentals	2 - 4 months	2	1.5	3	8
	3 - 6 months	3	2.2	3	9
	4 - 8 months	4	3	3	12

Tank Mix Combinations

Tank mix combinations of Harrier 4L plus glyphosate, and many other labeled herbicides may be used to control undesirable vegetation in ornamental areas. Harrier 4L may also be tank mixed with Gallery herbicide and applied preemergence to broaden the spectrum of broadleaf weed control in ornamental areas. Applied as directed, these tank mixes of Harrier 4L will provide control of susceptible weed species listed on the respective labels. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

Harrier 4L Plus glyphosate: Tank mix combinations of Harrier 4L plus glyphosate are recommended to control existing undesirable vegetation. Applied as directed, Harrier 4L plus glyphosate will provide postemergence control of susceptible weed species listed on the label for glyphosate and residual preemergence control of susceptible weed species listed on the label for Harrier 4L. Refer to the label for glyphosate for specific use directions, precautions, and limitations before use.

Precautions: Do not apply sprays containing glyphosate over the top of ornamental plants.

Extreme care must be exercised to prevent sprays containing glyphosate from coming in contact with foliage and stems of turfgrasses, trees, shrubs, or other desirable vegetation since severe damage or death may result. If spraying with glyphosate in areas adjacent to desirable plants, use a shield to prevent spray from contacting foliage and stems of desirable plants.

Special Use Precautions:

Apply only to established plants that have been transplanted into their growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

Rooted liners should be removed from their original growing containers and placed in new containers at least two weeks prior to treatment or injury may occur.

To avoid possible injury, do not apply Harrier 4L to:

- Nursery, forest, or Christmas tree: seedling beds, cutting beds, or transplant beds.
- Unrooted liners or cuttings that have been planted in pots for the first time.
- Pots less than four inches wide.
- Ground covers until they are established and well rooted.
- Ornamental plantings where there is likelihood of runoff onto lawn areas.
- Areas containing dichondra or cool season turfgrass species.

On container grown ornamentals where weed seed germination continues for extended periods of time, do not make repeat applications of Harrier 4L for at least 90 days or crop injury may occur.

Applications of Harrier 4L over the top of plants with newly forming buds may cause injury. In this situation a directed spray is recommended.

For soils treated with Harrier 4L during the previous season, plant only the ornamental species listed on this label or injury may occur.

Ice Plant: When establishing unrooted ice plant on coarse-textured soils in landscape plantings, do not exceed the 2 quart per acre rate of Harrier 4L or crop injury may occur.

Note: Injury on the following plant species has been observed following applications of Harrier 4L and use is not recommended:

Deutzia gracilis (slender deutzia)
Pseudotsuga menziesii (Douglas-fir)
Thuja occidentalis 'Techny' (Techny arborvitae)
Tsuga canadensis (eastern hemlock)
Begonia spp. (begonia)
Coleus hybridus (coleus)

Harrier 4L May be Used on the Following Established Plant Species: (Note: Limitations on recommended treatment methods).

Trees

Recommended Treatment Method F = Field Grown			Recommended Treatment Method F = Field Grown		
Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown
<i>Abies balsamea</i>	Fir, balsam	F	<i>Heteromeles arbutiflora</i>	Toyon	F
<i>Abies concolor</i>	Fir, white	F	<i>Juniperus virginiana</i>	Redcedar, Eastern	F
<i>Abies fraseri</i>	Fir, fraser	F	<i>Koelreuteria paniculata</i>	Goldenrain tree	F
<i>Abies grandis</i>	Fir, grand	F	<i>Liquidambar styraciflua</i>	Sweetgum, American	C,F
<i>Abies veitchi</i>	Fir, Veitch	F	<i>Malus</i> spp.	Crabapple	F
<i>Abies lasiocarpa</i>	Fir, alpine	F	<i>Magnolia</i> spp.	Magnolia	F
<i>Abutilon hybridum</i>	Albus-flowering maple	F	<i>Morus alba</i>	White mulberry	F
	Luteus-flowering maple	F	<i>Picea abies</i>	Pendula-weeping Norway spruce	F
	Roseus-flowering maple	F		Repens-spreading Norway spruce	F
	Tangerine-flowering maple	F		Spruce, Norway	F
	Vesuvius red-flowering maple	F	<i>Picea engelmanni</i>	Spruce, Englemann	F
<i>Acer ginnala</i>	Flame maple	F	<i>Picea glauca</i>	Spruce, white	F
<i>Acer rubrum</i>	Red sunset maple	F		Conica-dwarf Alberta spruce	F
<i>Acer saccharinum</i>	Silver maple	F	<i>Picea glauca conica</i>	Dwarf Alberta spruce	F
<i>Acer</i> spp.	Maple	F	<i>Picea mariana</i>	Spruce, black	F
<i>Alsophila australis</i>	Australian tree fern	C,F	<i>Picea pungens</i>	Glaucous-Colorado blue spruce	F
<i>Arecastrum romanzoffianum</i>	Queen palm	F		Hoopsii-Hoop's blue spruce	F
<i>Betula nigra</i>	Birch, river	F		Koster-Koster blue spruce	F
<i>Betula papyrifera</i>	Paper birch	F		Spruce, Colorado	C,F
<i>Betula pendula</i>	Birch, white	F	<i>Pinus aristata</i>	Bristlecone pine	F
<i>Bucida buceras</i>	Black olive	F	<i>Pinus canariensis</i>	Canary Island pine	F
<i>Carya</i> spp.	Pecan, ornamental	C,F	<i>Pinus contorta</i>	Shore pine, beach pine	F
<i>Cedrus, atlantica</i>	Atlas cedar	C,F	<i>Pinus eldarica</i>	Eldarica pine	F
<i>Cedrus deodara</i>	Deodar cedar	C,F	<i>Pinus halepensis</i>	Aleppo pine	C,F
<i>Ceratonia siliqua</i>	Carob	F	<i>Pinus radiata</i>	Monterey pine	F
<i>Cercidium floridum</i>	Palo Verde, blue	F	<i>Pinus</i> spp.	Pine	C,F
<i>Cercis canadensis</i>	Redbud	C,F	<i>Pinus strobus</i>	Eastern white pine	F
<i>Chamaecyparis lawsoniana</i>	Falsecypress, Lawson	F	<i>Pinus sylvestris</i>	Scotch pine	F
<i>Chamaecyparis obtusa</i>	Filicoides-fernspray cypress	F	<i>Pinus thunbergiana</i>	Japanese black pine	F
	Gracilis-slender Hinoki cypress	F	<i>Platanus occidentalis</i>	American sycamore	F
<i>Chamaecyparis pisifera</i>	Sawara-false cypress	F	<i>Platanus racemosa</i>	California sycamore	F
	Squarrosa-moss cypress	F	<i>Podocarpus</i> spp.	Podocarpus	F
<i>Chamaedorea cataractarum</i>	Cat Palm	F	<i>Populus deltoides</i>	Cottonwood	F
<i>Chamaedorea costaricana</i>	Palm	F		Cottonwood (grown for pulp)	F
<i>Chamaedorea elegans</i>	Parlor palm	F	<i>Prunus caroliniana</i>	Laurelcherry, Carolina	F
<i>Citrus</i> spp.	Citrus, ornamental	C,F	<i>Prunus glandulosa</i>	Dwarf flowering almond	C,F
<i>Cornus florida</i>	Dogwood, flowering	F	<i>Prunus laurocerasus</i>	Laurelcherry, English	F
<i>Cryptomeria japonica</i>	Cryptomeria, Japanese	C,F	<i>Prunus mahaleb</i>	Cherry, Mahaleb	F
<i>Cupaniopsis anacardioides</i>	Carrot wood	F	<i>Prunus yedoensis</i>	Yoshino flowering cherry	F
<i>Cupressus arizonica</i>	Cypress, Arizona	C,F	<i>Pyrus communis</i>	Pear	F
<i>(glabra)</i>			<i>Quercus palustris</i>	Pin oak	F
<i>Cupressus glabra</i>	Arizona cypress	C,F	<i>Quercus phellos</i>	Willow oak	F
<i>Cupressocyparis leylandii</i>	Leyland cypress	C,F	<i>Quercus rubra</i>	Red oak	C,F
<i>Cupressus sempervirens</i>	Cypress, Italian	C,F	<i>Quercus</i> spp.	Oak	C,F
<i>Dicksonia antarctica</i>	Tasmanian tree fern	C,F	<i>Salix babylonica</i>	Babylon weeping willow	F
<i>Elaeagnus angustifolia</i>	Russian olive	C,F		Corkscrew willow	F
<i>Eucalyptus camaldulensis</i>	Red gum eucalyptus	F	<i>Schinus molle</i>	California pepper tree	F
<i>Eucalyptus cinerea</i>	Eucalyptus, mealy	F	<i>Sequoia sempervirens</i>	Redwood, coast	F
	Silver dollar eucalyptus	F	<i>Sequoiadendron giganteum</i>	Giant sequoia	F
<i>Eucalyptus nicholii</i>	Eucalyptus, narrow-leaved	F	<i>Swietenia mahogany</i>	Mahogany	F
<i>Eucalyptus sideroxylon</i>	Eucalyptus, red ironbark	F	<i>Tabebuia caraiba</i>	Yellow tab	F
<i>Ficus benjamina</i>	Ficus	F	<i>Tilia cordata</i>	Linden, little leaf	C,F
<i>Fraxinus</i> spp.	Ash	F	<i>Ulmus parvifolia</i>	Chinese elm	F
<i>Ginkgo biloba</i>	Ginkgo (Maidenhair tree)	C,F	<i>Umbellularia californica</i>	California laurel	F
<i>Gleditsia triacanthos</i>	Honey locust	F	<i>Washingtonia robusta</i>	Mexican fan palm	F

Shrubs

			Recommended Treatment Method			Recommended Treatment Method		
			F = Field Grown			F = Field Grown		
Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown
<i>Abelia grandiflora</i>	Glossy abelia	F	<i>Euonymus fortunei</i>	Canadale gold euonymus	C,F			
<i>Acacia redolens</i>	Acacia, prostrate	F		Emerald'n gold euonymus	C,F			
<i>Agave americana</i>	Century plant	F		Euonymus, stringybark	C,F			
<i>Agave macroculmis</i>	Agave	F		Wintercreeper	C,F			
<i>Anisodonte hypomandarum</i>	Cape mallow	C,F	<i>Euonymus japonica</i>	Euonymus, evergreen	C,F			
<i>Arctostaphylos stanfordiana</i>	Manzanita, Stanford	F		Silver king euonymus	F			
<i>Astilbe chinensis</i>	Astilbe/false spirea	C,F	<i>Euonymus kiatschovica</i>	Spreading euonymus	F			
<i>Baccharis pilularis</i>	Coyotebush	F	<i>Euonymus vegetus</i>	Bigleaf wintercreeper	C,F			
<i>Berberis thunbergii</i>	Aurea-golden Japanese barberry	C,F	<i>Fatshedera lizei</i>	Fatshedera	C,F			
	Crimson pygmy barberry	C,F	<i>Fatsia japonica</i>	Japanese aralia	C,F			
	Atropurea-redleaf Japanese barberry	C,F	<i>Felicia amelloides</i>	Blue marguerite	C,F			
	Barberry, Japanese	C,F	<i>Forsythia intermedia</i>	Forsythia, border	F			
<i>Bougainvillea</i> spp.	Barbara Karst	F	<i>Gardenia jasminoides</i>	Gardenia	C,F			
	California gold	F	<i>Genista pilosa</i>	Woadwaxen	F			
	Scarlet O'Hara	F	<i>Hibiscus rosa-sinensis</i>	Ross Estey-hibiscus	F			
	Texas dawn	F		Hibiscus, Chinese	F			
<i>Buddleia davidii</i>	Butterfly bush	C,F	<i>Hibiscus syriacus</i>	Rose of Sharon, Red Bird	F			
<i>Buxus microphylla</i>	Littleleaf boxwood	F		Rose of Sharon, Red Heart	F			
<i>Buxus microphylla japonica</i>	Boxwood, Japanese	C,F		Rose of Sharon, Woodbridge	F			
<i>Buxus sempervirens</i>	Boxwood, common	C,F		Rose of Sharon, (Shrubalthea)	F			
<i>Callistemon citrinus</i>	Bottlebrush, lemon	C,F	<i>Hydrangea macrophylla</i>	Hydrangea, French	C,F			
<i>Cassia artemisioides</i>	Cassia, feathery	F	<i>Hydrangea quercifolia</i>	Hydrangea, Oakleaf	C,F			
<i>Ceanothus americanus</i>	Jerseytea, redroot	C,F	<i>Ilex aquifolium</i>	Balkans holly	F			
<i>Ceanothus</i> spp.	Wild lilac	C,F		Gold coast holly	F			
<i>Chaenomeles japonica</i>	Flowering quince	C,F		Holly, English	F			
<i>Chamaecyparis obtusa</i>	Kosteri cypress	F	<i>Ilex aquipernyi</i>	San Jose holly	C,F			
	Nana-dwarf Hinoki cypress	F	<i>Ilex cornuta</i>	Dwarf Burford holly	C,F			
	Torulosa cypress	F		Holly, Chinese	C,F			
<i>Chamaecyparis pisifera</i>	Squarrosa Minima cypress	F	<i>Ilex crenata</i>	Compacta-dwarf Japanese holly	C,F			
<i>Chamaecyparis pisifera</i> spp.	Filifera-thread cypress	F		Convexa holly	C,F			
<i>Chrysalidocarpus lutescens</i>	Areca palm	F		Helleri-Heller's Japanese holly	C,F			
<i>Clethra</i>	Summersweet	C,F		Holly, Japanese	C,F			
<i>Cleyera japonica</i>	Cleyera, Japanese	C,F	<i>Ilex glabra</i>	Nordica-inkberry holly	F			
<i>Coleonema pulchrum</i>	Pink breath of heaven	C,F	<i>Ilex meserveae</i>	Blue boy holly	F			
<i>Cornus alba</i>	Sibirica-Siberian dogwood	F		Blue girl holly	F			
<i>Cornus kousa</i>	Dogwood, kousa	C,F		Ebony magic holly	F			
<i>Cornus stolonifera</i>	Flaviramea-yellowtwig dogwood	F	<i>Ilex vomitoria</i>	Nana-dwarf yaupon holly	C,F			
<i>Cotoneaster adpressus</i>	Praecox-early cotoneaster	F		Pendula-weeping yaupon holly	C,F			
<i>Cotoneaster apiculatus</i>	Cotoneaster, cranberry	C,F		yaupon holly	C,F			
<i>Cotoneaster buxifolius</i>	Cotoneaster, brightbead	F	<i>Juniperus chinensis</i>	Media-old gold juniper	C,F			
<i>Cotoneaster congestus</i>	Cotoneaster, Pyrenees	F	<i>Juniperus conferta</i>	Emerald sea shore juniper	F			
<i>Cotoneaster dammeri</i>	Cotoneaster, bearberry	C,F	<i>Juniperus horizontalis</i>	Huntington blue juniper	C,F			
<i>Cotoneaster himalayan</i>	Himalayan cotoneaster	F		Wiltonii-blue carpet juniper	C,F			
<i>Cotoneaster horizontalis</i>	Cotoneaster, rock	C,F	<i>Juniperus procumbens</i>	Nana-dwarf Japaneses garden juniper	C,F			
<i>Cotoneaster lacteus</i>	Cotoneaster, parney	C,F	<i>Juniperus prostrata</i>	Prostrata juniper	C,F			
<i>Cotoneaster microphyllus</i>	Cotoneaster, rockspray	F	<i>Juniperus sabina</i>	Broadmoor juniper	F			
<i>Cotoneaster salicifolia</i>	Willowleaf cotoneaster	C,F		Foemina-Hicks juniper	F			
<i>Cytisus praecox</i>	Hollandia-warminster broom	F		Tamariscifolia-Tam juniper	F			
<i>Cytisus scoparius</i>	Lena-Scotch broom	F	<i>Juniperus scopulorum</i>	Emerald green juniper	F			
<i>Dasyllirion wheeleri</i>	Sotol, desert spoon	F	<i>Juniperus</i> spp.	Juniper	C,F			
<i>Deutzia crenata</i>	Nakiana-dwarf deutzia	F	<i>Juniperus squamata</i>	Blue juniper	F			
<i>Dodonaea viscosa</i>	Hopseedbush, clammy	F		Blue star juniper	F			
	Hopseed bush	F		Parsonii juniper	F			
<i>Escallonia exoniensis</i>	Escallonia	C,F	<i>Justicia brandegeana</i>	Shrimp plant	C,F			
<i>Euonymus alata</i>	Euonymus, winged	F	<i>Justicia spicigera</i>	Honeysuckle, Mexican	F			

Shrubs (Cont.)

Recommended Treatment Method F = Field Grown			Recommended Treatment Method F = Field Grown		
Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown
<i>Kalmia latifolia</i>	Laurel, mountain	F	<i>Pyracantha coccinea</i>	Firethorn, scarlet	C,F
<i>Lagerstroemia indica</i>	Crape myrtle	C,F	<i>Pyracantha fortuneana</i>	Lolendei Monrovia pyracantha	C,F
<i>Lavandula angustifolia</i>	English lavender	C,F	<i>Pyracantha fortuneana</i>	Monon pyracantha	C,F
<i>Leucothoe axillaris</i>	Leucothoe, coast	F		Red elf hybrid pyracantha	C,F
<i>Leucothoe fontanesiana</i>	Leucothoe, drooping	F		Rutgers hybrid pyracantha	C,F
<i>Ligustrum amurense</i>	Privet, amur	C,F		Santa Cruz pyracantha	C,F
<i>Ligustrum japonicum</i>	Privet, Japanese	C,F		Victory pyracantha	C,F
	yellow tip ligustrum	C,F	<i>Pyracantha skoidzumi</i>	Firethorn, formosa	C,F
<i>Ligustrum lucidum</i>	Privet, glossy	C,F	<i>Pyracantha, fortuneana</i>	Firethorn	C,F
<i>Ligustrum ovalifolium</i>	California privet	F	<i>Raphiolepis indica</i>	Enchantress-Moness raphiolepis	F
<i>Ligustrum texanum</i>	Howardi privet	F		Raphiolepis (India hawthorn)	C,F
	Wax leaf privet	F		Springtime-Monme raphiolepis	F
<i>Ligustrum vicaryi</i>	Privet, golden	C,F	<i>Raphiolepis ovata</i>	Roundleaf raphiolepis	F
	Vicary golden privet	C,F	<i>Rhipsalidopsis gaertneri</i>	Eastercactus	C,F
<i>Livistona chinensis</i>	Chinese fountain palm	F	<i>Rhododendron calendulaceum</i>	Flame azalea	F
<i>Lonicera fragrantissima</i>	Winter honeysuckle	F	<i>Rhododendron</i>	Butterfly rhododendron	F
<i>Lonicera periclymenum</i>	Flowering woodbine	F	<i>campylocarpum</i>		
	Serotina woodbine	F	<i>Rhododendron</i>	PJM rhododendron	F
<i>Lonicera sempervirens</i>	Trumpet honeysuckle	F	<i>carolinianum x daurium</i>		
<i>Lorpetalum chinense</i>	(No common name)	C,F	<i>Rhododendron catawbiense</i>	Catawba album rhododendron	C,F
<i>Mahonia aquifolium</i>	Oregon grape	F		Catawba rhododendron	C,F
<i>Myoporum parvifolium</i>	Myoporum, prostrate	F		Lord Roberts rhododendron	C,F
<i>Myrtus communis</i>	Myrtle, true	C,F		Rocket rhododendron	C,F
<i>Nandina domestica</i>	Compacta-dwarf heavenly bamboo	C,F	<i>Rhododendron</i>	Elizabeth rhododendron	F
	Harbour dwarf-heavenly bamboo	C,F	<i>forrestii x griersonianum</i>		
	Heavenly bamboo (Nandina)	C,F	<i>Rhododendron hybrid</i> spp.	America rhododendron	F
	Nana compacta-heavenly bamboo	C,F		English Roseum rhododendron	F
	Nana purpurea-heavenly bamboo	C,F		Nova Zembla rhododendron	F
	Woods dwarf-heavenly bamboo	C,F		Scintillation rhododendron	F
<i>Nerium oleander</i>	Hardy red oleander	C,F	<i>Rhododendron impeditum</i>	Rhododendron	F
	Oleander	C,F	<i>Rhododendron indica</i>	Formosa azalea	C,F
	Ruby lace oleander	C,F		Waucabusa azalea	C,F
<i>Osmanthus heterophyllus</i>	Osmanthus, holly-leaf	F	<i>Rhododendron kerume</i>	Coral bells azalea	C,F
<i>Pachysandra terminalis</i>	Japanese spurge	C,F		Hino crimson azalea	C,F
<i>Philadelphus</i> spp.	Mockorange	C,F		Hino pink azalea	C,F
<i>Phoenix roebelenii</i>	Pigmy date palm	F		Snow azalea	C,F
<i>Photinia fraseri</i>	Fraser's photinia	C,F	<i>Rhododendron maximum</i>	Rhodie max (rosebay)	C,F
	Photinia	C,F	<i>Rhododendron mucronulatum</i>	Rhododendron	F
<i>Pieris japonica</i>	Lily-of-the-valley	F	<i>Rhododendron satuksi</i>	Gumpo pink azalea	F
	Snowdrift lily-of-the-valley	F		Higasa azalea	F
	Temple bells lily-of-the-valley	F	<i>Rhododendron</i> spp.	Azalea	C,F
	Valley rose lily-of-the-valley	F		Rhododendron	C,F
	Andromeda	C,F	<i>Rhododendron</i> spp. <i>hybrids</i>	Carror azalea	C,F
<i>Pittosporum</i> spp.	Pittosporum	C,F		Girard Roberta azalea	F
<i>Pittosporum tobira</i>	Green pittosporum	F		Golden flare exbury azalea	F
	Japanese pittosporum	F	<i>Rhus lancea</i>	Sumac, African	C,F
	Tobira	F	<i>Rosa rugosa</i>	Ramanas rose	F
	Wheeler's dwarf pittosporum	F	<i>Rosmarinus officinalis</i>	Rosemary	F
<i>Platycladus orientalis</i>	Arborvitae, Oriental	C,F	<i>Senecio cineraria</i>	Dusty miller	C,F
<i>Plumbago ariculata</i>	Blue cape plumbago	F	<i>Spiraea vanhouttei</i>	Bridal wreath	F
<i>Podocarpus macrophyllus</i>	Yewpine	C,F	<i>Syringa vulgaris</i>	Lilac, common	C,F
<i>Potentilla fragiformis</i>	Cinquefoil	F	<i>Syzygium paniculata</i>	Brush cherry	C,F
<i>Potentilla fruticosa</i>	Cinquefoil	C,F	<i>Taxus cuspidata</i>	Yew, Japanese	F
<i>Protea neriifolia</i>	Protea	F	<i>Taxus media</i>	Yew	F

Shrubs (Cont.)

			Recommended Treatment Method			Recommended Treatment Method		
			F = Field Grown			F = Field Grown		
Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown
<i>Thuja occidentalis</i>	Arborvitae, American	C,F	<i>Viburnum opulus sterile</i>	Common snowball viburnum	F			
	Emerald arborvitae	F	<i>Viburnum plicatum</i>	Doublefile viburnum	F			
	Globosa-globe arborvitae	F	<i>tomentosum</i>					
	Little giant-dwarf arborvitae	F	<i>Viburnum setigerum</i>	Tea viburnum	F			
	Nigra-dark American arborvitae	F	<i>Viburnum suspensum</i>	Viburnum, Sandankwa	F			
	Pyramidalis arborvitae	F	<i>Viburnum tinus</i>	Viburnum, Laurustinus	C,F			
	Rheingold arborvitae	F		Compactum-spring bouquet viburnum	F			
	Woodwardii arborvitae	F	<i>Viburnum tinus compactum</i>	Spring bouquet viburnum	F			
<i>Thuja orientalis</i>	Aureus nana-dwarf golden arborvitae	F	<i>Viburnum trilobum</i>	Dwarf cranberry bush	F			
	Minima glauca-dwarf arborvitae	F	<i>compactum</i>					
<i>Thuja plicata</i>	Red Cedar, Western	F	<i>Viburnum x pragense</i>	Viburnum	F			
<i>Trachelospermum jasminoides</i>	Star jasmine, Chinese	F	<i>Weigela florida</i>	Bristol ruby weigela	F			
<i>Veitchia merrilli</i>	Christmas palm	F		Java red weigela	F			
<i>Viburnum carlesii</i>	Koreanspice viburnum	C,F		Minuet weigela	F			
<i>Viburnum davidii</i>	David viburnum	F		Weigela, oldfashioned	F			
<i>Viburnum japonicum</i>	Viburnum	F	<i>Xylosma congestum</i>	Xylosma	F			
<i>Viburnum judd</i>	Viburnum	C,F	<i>Yucca elata</i>	Yucca, soaptree	C,F			
(V X Judii)			<i>Yucca recurvifolia</i>	Yucca, pendulous	F			

Groundcovers/Perennials

			Recommended Treatment Method			Recommended Treatment Method		
			F = Field Grown			F = Field Grown		
Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown	Scientific Name	Common Name	C = Container Grown
<i>Agapanthus africanus</i>	Lily-of-the-Nile	C,F	<i>Heuchera micrantha</i>	Coral bells	C,F			
<i>Ajuga</i> spp.	Carpet bugle	F	<i>Hypericum</i> spp.	St. Johnswort	C,F			
<i>Arctotheca calendula</i>	Cape weed	F	<i>Iberis sempervirens</i>	Evergreen candytuft	C,F			
<i>Asparagus retrofractus</i>	(No common name)	C,F	<i>Lampranthus spectabilis</i>	Trailing iceplant	F			
<i>Asparagus varieegata</i>	Tree fern	C,F	<i>Leptospermum scaparium</i>	New Zealand teatree/Manuka	C,F			
<i>Aster novae-angliae</i>	New England aster	C,F	<i>Limonium perezii</i>	Statice/Sea lavender	C,F			
<i>Aster novi-belgii</i>	New York aster	C,F	<i>Liriope gigantea</i>	White lily turf	F			
<i>Athyrium nipponicum</i>	Japanese painter fern	C,F	<i>Liriope muscari</i>	Lilac beauty lily turf	C,F			
<i>Brassica oleracea</i>	Wild cabbage	C,F		Majestic lily turf	C,F			
<i>Callistepheus chinensis</i>	China aster	C,F		Monroe white lily turf	C,F			
<i>Campanula elatines</i>	Bellflower	C,F		Silvery sunproof lily turf	C,F			
<i>Carpobrotus edulis</i>	Ice plant, largeleaf (see label)	F		Variegated liriope lily turf	C,F			
<i>Clytostoma callistegioides</i>	Trumpet vine, violet	C,F		Big blue lily turf	C,F			
<i>Cortaderia selloana</i>	Pampas grass	F	<i>Lobelia erinus</i>	Edging lobelia	C,F			
<i>Cuphea hyssopifolia</i>	False Mexican heather	C,F	<i>Lonicera japonica</i>	Honeysuckle, Japanese	F			
<i>Delosperma alba</i>	White iceplant	F	<i>Mesembryanthemum crystallinum</i>	Ice plant (see label)	F			
<i>Dietes vegeta</i>	Fortnight lily	C,F	<i>Monarda didyma</i>	Bee Balm	C,F			
<i>Digitalis mertonensis</i>	Foxglove	C,F	<i>Ophiopogon japonicus</i>	Mondo grass	F			
<i>Doronicum cordatum</i>	Leopard's bane	C,F	<i>Osteospermum fruticosum</i>	Daisy, trailing African	F			
<i>Drosanthemum floribundum</i>	Trailing rosea iceplant	F	<i>Pachysandra terminalis</i>	Japanese spurge	F			
<i>Erianthus ravennae</i>	Hardy pampus grass	C,F	<i>Pennisetum setaceum</i>	Fountaingrass	C,F			
<i>Festuca ovina glauca</i>	Blue fescue	F	<i>Polystichum polyblepharum</i>	Tassel fern	C,F			
<i>Gaillardia grandiflora</i>	Blanket flower	C,F	<i>Sedum brevifolium</i>	Stonecrop	C,F			
<i>Gazania rigens leucolaena</i>	Gazania, trailing	C,F	<i>Sedum kamtschaticum</i>	Stonecrop	C,F			
<i>Gazania</i> spp.	Gazania	F	<i>Sedum spurium</i>	Stonecrop, tworow	C,F			
<i>Hedera canariensis</i>	Ivy, Algerian	F	<i>Tulbaghia violacea</i>	Society garlic	C,F			
<i>Hedera helix</i>	Ivy, English	F	<i>Verbena rigida</i>	Veined verbena	C,F			
<i>Heliotropium fragrans</i>	Common heliotrope	C,F	<i>Veronica</i> spp.	Speedwell	C,F			
<i>Hemerocallis</i> spp.	Daylily	C,F	<i>Vinca major</i>	Periwinkle, bigleaf	F			
<i>Hosta lancifolia</i>	Albo-marginata hosta	C,F	<i>Vinca minor</i>	Periwinkle, dwarf	F			
<i>Hosta</i> spp.	Lily, plantain	C,F						

Flowers

Recommended Treatment Method F = Field Grown C = Container Grown			Recommended Treatment Method F = Field Grown C = Container Grown		
Scientific Name	Common Name		Scientific Name	Common Name	
<i>Achillea</i> spp.	Yarrow	C,F	<i>Impatiens wallerana</i>	Impatiens (Busy lizzie)	F
<i>Antirrhinum majus</i>	Snapdragon	F	<i>Iris</i> spp.	Iris, bearded	F
<i>Caladium bicolor</i>	Caladium, fancy leafed	F	<i>Liatris spicata</i>	Blazing star	C,F
<i>Chrysanthemum</i> spp.	Chrysanthemum	C,F	<i>Pelargonium hortorum</i>	Geranium	F
<i>Mixed hybrid</i>	Dahlia	C,F	<i>Petunia</i> spp.	Petunia	C,F
<i>Caladium bicolor</i>	Fancy-leaved caladium	F	<i>Portulaca grandiflora</i>	Moss, rose	F
<i>Coreopsis lanceolata</i>	Coreopsis	F	<i>Ranunculus asiaticus</i>	Ranunculus, Persian	F
<i>Coreopsis verticulata</i>	Threadleaf coreopsis	C,F	<i>Rosa</i> spp.	Rose	F
<i>Dianthus barbatus</i>	Sweet William	F	<i>Rudbeckia fulgida</i>	Blackeyed susan	C,F
<i>Dianthus gratianopolitanus</i>	Cheddar pink	C,F	<i>Rudbeckia hirta</i>	Daisy, gloriosa (black-eyed Susan)	F
<i>Dicentra spectabilis</i>	Bleeding heart	C,F	<i>Salvia</i> spp.	Salvia (Sage)	F
<i>Dimorphotheca</i> spp.	Marigold, cape	F	<i>Stokesia laevis</i>	Aster, stokes	F
<i>Echinacea purpurea</i>	Coneflower, purple	C,F	<i>Strelitzia reginae</i>	Bird of paradise	F
<i>Evolvulus nuttallianus</i>	Blue daze	C,F	<i>Tagetes</i> spp.	Marigold	F
<i>Geum quellyon</i>	Geum	F	<i>Viola wittrockiana</i>	Pansy	F
<i>Gladiolus hortulanus</i>	Gladiolus	F	<i>Zinnia elegans</i>	Zinnia, common	F
<i>Gypsophila paniculata</i>	Baby's breath	F			

Non-bearing Trees and Vines†

Recommended Treatment Method F = Field Grown C = Container Grown		Recommended Treatment Method F = Field Grown C = Container Grown	
almond	F	kiwi	F
apple	F	kumquat	C,F
apricot	F	lemon	F
avocado	F	loganberry	F
blackberry	F	macadamia nut	F
blueberry	F	nectarine	F
boysenberry	F	olive	F
cherry, sour	F	orange	C,F
cherry, sweet	F	peach	F
currant	F	pear	F
dewberry	F	pecan	C,F
elderberry	F	pistachio	F
fig	F	plum	F
filbert	F	pomegranate	F
gooseberry	F	prune	F
grape, American	F	raspberry	F
grape, European	F	walnut, black	F
grapefruit	F	walnut, English	F

† Non-bearing plants are defined as those that will not bear fruit for at least one year after treatment.

Ornamental Bulbs

Harrier 4L may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth, and tulip. Apply Harrier 4L to the soil surface 2-4 weeks after planting, but prior to the emergence of annual weeds. For fall planted bulbs, apply Harrier 4L again in late winter or early spring to weed-free soil surfaces.

Broadcast Application Rates

Time of Application	Soil Texture	Harrier 4L		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre)
		(qt/acre)	(fl oz/1000 sq ft)		
Fall	Coarse	0.75	0.5	3	1.5
Fall	Medium and Fine	1.5	1.0	3	2.25
Feb. - March	All Soil Textures	0.75	0.5	3	2.25

Special Use Precautions:

Do not apply to tulip plants that have emerged to a height greater than 3/4 inch.

Do not apply to gladioli corms prior to emergence or less than one (1) inch in diameter.

Shadehouse Areas

Harrier 4L may be applied to drainage areas under benches in open shadehouse-type structures where the natural flow of air is unimpeded. Do not apply in enclosed greenhouses or in enclosed shadehouse-type structures. Do not apply within 3 weeks prior to enclosure of greenhouse or poly-type structures.

Christmas Tree Plantations

Harrier 4L - Alone

Apply Harrier 4L as a directed spray to the soil surface or as an overtop spray to established plantings of field grown Christmas tree species, including fir (*Abies* spp.), pine (*Pinus* spp.), and spruce (*Picea* spp.). Follow all instructions provided in the "General Information" section of this label.

Broadcast Application Rates

Length of Control	Harrier 4L		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre)
	(qt/acre)	(fl oz/1000 sq ft)		
2 - 4 months	2	1.5	2	8
4 - 8 months	4	3	2	8

Tank Mix Combinations

Tank mix combinations of Harrier 4L plus other labeled herbicides may be used as directed or overtop sprays in established Christmas tree plantings. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

Harrier 4L Plus glyphosate: Apply tank mix combinations of Harrier 4L plus glyphosate only as directed sprays in Christmas tree plantings. When applied according to use directions, Harrier 4L plus glyphosate will provide post-emergence control of susceptible weed species listed on the label for glyphosate and residual preemergence control of susceptible weed species listed on the label for Harrier 4L. Refer to the label for glyphosate for specific use directions, precautions, and limitations before use.

Special Use Precautions:

Do not apply to Douglas-fir (*Pseudotsuga menziesii*). Do not apply to seedbeds or seedling transplant beds. Apply only to established plants that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

Noncropland Areas and Industrial Sites

Noncropland Areas - Tank Mix Combinations

Tank mix combinations of Harrier 4L plus glyphosate and many other labeled herbicides may be used to control undesirable vegetation in noncropland areas such as roadsides, rights-of-way, etc. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

Broadcast Application Rates

Length of Control	Harrier 4L		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre)
	(qt/acre)	(fl oz/1000 sq ft)		
2 - 4 months	2	1.5	2	6
4 - 8 months	4	3	4	12
8 - 12 months	6	4.5	8	12

Industrial Sites - Tank Mix Combinations

Tank mix combinations of Harrier 4L plus glyphosate, Spike herbicide, and many other labeled herbicides may be used as overtop sprays to control existing vegetation on industrial sites such as utility substations, highway guard rails, sign posts, and delineators. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions, and limitations before use.

Warm Season Turfgrasses

Harrier 4L may be applied as a preemergence treatment for control of annual grasses and certain broadleaf weeds in established warm season turf including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass, zoysiagrass, and established tall fescue growing in warm season areas. Established turf is defined as a dense turf having a well-anchored root system and healthy, vigorous top growth. Use Harrier 4L only as a part of a total turf management program that includes good fertilization practices.

Harrier 4L may be tank mixed with Gallery herbicide (California registration pending) and applied preemergence to broaden the spectrum of broadleaf weed control in warm season turf. Refer to the label for Gallery for specific use directions, precautions, and limitations before use.

Any cultural practices that disturb the soil, such as aerification or verticutting, should be done prior to application of Harrier 4L.

Harrier 4L will not control emerged weeds. Successful preemergence control of weeds listed on this label requires that Harrier 4L be applied prior to weed germination and be activated by at least one-half (1/2) inch of rainfall or irrigation within 21 days of application.

Harrier 4L may injure turf that is not well established or is stressed or weakened due to unfavorable winter climatic conditions, drought, nematodes, or other factors which damage or weaken turf root systems. Apply Harrier 4L only to healthy, well-established turf that has a well-anchored root system.

Do not apply Harrier 4L in the spring or early summer to tall fescue turfgrass reseeded the previous fall. In such cases, apply Balan 2.5G granular herbicide at 60-80 pounds per acre in early summer (Round 1) and Harrier 4L at 1.5 quarts per acre approximately eight weeks later (Round 2). Do not apply Harrier 4L at the single application rate (2 quarts per acre) to established tall fescue; in such cases, apply 1.5 quarts per acre of Harrier 4L in an initial application, followed by a second application of 1.5 quarts per acre 8-10 weeks later.

In bermudagrass areas that have been overseeded with winter grasses, a spring application of Harrier 4L will thin the overseeded grasses.

Annual Grasses Controlled by Harrier 4L

Summer Annuals:

Common Name	Scientific Name	Common Name	Scientific Name
barnyardgrass (watergrass)	<i>Echinochloa crus-galli</i>	foxtail, green (pigeongrass)	<i>Setaria viridis</i>
crabgrass, large	<i>Digitaria sanguinalis</i>	foxtail, robust	<i>Setaria robusta</i>
crabgrass, smooth	<i>Digitaria ischaemum</i>	foxtail, yellow	<i>Setaria glauca</i>
crabgrass	<i>Digitaria</i> spp.	goosegrass (silver crabgrass)	<i>Eleusine indica</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>	Johnsongrass (seedling only)	<i>Sorghum halepense</i>
foxtail, bristlegrass	<i>Setaria magna</i>	ryegrass, Italian	<i>Lolium multiflorum</i>
foxtail, giant	<i>Setaria faberi</i>	sandbur, field	<i>Cenchrus incertus</i>

Annual Broadleaf Weeds Controlled by Harrier 4L

Summer Annuals:

Common Name	Scientific Name
carpetweed	<i>Mollugo verticillata</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
purslane, common	<i>Portulaca oleracea</i>

Winter Annuals:

Common Name	Scientific Name
chickweed, common	<i>Stellaria media</i>
henbit	<i>Lamium amplexicaule</i>

Broadleaf Weeds Suppressed by Harrier 4L

Common Name	Scientific Name	Common Name	Scientific Name
groundsel, common	<i>Senecio vulgaris</i>	woodsorrel, yellow	<i>Oxalis stricta</i>
spurge, prostrate	<i>Euphorbia humistrata</i>		

Application Rates, Frequency, and Timing of Application

Harrier 4L can be applied in the spring for summer annual grass and broadleaf weed control, and in the winter for annual broadleaf weed control.

Broadcast Application Rates (Warm Season Turfgrasses)

Use Area	Harrier 4L		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (qt/acre)
	(qt/acre)	(fl oz/1000 sq ft)		
All, except Florida	1.5	1	3	6
Florida	2	1.5	3	6
Florida	1.5	1	3	4.5

1. Summer Annual Grasses and Broadleaf Weeds

Single Application Program: Apply 2 quarts per acre of Harrier 4L in late winter or early spring, prior to the onset of conditions favorable for annual weed germination.

Split Application Program: As an alternative to a single application program, Harrier 4L may be applied in a split application. This program is desirable when the initial application is made well in advance of weed germination and where weed control is desired for a longer period of time. Apply 1.5 quarts per acre of Harrier 4L in an initial application, followed by a second application of 1.5 quarts per acre 8-10 weeks later.

The second treatment of the split application may follow application of a different preemergence grass herbicide in place of the initial application of Harrier 4L.

2. Winter Annual Broadleaf Weeds

Apply Harrier 4L as a preemergence treatment in late summer or early fall, prior to the expected germination period for winter annual broadleaf weeds.

Weed Control in Florida

In Florida, apply 1.5 quarts per acre of Harrier 4L three times per year, or every 90-100 days, in the fall, early spring, and early summer. Do not apply more than 1.5 quarts per acre of Harrier 4L in any single application.

Application Equipment

Apply Harrier 4L evenly over the turfgrass area. Avoid spray pattern skips and overlaps that may result in incomplete coverage or over-application. For best results, use application equipment designed to uniformly broadcast liquid herbicides. Calibrate application equipment prior to use, according to manufacturer's directions. Check equipment frequently to make sure it is working properly and distributing spray uniformly.

Reseeding

Herbicides that control annual weeds may also affect establishment of desirable turfgrass seedlings. Reseeding should be delayed for at least 90-120 days following application of Harrier 4L. When reseeding, it is essential that proper cultural practices such as soil cultivation and seedbed preparation, irrigation, and fertilization be followed. For satisfactory reseeding results following use of Harrier 4L, the seeding rate should be increased and equipment designed to place seed in full contact with soil (such as the Rogers Aero Seeder) should be employed.

Special Use Precautions:

To avoid possible injury, do not apply Harrier 4L to:

- Cool season turfgrass species.
- Golf course putting greens and tees or lawns containing dichondra or cool season turfgrass species.
- Newly sprigged or sodded areas of bermudagrass, St. Augustinegrass, centipedegrass, or zoysiagrass until these turfgrasses are well established and have well-anchored root systems.
- Newly hydromulched areas of bermudagrass until such areas are well established.
- Bermudagrass variety "Sun Turf" when tank mixed with atrazine.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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ESL05182010

Rev. 7/26/11

70506-44(072711-4154)