



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

240998

Application for Pesticide - Section I

1. Company/Product Number 7969-88	2. EPA Product Manager R. Taylor	3. Proposed Classification ☒ None ☐ Restricted
4. Company/Product (Name) Vantage herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation Agricultural Products P.O. Box 13528 Research Triangle Park, NC 27709-3528 ☐ Check if this is a new address.		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

☐ Amendment - Explain below.	☐ Final printed labels in response to Agency letter dated _____
☐ Resubmission in response to Agency letter dated _____	☐ "Me Too" Application.
☒ Notification - Explain below.	☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Correction of previously submitted notifications (10/31/95) and (1/11/96); Vantage label (2/29/96)

NOTIFICATION

MAR 24 1996

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging ☒ Yes* ☐ No	Unit Packaging ☐ Yes ☒ No	Water Soluble Packaging ☐ Yes ☒ No		☒ Metal	
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container	☐ Plastic	
				☐ Glass	
				☐ Paper	
				☐ Other (Specify) _____	
3. Location of Net Contents Information ☒ Label ☐ Container		4. Size(s) Retail Container 1, 2 1/2, 5 gal		5. Location of Label Directions ☒ On Label ☐ On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product ☒ Lithograph ☐ Paper glued ☐ Stenciled				☐ Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name T. R. Nelsen	Title Manager, Regulatory Affairs	Telephone No. (Include Area Code) 919-547-2174	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or, both under applicable law.			6. Date Application Received (Stamped)
2. Signature 	3. Title Manager, Regulatory Affairs		
4. Typed Name T. R. Nelsen	5. Date 2/29/96		

BASF

2/29/96
Notification

Vantage[®]
herbicide

Postemergence Grass Herbicide

Active Ingredient:

Sethoxydim: 2-[1-(ethoxyimino)butyl-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one]13.0%

Inert Ingredients:87.0%

Total:100.0%

*Equivalent to 1 pound of sethoxydim per gallon

EPA Reg. No. 7969-88

EPA Est. No. 34313-TX-01

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Statement of Practical Treatment

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

If on skin: Wash with plenty of soap and water. Get medical attention.

If swallowed: Promptly drink a large quantity of milk, egg whites, gelation solution, or, if these are not available, large quantities of water. Avoid alcohol.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the **Directions For Use** for information about this standard.

Net contents: 1 pint, 1 gallon

BASF Corporation
P.O. Box 13528, Research Triangle Park, NC, 27709

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Precautionary Statements HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

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

Personal Protective Equipment:

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

Applicators and Other Handlers Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, nitrile rubber $\geq$ 14 mils, neoprene rubber $\geq$ 14 mils, or viton $\geq$ 14 mils
- Shoes plus socks

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

Engineering Controls Statement

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

User Safety Recommendations Users should:

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

Environmental Hazards

For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

Directions For Use

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

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.

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.

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 such as barrier laminate, nitrile rubber $\geq$ 14 mils, neoprene rubber $\geq$ 14 mils, or viton $\geq$ 14 mils
- Shoes plus socks

Nonagricultural 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, nurseries, or greenhouses. Do not allow people or pets to come into contact with treated areas until sprays have dried.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Triple rinse container (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.

In Case of Emergency

In case of large-scale spillage regarding this product call:
CHEMTREC 800-424-9300
BASF Corporation 800-832-HELP

In case of medical emergency regarding this product, call:

1. Your local doctor for immediate treatment.
2. Your local poison control center (hospital).
3. BASF Corporation 800-832-HELP

Vantage® herbicide is a selective broad spectrum postemergence herbicide used to control annual and perennial grassy weeds in turf, ornamentals, nonfood, and noncrop sites listed on this label. **Vantage** does not control sedges (annual or perennial), annual bluegrass, or broadleaf weeds. Because many grasses such as sorghum, corn, small grains, and rice as well as many other ornamental turf grasses (except fine fescue and centipede-grass) are susceptible to **Vantage**, avoid all direct or indirect contact with any desirable grass species. Avoid any spray drift.

Vantage® herbicide may be used in or around the following sites. Consult the appropriate section of this label for **Directions For Use** and **Restriction and Limitations** before using this product.

Centipedegrass and fine fescue turf
Fine fescue seed production
Bedding plants
Drug and medicinal crops
Fences and hedgerows
Public buildings
Recreation areas
Storage yards
Electrical transformer stations
Sewage disposal areas
Uncultivated agricultural areas
Perennial peanuts (nonfood)
Trees, Christmas trees
Shrubs
Ground covers
Rights-of-ways
Roadsides
Other paved areas
Industrial sites
Airports
Pipeline pumping stations
Potting and top soils
General indoor/outdoor sites
Wildflowers

Control Symptoms

Vantage rapidly enters grass plants through the foliage and translocates throughout the plant. Control symptoms exhibited by the grass plant progress from a slowing or stopping of growth (generally within 2 days), to reddening of the foliage and to leaf tip burn. Subsequently, foliage burnback occurs. This will generally be observed within 3 weeks depending on environmental conditions.

Notice to User

Due to variability within species and in application techniques, neither the manufacturer nor the seller has determined whether or not **Vantage** can safely be used on all varieties and species of nonbearing food crops, trees, shrubs, ornamentals, bedding plants, ground covers, nursery, wildflowers, Christmas trees, turf and other non-food crops under all conditions. It is recommended, therefore, that the professional user determine if **Vantage** can be used safely before broad use by applying the recommended use rate of **Vantage** on a nonlabeled species or variety under the conditions expected to be encountered on a small test area. Any adverse effects should be visible within 7 days.

Application Information

Apply **Vantage** to actively growing grasses at the proper growth stage as specified in this labeling. In irrigated areas, it may be necessary to irrigate before treating with

Vantage to ensure active weed growth. Grass weeds that have been mowed or have regrown from mowed stubble may be controlled poorly. Repeat application if new germination or regrowth occurs.

Ground equipment: Thorough spray coverage of grass foliage is essential. For broadcast application, use standard high-pressure pesticide hollow cone or flat fan nozzles. Do not use flood or whirl chamber nozzles. Do not apply **Vantage** with control drop applicator (CDA) nozzles as erratic coverage can cause inconsistent weed control. Use 5-50 gallons of spray solution per acre (1-10 pints per 1,000 square feet). Adjust pressure to 30-60 psi at the nozzle. Always adjust spray pressure, spray volume, and height of spray boom to ensure thorough coverage of target grasses.

Air equipment: Thorough spray coverage of grass foliage is essential. Use a minimum of 5 gallons of water per acre. Increase water volume to 10 gallons per acre if grass foliage is dense or a heavy plant canopy exists.

Mixing

Fill the tank of a thoroughly clean sprayer one-half to two-thirds full with clean water. Start agitation, add **Vantage** and the remaining volume of water. Maintain constant agitation during application.

Cultivation Information

If cultivation is an option, do not cultivate within 5 days before or 7 days after applying **Vantage**. A timely cultivation 14-21 days after application may help control perennial grasses.

General Restrictions and Limitations

Do not apply if rainfall is expected within 1 hour after application as grass control will probably be unsatisfactory.

Do not apply **Vantage** through any type of irrigation system.

Do not apply to grass weeds under stress, such as stress due to lack of moisture, excess moisture, mechanical injury, herbicide injury, diseases or cold temperatures, as unsatisfactory grass control may result.

Do not apply **Vantage** to desirable plants that have been subject to stress conditions such as hail damage, flooding, drought, injury from other herbicides or widely fluctuating temperatures, as injury may result.

Do not use treated vegetation as pasture, hay, feed, or forage.

General Tank Mix Recommendations

Vantage may be tank mixed with any registered herbicide for the use intended with each product.

All **Directions For Use** and **Restrictions and Limitations** of the respective product must be understood and adhered to. If the respective label recommends that additives, surfactants, or oil concentrates NOT be used, do not tank mix with **Vantage**.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **Vantage** with pesticides (fungicides, herbicides, insecticides, or miticides), additives or fertilizers. BASF does not recommend using **Vantage** tank mixes other than those listed on BASF labeling.

Local horticultural authorities may be a source of information when using combinations other than those recommended by BASF. Otherwise, test a small area of the desired site with the desired tank mix combination and allow 7-10 days to evaluate potential injury.

Using Vantage® herbicide on centipedegrass and fine fescue in turf, lawns, and rights-of-ways

Directions For Use

Vantage may be used in seedling (first year) and established centipedegrass (*Eremochloa ophiuroides*) and fine fescues which include creeping red fescue and chewings fescue (*Festuca rubra*), sheep fescue (*Festuca ovina*) and hard fescue (*Festuca longifolia*). **Vantage** does not control yellow and purple nutsedge (nutgrass), annual bluegrass, or broadleaf weeds.

Timing of Application

Apply **Vantage** to actively growing grassy weeds as specified in the **Recommendations for Grass Control**. Apply **Vantage** no earlier than 3 weeks after spring green-up of centipedegrass turf. Apply **Vantage** before annual grasses become extensively tillered. Delay all treatment with **Vantage** until newly planted centipedegrass has 3 inches of new stolon growth.

Mowing

Adequate coverage of the leaf surface is necessary for absorption of this herbicide. Therefore, centipedegrass and fine fescue areas should not be mowed within 7 days before or after applying **Vantage**. Increased control has been observed when mowing is delayed until 14 days after application.

Restrictions and Limitations

Read and abide by all **General Restrictions and Limitations** listed on page 4.

On seedling centipedegrass, do not apply more than 1.5 pints of **Vantage** per acre, per application or a total of 3 pints per acre, per season.

On established centipedegrass, do not apply more than 2.25 pints of **Vantage** per acre, per application or more than a total of 4.5 pints per acre, per season.

Do not use on tall fescue (*Festuca arundinacea*) as injury may occur. Do not apply **Vantage** to any desirable turfgrass other than centipedegrass and fine fescue varieties classified as creeping red, chewings, sheep or hard fescue because other turf species may be seriously injured.

Table 1. Recommendations for Annual Grass Control in Seedling Centipedegrass and Fine Fescue

Grass	Time of Application**	Vantage	
		Rate Per Acre	Rate Per 1,000 sq. ft.
Crabgrass, Large, Smooth, Goosegrass	Up to 4"	1.5 pints	0.5 fluid ounces*

* 1 tablespoon = 0.5 fluid ounces
 ** If the grass weeds have been mowed numerous times and are extensively tillered, control may be reduced.

Table 2. Recommendations for Annual Grass Control in Established Centipedegrass and Fine Fescue

Grass	Time of Application	Vantage	
		Rate Per Acre	Rate Per 1,000 sq. ft.
Crabgrass, Large, Smooth, Goosegrass	Up to 4". Apply before grass weeds become well established through tiller development.	2.25 pints	0.75 fluid ounces*

* 1 tablespoon = 0.5 fluid ounces

Table 3. Recommendations for Perennial Grass Control in Seedling Centipedegrass and Fine Fescue

Grass	Time of Application	Vantage	
		Rate Per Acre	Rate Per 1,000 sq. ft.
Bahiagrass*	Up to 4"	2.25 pints	0.75 fluid ounces**
First Application			
Second Application	When regrowth is less than 4" generally 10-14 days later.	2.25 pints	0.75 fluid ounces**

* Do not mow within 7 days before application or within 14 days after application for best control.
 ** 1 tablespoon = 0.5 fluid ounces

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Bahiagrass Control and Seedhead Suppression in Established Centipedegrass

Established bahiagrass is very difficult to control because of its extensive rhizome system. One application of **Vantage**® herbicide will burn down the bahiagrass, but many plants will regrow. However, this regrowth is weak and seedheads will generally be suppressed for 40 days after the first application.

A second application of **Vantage** will be necessary for bahiagrass control. Under optimum growing conditions, this second application should be made as soon as 10-14 days after the first application. The second application should be made when the bahiagrass regrowth is young and actively growing and before it has reached a height of 4 inches.

Depending upon environmental conditions and cultural practices, season-long control may not always be obtained. However, competition of the bahiagrass with the centipedegrass turf will be reduced. In addition, any remaining bahiagrass will be less noticeable because of the long-term seedhead suppression provided by the second application of **Vantage**.

Using Vantage + Basagran® T/O Herbicide Tank Mix in Established Turf, Lawns, and Rights-of-ways

(Not applicable in California)

A tank mix of **Vantage** and **Basagran T/O** may be applied to control yellow nutsedge (nutgrass), grass, and broadleaf weeds in centipedegrass and fine fescue areas. Applied as directed, this tank mix will control susceptible weeds listed on each label.

Read each product label for directions, restrictions, and limitations before using. The most restrictive labeling applies to all tank mixes.

Timing and Application Information

This tank mix may be applied to established turf grass. Do not apply to newly seeded turf sites until the turf has become fully established.

Tank mix 2.25 pints of **Vantage** with 2-4 pints of **Basagran T/O** according to the directions on the **Basagran T/O** label.

The use of oil concentrate in this tank mix is not recommended.

Using Vantage® Herbicide in Fine Fescue (creeping red, chewings, hard and sheep) Grown for Turf Seed (Not for use in California)

Directions For Use

Vantage may be used to control annual and perennial grass weeds in fine fescue. To control annual ryegrass, downy brome, German velvetgrass, and Colonial and Highland bentgrasses in the Pacific Northwest, apply Vantage when the fine fescue is semi-dormant, which is generally from November 1 through March 15 (see Application Rate Table for Pacific Northwest only).

Applying Vantage at other times of the year will generally result in reduced control of these problem grass weeds.

For grass control in other Northern climates, see Application Rate Table for Annual Grass Control or Application Rate Table for Perennial Grass Control.

Because most grass crops such as sorghum, corn, small grains, and rice, as well as many ornamental turf grasses (except the fine fescues and centipedegrass), are extremely susceptible to Vantage, avoid all direct or indirect contact with any desired grass plant. However, Vantage does not control annual bluegrass or rattail fescue.

Restrictions and Limitations

Read and abide by all General Restrictions and Limitations listed on page 4.

Do not apply Vantage to tall fescue because injury may occur.

Table 4. Application Rate Table for Vantage (Pacific Northwest only)

Grass Species	Application Time (Weed Size)	Vantage* (Rate per Acre)
Annual Grasses Annual Ryegrass (<i>Lolium multiflorum</i>)	4-8"	2.25 pints
Downy Brome (<i>Bromus tectorum</i>) Also called cheatgrass	2-6"	3.75 pints
Perennial Grasses German Velvetgrass (<i>Holcus mollis</i>)	2-4"	3-3.75 pints
Colonial and Highland Bentgrasses (<i>Agrostis tenuis</i>)	2-4"	2.25-3.75 pints
The higher rate of Vantage is recommended for use on well-established grass weeds. * If regrowth occurs or new plants emerge, make a second application at the same rate and time.		

Table 5. Application Rate Table for Annual Grass Control (Other than Pacific Northwest)

Grass Species	Vantage Application Rate	
	Grass up to 6" height	Grass up to 12" height
Barnyardgrass Broadleaf Signalgrass Crabgrass, Large Smooth Foxtails, Giant Green Yellow Goosegrass Johnsongrass, Seedling Junglerice Lovegrass Orchardgrass Seedling Panicum, Browntop Fall Texas Ryegrass, Annual Sandbur, Field Shattercane/Wildcane Sprangletop, Red* Tall Fescue, Seedling Volunteer, Barley Oats Rye Wheat Wild Oats Wild Proso Millet Witchgrass Woolly Cupgrass	2.25 pints per acre or 0.8 fluid ounces per 1,000 square feet	3.75 pints per acre or 1.4 fluid ounces per 1,000 square feet
* Not recommended in CA, AZ, or Western NM.		

Table 6. Application Rate Table for Perennial Grass Control (Other than Pacific Northwest)

Grass	Application Time (Weed Size)	Vantage	
		Rate per acre	Rate per 1,000 square feet
Bermudagrass	Up to 6" runners	3.75 pints	1.4 fluid ounces
Johnsongrass, Rhizome	15-20" height		
Quackgrass	6-8" height		
Wirestem Muhly	Up to 6" height	2.25 pints	0.8 fluid ounces

Using Vantage® Herbicide in Nonbearing Food Crops, Ornamental and Nursery Plantings, Rights-of-way, Nonfood Crop Areas, Noncrop Areas and Fallow Land

Directions For Use

Postemergence applications of Vantage may be made to nonbearing food crops, nursery liners, trees, shrubs, ornamentals, bedding plants, cut flowers, and ground covers including those listed in the Appendix. If species in the application site are not listed in the Appendix, Vantage may be applied as a directed spray away from the foliage of desired plants.

Vantage may also be applied to sites such as rights-of-ways, fallow land, noncrop areas and nonfood crop areas such as airports, industrial sites, roadsides, storage yards, and other areas listed on page 4.

Apply to actively growing grasses at the sizes indicated in the tables for Annual Grass Control with Vantage and Perennial Grass Control with Vantage.

In irrigated areas, it may be necessary to irrigate before treating with Vantage to ensure active weed growth.

Do not mow within 20 days before or 7 days after application. Grasses that have been mowed or have regrown from mowed stubble may be controlled poorly. Repeat application if new germination or regrowth occurs.

Restrictions and Limitations

Read and abide by all General Restrictions and Limitations listed on page 4.

Table 7. Annual Grass Control with Vantage

Grass	Vantage Rate	
	Grass up to 6" height	Grass up to 12" height
Barnyardgrass Broadleaf Signalgrass Crabgrass, Large Smooth Foxtails, Giant Green Yellow Goosegrass Johnsongrass, Seedling Junglerice Lovegrass Orchardgrass Seedling Panicum, Browntop Fall Texas Red Sprangletop* Sandbur Field Shattercane/Wildcane Tall Fescue, Seedling Volunteer, Barley Oats Rye Wheat Wild Oats Wild Proso Millet Witchgrass Woolly Cupgrass	2.25 pints per acre or 0.8 fluid ounces per 1,000 square feet	3.75 pints per acre or 1.4 fluid ounces per 1,000 square feet

* Not recommended in CA, AZ, or Western NM.

Table 8. Perennial Grass Control with Vantage

Grass	Maximum Size Range	Vantage	
		Rate per acre	Rate per 1,000 square feet
Bermudagrass	Up to 6" runners	3.75 pints	1.4 fluid ounces
Johnsongrass, Rhizome	15-20" height		
Quackgrass	6-8" height		
Wirestem Muhly	Up to 6" height	2.25 pints	0.8 fluid ounces

Spot Treatment Application with Vantage® herbicide

To control grasses when using knapsack sprayers, equipment with hand guns, or other suitable nozzle arrangements, prepare a solution of Vantage in water according to the Tables 9-11.

Apply to actively growing grasses at the sizes indicated below.

Apply to the foliage of grasses on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to the point of runoff.

Table 9. Spot Treatment Application Table Annual Grass Control with Vantage

Grass	Vantage	
	Concentration in Spray Solution	
	Grass Up to 6" Height	Grass Up to 12" Height
See annual grasses listed on page 8.	1.5%	2.25%

Table 10. Perennial Grass Control with Vantage

Grass	Maximum Size Range	Vantage
		Concentration in Spray Solution*
Bermudagrass	Up to 6" runners	2.25%
Johnsongrass, Rhizome	15-20" height	2.25%
Quackgrass	6-8" height	2.25%
Wirestem Muhly	Up to 6" height	1.5%

* Refer to Table 11, Solution Table for preparing a spray solution volume.

Table 11. Solution Table for Spot Treatments

Desired Spray Solution Volume	Amount of Vantage to be Added for Solution	
	1.5%	2.25%
1 gallon	2 fluid ounces	3 fluid ounces
3 gallons	5.75 fluid ounces	8.75 fluid ounces
5 gallons	8.75 fluid ounces	14.5 fluid ounces

Using Vantage in Christmas Trees and Deciduous Tree Farms

Vantage may be used to control annual and perennial grasses in Christmas and deciduous tree farms. Consult Table 12 or the Appendix for tolerant species for postemergence application.

Apply as a directed spray to species not listed, while avoiding direct or indirect application to the foliage. To control grasses, consult the tables Annual Grass Control with Vantage and Perennial Grass Control with Vantage.

If a Christmas tree or deciduous tree is not listed in Table 12 or in the Appendix, the user may determine if Vantage can be used safely prior to broad use by applying the recommended use rate of Vantage to the target plant on a small test area under the conditions expected to be encountered.

Any adverse effects should be visible within 7 days.

Table 12. Christmas Trees

Common Name	Scientific Name
Fir, Balsam	<i>Abies balsamea</i>
, Douglas	<i>Pseudotsuga menziesii</i>
, Fraser	<i>Abies fraseri</i>
, Grand	<i>Abies grandis</i>
, Noble	<i>Abies procera</i> (A. nobilis)
, Nordmann	<i>Abies nordmanniana</i>
, Red	<i>Abies magnifica</i>
, Shasta	<i>Abies magnifica</i>
, Turkish	
, White	<i>Abies concolor</i>
Hemlock, Canada	<i>Tsuga canadensis</i>
Pine, Austrian	<i>Pinus nigra</i>
, Lodgepole	<i>Pinus contorta latifolia</i>
, Monterey	<i>Pinus radiata</i>
, Ponderosa	<i>Pinus ponderosa</i>
, Scotch	<i>Pinus sylvestris</i>
, Southern (Longleaf)	<i>Pinus palustris</i>
, Virginia	<i>Pinus virginiana</i>
, White	<i>Pinus strobus</i>
Spruce, Black Hills	<i>Picea glauca</i>
, Colorado Blue	<i>Picea pungens</i>
, Norway	<i>Picea abies</i>
, White	<i>Picea glauca</i>

Read and abide by all General Restrictions and Limitations listed on page 4.

Using Vantage + Basagran® T/O Tank Mix in Ornamental Sites

A tank mix of Vantage + Basagran T/O may be applied as a directed spray to control yellow nutsedge, grass, and broadleaf weeds in non-bearing food crops and ornamental sites including trees, shrubs, bedding plants, and ground covers. This tank mix should be applied as a directed spray away from the foliage of desired plants. If any desirable plant foliage receives direct or indirect application, wash off immediately. The use of an oil concentrate as mentioned on the Basagran T/O label is not necessary in this tank mix. Over-the-top applications of this tank mix may be made to certain ground covers. Consult the Basagran T/O label for this listing.

Read each product label for directions, and Restrictions and Limitations before using. The most restrictive labeling applies in all tank mixes.

Using Vantage + Surflan® A.S. Herbicide Tank Mix In Ornamental Sites

A tank mix of Vantage + Surflan A.S. may be applied to control weeds in ornamental sites including trees, shrubs and groundcovers. Applied as directed, this tank mix will control susceptible weeds listed on each label.

Read each product label for directions, restrictions and limitations prior to use. The most restrictive labeling applies in all tank mixes.

Vantage® + Goal® 1.6E Herbicide Tank Mix for Broad Spectrum Grass and Broadleaf Weed Control

(Not for use in California)

Tank mix **Vantage + Goal 1.6E** to control a broad spectrum of grass and broadleaf weeds in conifers and Christmas trees. Consult the **Goal 1.6E** label for the list of broadleaf weeds controlled. This tank mix may be used only on the species listed in **Table 13**.

Vantage and Goal 1.6E Rates

A maximum of 60 fluid ounces of **Vantage** per acre may be tank mixed with **Goal 1.6E**. A maximum of 2.5 pints of **Goal 1.6E** may be tank mixed with **Vantage**. See previous pages for the minimum recommended rates of **Vantage** and see the **Goal 1.6E** label for minimum rates of **Goal 1.6E**. For season-long control, 2-3 applications may be needed. In some cases, reduced grass control may result when tank mixing **Vantage** with **Goal 1.6E**.

Timing

Apply to actively growing weeds before conifer bud break or after conifer foliage has had an opportunity to harden off. Broadleaf weeds must be within the height indicated on the **Goal 1.6E** label.

Spray Volume and Pressure

Apply at 20 gallons per acre and 40 psi.

Restrictions and Limitations

Read and follow all conifer specific and **General Use Restrictions and Limitations** on the **Vantage** and **Goal 1.6E** labels. The most restrictive labeling applies in tank mixes. Do not apply this tank mix when temperatures exceed 90° F. Do not apply this tank mix to conifer seedlings less than 10 months old. Do not apply this tank mix by aircraft equipment. Do not use spot treatments.

Vantage + Stinger® Tank Mix

A postemergence tank mix application of **Vantage + Stinger** will not only control a broad spectrum of grasses, but also certain broadleaf weeds such as Canada thistle, clover, vetch, knapweed and suppress other broadleaf weeds. Consult the **Stinger** labeling for a list of broadleaf weeds controlled. This tank mix may be applied only over-the-top of the following actively growing trees: Fir (balsam, Douglas, Fraser, Grand, Noble) Pine (lodgepole, ponderosa, scotch, white), and Spruce (blue).

Restrictions and Limitations

Read and follow all **Directions For Use, Precautionary Statements, and Restrictions and Limitations** on the **Vantage** and **Stinger** labels. The most restrictive labeling applies in tank mixes.

In the Pacific Northwest, do not apply this tank mix in the first year of transplanting as injury (leaf curling) may occur.

Do not apply more than 0.5 pint of **Stinger** per acre on blue spruce.

Do not add a surfactant or oil concentrate to this tank mix as injury may occur.

Using Vantage in Tree Farms for Established Tall Fescue Growth Suppression

Vantage may be used in tree farms to suppress the growth of tall fescue when grown as a desired ground cover. Tall fescue must be actively growing at the time of **Vantage** application or injury may occur. Follow the directions on rates and timing closely.

Timing

Apply **Vantage** to actively growing tall fescue after it has had 4-6 inches of new growth, before the emergence of seedheads and before conifer bud break. Application from July 1 to mid August may be less effective, especially if day temperatures reach 90° F. Tall fescue must be one year old before the first application of **Vantage**.

Adequate coverage of the leaf surface is necessary for absorption of this herbicide; thus, do not mow tall fescue turf for 30 days before or 14 days after application of **Vantage** for optimum control.

Rate

Apply 24-30 fluid ounces of **Vantage** per acre. For greater fescue suppression, up to 60 fluid ounces 24-30 fluid ounces of **Vantage** can be used per acre. Because of environmental differences at application and growth differences of tall fescue, suppression of tall fescue may differ from that desired. Users of **Vantage** are advised to begin using **Vantage** at the minimum recommended rate and adjust rates as local conditions and experience dictate. Additional applications may be made if extended growth suppression is desired.

Restrictions and Limitations

Read and abide by all **General Restrictions and Limitations** on page 4.

Do not apply to grasses under stress, such as stress due to lack of moisture, herbicide injury, or cold temperatures, because unsatisfactory suppression may result.

Table 13.

Common Name	Scientific Name
Fir, Fraser	<i>Abies fraseri</i>
Hemlock, Canada*	<i>Tsuga canadensis</i> *
Pine, Virginia	<i>Pinus virginiana</i>
Pine, White	<i>Pinus strobus</i>
Spruce, Norway	<i>Picea abies</i>

* Canada Hemlock has a prolonged period of bud break and new growth, thus directed applications are recommended during this period.

Using Vantage™ herbicide in Wildflowers

Vantage may be used to control grass in native wildflowers on roadsides and landscapes.

Vantage will reduce the competition from grasses on wildflower species. Grass competition can cause flower stand thinning, stunting and reduced seed production, reducing the aesthetic value and the resetting potential of the wildflower stand. Many wildflower species are tolerant of Vantage applications such as those listed in the Appendix. However, apply Vantage prior to blooming.

Application Timing

Apply Vantage to actively growing grass after wildflowers have emerged, but not during flowering. Apply Vantage 4-6 weeks after wildflowers have emerged, but always base application timing on grass size. Make broadcast applications according to the Annual Grass Control with Vantage and Perennial Grass Control with Vantage tables on page 7.

Vantage controls emerged grass species and does not give residual control. A second application may be necessary if a new flush of grass occurs later in the growing season. In irrigated areas, it may be necessary to irrigate before treating with Vantage to ensure active weed growth.

Spot Treatment

Vantage can be applied using tank-type, knapsack sprayers, high-volume equipment with hand guns, or other suitable nozzle arrangements. Prepare a solution of Vantage in water according to the Solution Table for Spot Treatments on page 9. Apply to the foliage of grasses on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to the point of runoff.

Using Vantage on Roadsides, Rights-of-ways, and in Nonfood Crop Alleyways for Established Tall Fescue Seedhead Suppression

(Not intended for domestic use, except by professional applicators) When used under the conditions specified in this label, Vantage will suppress the initiation and development of the seedheads of established tall fescue.

Discoloration of the fescue will occur soon after application and may persist for 2-8 weeks depending on environmental conditions. Avoid applying to any tall fescue area where discoloration is aesthetically unacceptable.

Treated vegetation may not be used as feed, forage, hay, or silage.

Vantage will not injure clovers, vetch, or other broadleaf plants that may be present.

Timing and Application Information

Timing

Generally, apply Vantage to actively growing tall fescue before the emergence of seedheads in the spring. Do not apply after May 1 in Alabama, Georgia, and Tennessee; timing may vary in other areas.

Tall fescue must be one year old before the first application of Vantage.

Do not apply to grasses under stress, such as stress due to lack of moisture, mechanical injury, herbicide injury, or cold temperatures, because unsatisfactory seedhead suppression may result. Adequate coverage of the leaf surface is necessary for absorption of this herbicide; thus, do not mow turf for 30 days before or 14 days after applying Vantage for optimum control.

Rate

Apply 1.5 pints of Vantage per acre.

Do not make more than one application of Vantage to tall fescue per year.

Spray volume

Thorough spray coverage of grass foliage is essential. Use 30-50 gallons per acre.

Total Vegetation Suppression

A reduction in grass competition may make certain broadleaf weeds appear more prominent or may allow new weeds to germinate.

Vantage does not control or suppress broadleaf plants. A program for total vegetation suppression may necessitate the use of a broadleaf herbicide.

Any combination treatment using Vantage, either tank mixed or sequential, should be tested to determine if seedhead growth suppression is maintained without increased injury or discoloration to tall fescue or other desired plant species.

Read and abide by all General Restrictions and Limitations listed on page 4.

Procedure for Cleaning Spray Equipment

Attention! Clean the sprayer thoroughly before and after applying Vantage, particularly if a herbicide with the potential to injure the crop to be sprayed with Vantage was used.

Failure to clean the sprayer thoroughly after applying Vantage may result in injury to any grass crop sprayed subsequently.

Fill the sprayer with clean water and add a commercial sprayer cleaner or a surfactant/adjuvant at the recommended rate on its label.

Circulate the solution through the entire sprayer system. Spray approximately half the tank solution through the hoses, booms, and nozzles to clean these parts. Drain the tank and rinse the total system thoroughly several times with clean water.

Appendix

Trees

Listed by common name

Acacia, Knife Leaf
(*Acacia cultriformis*)
Arborvitae, Eastern (var: Teehny)
(*Thuja occidentalis*)
Arborvitae, Berkman's, Oriental
(*Thuja orientalis*)
Ash, Green
(*Fraxinus pennsylvanicum*)
Ash, Mountain
(*Sorbus aucuparia*)
Ash, Mountain
(*Sorbus americana decora*)
Ash, White
(*Fraxinus americana*)
Basswood, American
(*Tilia americana*)
Berkman's, Oriental
(*Thuja orientalis*)
Birch
(*Betula sp.*)
Birch, Asian White (var. Japonica)
(*Betula platyphylla*)
Birch, European White
(*Betula pendula*)
Birch, paper
(*Betula papyrifolia*)
Birch, River, Black or Red
(*Betula nigra*)
Black Locust
(*Robinia pseudoacacia*)
Bottle-brush
(*Callistemon lanceolatus*)
Bottle Tree
(*Brachychiton populneus*)
Brisbane Box Tree
(*Tristania conferta*)
Cajeput Tree
(*Melaleuca quinquenervia*)
Carob Tree
(*Ceratonia siliqua*)
Carrot Wood
(*Cupaniopsis anacardioides*)
Catalpa, Southern
(*Catalpa bignonioides*)
Cherry Black
(*Prunus serotina*)
Cherry, Carolina
(*Prunus caroliniana "compacta"*)
Crabapple, Flowering
(var Dalgo, Radiant, Red Splendor, Royalty,
Vanguard, Sylvestris, Domestic)
(*Malus sp.*)
Cypress, False
(*Chamaecyparis pisifera*)
Cypress, Leyland
(*Cupressocyparis leylandii*)
Cypress, Italian
(*Cupressus sempervirens*)
Dogwood, Flowering
(*Comus florida*)
Dogwood, Silky
(*Comus amonum*)
Dogwood, Pagoda
(*Comus alternifolia*)
Elm, Chinese Evergreen
(*Ulmus parvifolia*)

Listed by scientific name

Abies balsamea
(Fir, White)
Abies concolor
(Fir, White)
Abies fraseri
(Fir, Frasier)
Abies sp.
(Fir)
Acacia baileyana (purpurea)
(Purpleleaf)
Acacia cultriformis
(Acacia, Knife leaf)
Acer palmatum
(Maple, Japanese)
Acer rubrum
(Maple, Red)
Acer saccharinum
(Maple, Silver)
Agonis flexuosa
(Willow, Peppermint)
Albizia julibrissin
(Mimosa tree, silk tree)
Arbutus unedo
(Strawberry Tree)
Arecastrum romanzoffianum
(Queen palm)
Betula nigra
(Birch, River, Black or Red)
Betula papyrifolia
(Birch, paper)
Betula pendula
(Birch, European White)
Betula platyphylla
(Birch, Asian White)
(var: Japonica)
Betula sp.
(Birch)
Brachychiton populneus
(Bottle tree)
Callistemon lanceolatus
(Bottle-brush)
Catalpa bignonioides
(Catalpa, Southern)
Celtis occidentalis
(Hackberry, Common)
Ceratonia siliqua
(Carob tree)
Chamaecyparis pisifera
(Cypress, False)
Chamaerops humilis
(Palm, Mediterranean fan)
Comus alternifolia
(Dogwood, Pagoda)
Comus amonum
(Dogwood, Silky)
Comus florida
(Dogwood, Flowering)
Cupaniopsis anacardioides
(Carrot Wood)
Cupressocyparis leylandii
(Cypress, Leyland)
Cupressus sempervirens
(Cypress, Italian)
Cycas revoluta
(Palm, Sago)
Elaeagnus angustifolia
(Olive, Russian)
Eriobotrya japonica
(Loquat)

Trees (continued)
Listed by common name

Eucalyptus
 (*Eucalyptus robusta*)
 (*Eucalyptus lehmannii*)
 (*Eucalyptus nicholi*)
 (*Eucalyptus granis*)
 Fir
 (*Abies* sp.)
 Fir, Douglas
 (*Pseudotsuga menziesii*)
 Fir, Frasier
 (*Abies fraseri*)
 Fir, White
 (*Abies concolor*)
 Goldenrain Tree
 (*Koelreuteria paniculata*)
 Guava
 (*Psidium littorale*)
 Guava, Pineapple
 (*Feijoa sellowiana*)
 Gum, Blue
 (*Eucalyptus globulus*)
 Gum, Lemon-scented
 (*Eucalyptus citriodora*)
 Gum, Red Box
 (*Eucalyptus polyanthemos*)
 Hackberry, Common
 (*Celtis occidentalis*)
 Hemlock, Canadian
 (*Tsuga canadensis*)
 Holly, Chinese
 (var: *Bufordii*, *Rotunda*)
 (*Ilex cornuta*)
 Holly, Hybrid (var *Nellie Stevens*)
 (*Ilex spares*)
 Holly, Japanese
 (var: *Convexa*, *Compacta*, *Helleri*, *Hoogendorn*)
 (*Ilex crenata*)
 Holly, Yaupon
 (*Ilex vomitoria*)
 Ironbark, Red
 (*Eucalyptus sideroxylon*)
 Jacaranda
 (*Jacaranda mimosifolia*)
 Kentucky Coffee Tree
 (*Gymnocladus dioica*)
 Larch, European
 (*Larix europa*)
 Laurel, Indian
 (*Ficus microcarpa nitida*)
 Linden
 (*Tilia americana*)
 Linden, Littleleaf
 (*Tilia cordata*)
 Locust, Honey
 (*Gleditsia triacanthos inermis*)
 Loquat
 (*Eriobotrya japonica*)
 Magnolia Southerm
 (*Magnolia grandiflora*)
 Maple, Red
 (*Acer rubrum*)
 Maple, Japanese
 (*Acer palmatum*)
 Maple, Silver
 (*Acer saccharinum*)
 Mimosa Tree (silk tree)
 (*Albizia julibrissin*)

Listed by scientific name

Eucalyptus citriodora
 (Gum, Lemon-scented)
Eucalyptus globulus
 (Gum, Blue)
Eucalyptus granis
 (Eucalyptus)
Eucalyptus lehmannii
 (Bushy Yate)
Eucalyptus nicholi
 (Nichol's Willow)
 (Leafed Peppermint)
Eucalyptus polyanthemos
 (Gum, Red Box, Silver Dollar)
Eucalyptus robusta
 (Eucalyptus)
Eucalyptus sideroxylon
 (Ironbark, Red)
Feijoa sellowiana
 (Pineapple, Guava)
Ficus benjamina
 (Weeping Fig, Exotica, Weeping Banyan)
Ficus microcarpa nitida
 (Laurel, Indian)
Fraxinus americana
 (Ash, White)
Fraxinus pennsylvanicum
 (Ash, Green)
Geijera parviflora
 (Willow, Australian)
Gleditsia triacanthos inermis
 (Locust, Honey)
Gymnocladus dioica
 (Kentucky Coffee Tree)
Ilex cornuta
 (Holly, Chinese)
 (var: *Bufordii*, *Rotunda*)
Ilex crenata
 (Holly, Japanese)
 (var *Compacta*, *Convexa*, *Helleri*, *Hoogendorn*)
Ilex spares
 (Holly, Hybrid)
 (var: *Nellie Stevens*)
Ilex vomitoria
 (Holly, Yaupon)
Jacaranda mimosifolia
 (Jacaranda)
Juglans nigra
 (Walnut, Black)
Koelreuteria paniculata
 (Goldenrain Tree)
Larix europa
 (Larch, European)
Leptospermum laevigatum
 (Tea tree, Australian)
Liquidambar styraciflua
 (Gum, Sweet)
Liriodendron tulipifera
 (Popular, Yellow, Tulip Tree)
Maclura pomifera
 (Osage Orange)
Magnolia grandiflora
 (Magnolia, Southern)
Malus sp.
 (Crabapple, Flowering)
 (var: *Dalgo*, *Domestic*, *Sylvestris*, *Radiant*,
Vanguard, *Royalty*, *Red Splendor*)
Melaleuca quinquenervia
 (Cajeput Tree)

Trees (continued)
Listed by common name

Myoporum
(*Myoporum laetum*)
New Zealand Christmas Tree
(*Metrosideros excelsus*)
Oak
(*Quercus*)
Oak, Water
(*Quercus nigra*)
Oak, Willow
(*Quercus phellos*)
Olive Tree
(*Olea europaea*)
Olive, Russian
(*Elaeagnus angustifolia*)
Orchid Tree, Purple
(*Bauhinia variegata*)
Osage Orange
(*Maclura pomifera*)
Palm, Mediterranean fan
(*Chamaerops humilis*)
Palm, Pygmy Date
(*Phoenix roebelenii*)
Palm, Queen
(*Arecastrum romanzoffianum*)
Palm, Sago
(*Cycas revoluta*)
Palm, Windmill
(*Tracheocarpus fortunei*)
Palo Verde, Green
(*Parkinsonia aculeata*)
Paulownia Royal
(*Paulownia tomentosa*)
Pear, Common
(*Pyrus communis*)
Pear, Evergreen
(*Pyrus kawakamii*)
Pear, Ussurian
(*Pyrus ussuriensis*)
Pepper, Brazilian
(*Schinus terebinthifolius*)
Pine, Aleppo
(*Pinus halepensis*)
Pine, Austrian
(*Pinus nigra*)
Pine, Canary Island
(*Pinus canariensis*)
Pine, Caribbean Slash
(*Pinus caribaea*)
Pine, Italian Stone
(*Pinus pinea*)
Pine, Jack
(*Pinus banksiana*)
Pine, Japanese Black
(*Pinus thunbergii*)
Pine, Loblolly
(*Pinus taeda*)
Pine, Mugho
(*Pinus mugho*)
Pine, Ponderosa, Western yellow
(*Pinus ponderosa*)
Pine, Red
(*Pinus resinosa*)
Pine, Scotch
(*Pinus sylvestris*)
Pine, Shore
(*Pinus contra*)
Pine, Slash
(*Pinus ellottii*)

Listed by scientific name

Metrosideros excelsus
(New Zealand Christmas Tree)
Mimosa pudica
(Sensitive Plant)
Myoporum laetum
(Myoporum)
Olea europaea
(Olive Tree)
Parkinsonia aculeata
(Palo Verde, Green)
Paulownia tomentosa
(Paulownia, Royal, Empress Tree)
Phoenix roebelenii
(Palm, Pygmy Date)
Picea abies
(Spruce, Norway)
Picea glauca
(Spruce, White)
Picea glauca
(Spruce, Black Hills)
(var: *Densata*)
Picea pungens
(Spruce, Colorado Blue)
Pinus banksiana
(Pine, Jack)
Pinus canariensis
(Pine, Canary Island)
Pinus caribaea
(Pine, Caribbean slash)
Pinus contra
(Pine, Shore)
Pinus ellottii
(Pine, Slash)
Pinus halepensis
(Pine, Aleppo)
Pinus mugo mugo
(Pine, Mugho)
Pinus nigra
(Pine, Austrian Black)
Pinus palustris
(Pine, Southern, Long Leaf)
Pinus parviflora
(Pine, Japanese White)
Pinus pinea
(Pine, Italian Stone)
Pinus ponderosa
(Pine, Ponderosa, Yellow)
Pinus resinosa
(Pine, Red)
Pinus strobus
(Pine, White)
Pinus sylvestris
(Pine, Scotch)
Pinus taeda
(Pine, Loblolly)
Pinus thunbergiana
(Pine, Japanese Black)
Pinus virginiana
(Pine, Virginia)
Pittosporum phylliraeoides
(Willow, Desert)
Platanus occidentalis
(Sycamore)
Podocarpus macrophyllus
(Pine, Yew)
Populus alba
(Poplar, White)

Trees (continued)
Listed by common name

Pine, Southern
(Pinus palustris)
 Pine, Virginia
(Pinus virginiana)
 Pine, White
(Pinus strobus)
 Pine, White, Japanese
(Pinus parviflora)
 Pine, Yew
(Podocarpus macrophyllus)
 Plum, Wild
(Prunus americana)
 Poplar, Hybrid
(Populus alba)
 Popular, Yellow, Tulip Tree
(Liriodendron tulipifera)
 Purpleleaf, Bailey Acacia
(Acacia baileyana)
 Redwood, Coast
(Sequoia sempervirens)
 Sandcherry, Western
(Prunus besseyi)
 Sensitive Plant
(Mimosa pudica)
 Silk Tree
(Albizia julibrissin)
 Spruce, Black Hills (var. *Densata*)
(Picea glauca)
 Spruce, Colorado Blue
(Picea pungens)
 Spruce, Norway
(Picea abies)
 Spruce, White
(Picea glauca)
 Strawberry Tree
(Arbutus unedo)
 Sumac, Standard, African
(Rhus lancea)
 Sweet Gum
(Liquidambar styraciflua)
 Sycamore
(Platanus occidentalis)
 Tea Tree, Australian
(Leptospermum laevigatum)
 Tipu Tree
(Tipuana tipu)
 Walnut, Black
(Juglans nigra)
 Weeping Fig, Exotica
(Ficus benjamina)
 Willow
(Salix matsudana tortuosa)
 Willow, Australian
(Geijera parviflora)
 Willow, Desert
(Pittosporum phylliraeoides)
 Willow, Peppermint
(Agonis flexuosa)
 Yate, Bushy
(Eucalyptus lehmannii)
 Yew, English
(Taxus baccata)

Listed by scientific name

Prunus americana
 (Plum, Wild)
Prunus besseyi
 (Sandcherry, Western)
Prunus caroliniana "compacta"
 (Cherry, Carolina)
Prunus mahaleb
Prunus myro
Prunus serotina
 (Cherry, Black)
Pseudotsuga menziesii
 (Fir, Douglas)
Psidium littorale
 (Guava)
Pyrus communis
 (Pear, Common)
Pyrus kawakamii
 (Evergreen Pear)
Pyrus ussuriensis
 (Pear, Ussurian)
Quercus
 (Oak)
Quercus nigra
 (Oak, Water)
Quercus phellos
 (Oak, Willow)
Rhus lancea
 (Sumac, African Standard)
Robinia pseudoacacia
 (Locust, Black)
Salix matsudana tortuosa
 (Willow)
Schinus terebinthifolius
 (Pepper, Brazilian)
Sequoia sempervirens
 (Coast, Redwood)
Sorbus aucuparia
 (Ash, Mountain)
Sorbus americana decora
 (Ash, Mountain)
Taxus baccata
 (Yew, English)
Thuja occidentalis
 (Arborvitae, American)
 (var: Teehny)
Thuja orientalis
 (Berkmans, Oriental Arborvitae)
Tilia americana
 (Linden, American Basswood)
Tilia cordata
 (Linden, Little-leaf)
Tipuana tipu
 (Tipu Tree)
Tracheocarpus fortunei
 (Palm, Windmill)
Tristania conferta
 (Brisbane Box Tree)
Tsuga canadensis
 (Hemlock, Canadian)
Ulmus parvifolia
 (Elm, Chinese Evergreen)

Shrubs

Listed by common name

Abelia, Glossy
 (*Abelia grandiflora*)
 Acacia, Bailey
 (*Acacia baileyana*)
 Acacia, Knife Leaf
 (*Acacia cultriformis*)
 Acacia, Prostrate
 (*Acacia redolens*)
 Acacia, Sydney Golden Wattle
 (*Acacia longifolia*)
 Andromeda
 (*Pieris japonica*)
 Arborvitae, Oriental
 (*Platycladus orientalis*)
 Arrowwood, Southern
 (*Viburnum dentatum*)
 Azalea, Mollis hybrid
 (*R. x kosterianum*)
 Azalea, Northern Lights Hybrid
 (*R x kosterianum x R prinophyllum*)
 Bamboo, Heavenly
 (*Nandina domestica*)
 Barberry, Japanese
 (*Berberis thunbergii*)
 Barberry, Korean
 (*Berberis koreana*)
 Barberry, Redleaf
 (*Berberis virginian*)
 Bird of Paradise Bush
 (*Caesalpinia gillesii*)
 Bluebeard
 (*Caryopteris clandonensis*)
 Boxwood, Common
 (*Buxus sempervirens*)
 Boxwood, African
 (*Myrsine africana*)
 Boxwood, Japanese
 (var: *Japonica*)
 (*Buxus microphylla*)
 Buckthorn, Glossy, Alder
 (*Rhamnus frangula*)
 Camellia
 (*Camellia japonica*)
 Camellia
 (*Camellia sasanqua*)
 Cedar, Eastern Red
 (var: *Pyramidiiformus, canearit*)
 (*Juniperus virginiana*)
 Cherry, Brush
 (*Eugenia myrtifolia*)
 Cherry, Manchu, Nanking
 (*Prunus tomentosa*)
 Chokecherry sp.
 (*Aronia meloelata*)
 Copper Plant, Caribbean
 (*Euphorbia cotinifolia*)
 Cotoneaster, Bearberry
 (*Cotoneaster dammerii*)
 Cotoneaster, Cranberry
 (*Cotoneaster apiculata*)
 Cotoneaster 'lowfast'
 Cotoneaster, Peking
 (*Cotoneaster acutifolia*)
 Coyote Bush
 (*Baccharis pilularis*)
 Cranberry Bush, American
 (*Viburnum trilobum*)
 Cranberry Bush, Golden
 (*Viburnum opulus aureum*)

Listed by scientific name

Abelia grandiflora
 (Abelia, Glossy)
Acacia baileyana
 (Acacia, Bailey)
Acacia cultriformis
 (Acacia, Knife Leaf)
Acacia longifolia
 (Acacia, Sydney Golden Wattle)
Acacia redolens
 (Acacia, Prostrate)
Alyogyne huegelli
 (Hibiscus, Blue)
Amelanchier alnifolia
 (Serviceberry, Saskatoon)
 (var: Regent)
Amelanchier laevis
 (Serviceberry, Allegheny)
Aronia meloelata
 (Chokecherry sp.)
Baccharis pilularis
 (Coyote Bush)
Berberis koreana
 (Barberry, Korean)
Berberis thunbergii
 (Barberry, Japanese)
 (var: Crimson pygmy)
Berberis virginian
 (Barberry, Redleaf)
Brunfelsia calycina
 (Yesterday-Today-and-Tomorrow)
Buxus microphylla
 (Boxwood, Japanese)
 (var: Japonica)
Buxus sempervirens
 (Boxwood, Common)
Caesalpinia gillesii
 (Bird of Paradise Bush)
Calliandra haematocephala
 (Pink Powder Puff)
Camellia japonica
 (Camellia)
Camellia sasanqua
 (Camellia)
Carissa grandiflora
 (Palm, Natal)
 (var: Green Carpet, Tuttle)
Caryopteris clandonensis
 (Bluebeard)
Ceanothus griseus
 (Mountain lilac, Carmel Creeper)
Cistus purpureus
 (Orchid rockrose)
Coprosma 'coppershine'
Coprosma repens
 (Mirror Plant)
Cornus stolonifera
 (Dogwood, Red Osier)
Correa pulchella
 (Fuchsia, Australian)
Cortaderia selloana
 (Pampas grass)
Cotoneaster acutifolius
 (Cotoneaster, Peking)
Cotoneaster apiculata
 (Cotoneaster, Cranberry)
Cotoneaster dammerii
 (Cotoneaster, Bearberry)
 (var: Coral Beauty)
Cotoneaster 'lowfast'

Shrubs (continued)
Listed by common name

Crape Myrtle
(*Lagerstromia indica*)
Currant, Alpine
(*Ribes alpinum*)
Dogwood, Red Osier
(*Cornus stolonifera*)
Elaeagnus
(*Elaeagnus umbellata*)
Escallonia
(*Escallonia fradesii*)
(*Escallonia rubia*)
Euonymus, Evergreen
(var. Golden, Silver King)
(*Euonymus japonica*)
Euonymus, Winged
(*Euonymus alata*)
Fig, Creeping
(*Ficus repens*)
Firethorn
(*Pyracantha graben*)
Forsythia, Greenstem
(*Forsythia viridissima bronxeniss*)
Flax, New Zealand
(*Phormium tenax*)
Fuchsia, Australian
(*Correa pulchella*)
Gardenia (var. Mystery, Radicans)
(*Gardenia augusta*)
(*Gardenia jasminoides*)
Gardenia, Dwarf (var. Veitchii)
(*Gardenia jasminoides*)
Gold Vine, Guinea
(*Hibbertia scandens*)
Hakea
(*Hakea proteacea*)
Hawthorn, Indian
(*Phaphiolepis indica*)
Hibiscus, Blue
(*Alyogyne huegelli*)
Hibiscus, Chinese
(*Hibiscus rosa-sinensis*)
Holly, Dwarf Burford
(var. Burfordii Nana)
(*Ilex cornuta*)
Honeysuckle, Bush
(*Diervilla lonicera*)
Honeysuckle, Cape
(*Tecomaria capensis*)
Hydrangea
(*Hydrangea macrophylla*)
Jasmine Asiatic
(*Trachelospermum asiaticum*)
Jasmine, Orange
(*Murraya paniculata*)
Jasmine, Star
(*Trachelospermum jasminoides*)
Jasmine, Winter
(*Jasminum nudiflorum*)
Jessamine, Carolina
(*Gelsemium sempervirens*)
Jojoba
(*Simmondsia chinensis*)
Juniper, Chinese (var. Maneyi, Old Gold, Pfitzerana,
Sea Green, Hekii, Nana, Torulosa, Pfitzerana
Aurea, Pfitzer, Golden Pfitzer)
(*Juniperus chinensis*)

Listed by scientific name

Diervilla lonicera
(Honeysuckle, Bush)
Dodonaea viscosa
(Purple Hop Bush)
(var: Purpurea)
Duranta stenostachya
(Sky Flower, Brazilian)
Elaeagnus pungens
(Silverberry)
Elaeagnus umbellata
(Elaeagnus)
Escallonia exoniensis
(Escallonia)
Escallonia fradesii
(Escallonia)
Escallonia rubra
(Escallonia)
Eugenia myrtifolia
(Brush Cherry)
Euonymus alata
(*Euonymus*, Winged)
Euonymus japonica
(*Euonymus*, Evergreen)
(var: Golden, Silver King)
Euonymus kiautschovica
(Spindle tree)
Euphorbia cotinifolia
(Copper Plant, Caribbean)
Ficus repens
(Fig, Creeping)
Forsythia viridissima bronxeniss
(Forsythia, Greenstem)
Gardenia augusta
(Gardenia) (var: Mystery)
Gardenia jasminoides
(Gardenia) (var: Mystery, Radicans)
(Gardenia, Dwarf) (var: Veitchii)
Gelsemium sempervirens
(Jessamine, Carolina)
Grewia occidentalis
(Lavender, Star Plant)
Hakea proteacea
(Hakea)
Hebe 'coed'
(Veronica) (var: Coed)
Heteromeles arbutifolia
(Toyon, California Holly)
Hibbertia scandens
(Gold Vine, Guinea)
Hibiscus rosa-sinensis
(Hibiscus, Chinese)
Hydrangea macrophylla
(Hydrangea)
Ilex cornuta
(Dwarf Burford Holly)
(var: Burfordii Nana)
Jasminum nudiflorum
(Winter Jasmine)
Juniperus chinensis
(Juniper, Chinese)
(var: Maneyi, Old Gold, Pfitzerana Sea Green,
Hetzii, Torulosa Nana, Gold Coast, Pfitzerana
aurea, Pfitzer, Golden Pfitzer, San Jose, San Jose
Variegated, Blue Gold)
Juniperus conferta
(Juniper, Shore) (var: Compacta)

Shrubs (continued)
Listed by common name

Juniper, Creeping (var: *Bluechip*, *Hughes*, *Plumosa*,
Prince of Wales, *Webberi*, *Wiltonii*, *Bar Harbor*,
Andorra, *Variegata*, *Youngstown Blue Rug*)
(Juniperus horizontalis)

Juniper, Ozark
(Juniperus sp.)

Juniper, Rocky Mountain (var: *Blue Heaven*, *Welchii*,
Wichita Blue, *Medova*, *Moffet*, *Pyramidal Green*,
Springtime, *Admiral*)
(Juniperus scopulorum)

Juniper, Savin
 (var: *Skandia*, *Arcadia*, *Broadmoor*, *Buffalo*, *Pepin*)
(Juniperus sabina)

Juniper, Shore (var: *Compacta*)
(Juniperus conferta)

Juniper, Tam (var: *Tamariscifolia*)
(Juniperus sabina)

Lantana, Purple Trailing
(Lantana montevidensis)

Laurustinus
(Viburnum tinus)

Lemonade Berry
(Rhus integrifolia)

Lilac, Common Purple
(Syringa vulgaris purpurea)

Liriope, Green
(Liriope muscari)

Liriope, Variegated
(Liriope muscari)

Mickey Mouse Bush
(Ochna serrulata)

Mirror Plant
(Coprosma repens)

Mock Orange
(Pittosporum tobira)

Mountain Lilac, Carmel Creeper
(Ceanothus griseus)

Myrtle, Dwarf
(Myrtus communis compacta)

Nandina, Heavenly Bamboo
(Nandina domestica)

Nannyberry
(Viburnum lantago)

Ninebark
(Physocarpus opulifolius)

Ninebark (var: *Aureus*)
(Physocarpus opulifolius nanus)

Oleander
(Nerium oleander)

Orchid, rockrose
(Cistus purpureus)

Oregon Grape
(Mahonia aquifolium)

Osmanthus, Holly-leaf
(Osmanthus heterophyllum)

Osmanthus, Sweet Olive
(Osmanthus fragrans)

Palm, Natal
 (var: *Green Carpet Tuttle*)
(Carissa grandiflora)

Pampas Grass
(Cortaderia selbana)

Photinia
(Photinia sp.)

Photinia, Fraser
(Photinia fraser)

Pink Lady
(Rahioleis indica)

Listed by scientific name

Juniperus horizontalis
 (Juniper, Creeping)
 (var: *Bluechip*, *Hughes*, *Plumosa*, *Prince of Wales*,
Webberi, *Wiltonii*, *Bar Harbor*, *Andorra*, *Blue Rug*,
Youngstown, *Variegata*)

Juniperus scopulorum
 (Juniper, Rocky Mountain)
 (var: *Blue Heaven*, *Welchii*, *Wichita Blue*, *Medova*,
Moffetii, *Pyramidal Green*, *Springtime*, *Admiral*)

Juniperus sabina
 (Juniper, Savin)
 (var: *Skandia*, *Arcadia*, *Broadmoor*, *Buffalo*, *Pepin*,
Tamariscifolia)

Juniperus virginiana
 (Cedar, Eastern Red)
 (var: *Pyramidiformis*, *Canerti*)

Juniperus sp.
 (Juniper, Ozark)

Lagestromia indica
 (Crape Myrtle)

Lantana montevidensis
 (Purple Lantana, Trailing)

Leptospermum laevigatum
 (Tea Tree, Australian)

Leptospermum scoparium
 (Tea Tree, New Zealand)
 (var: *Rudy Glow*)

Leucophyllum frutescens
 (Texas Ranger)

Ligustrum indica
 (Privet)

Ligustrum japonicum
 (Privet, Waxleaf, Japanese)

Ligustrum lucidum
 (Privet, Glossy) (var: *Lake Tresca*)

Ligustrum texanum
 (Privet, Texas)

Liriope muscari
 (Liriope, Green)

Liriope muscari
 (Liriope, Variegated)
 (var: *Variegata*)

Lycianthes rantonnetii

Mahonia aquifolium
 (Oregon Grape)

Murraya paniculata
 (Jasmine, Orange)

Myrsine africana
 (Boxwood, African)

Myrtus communis compacta
 (Dwarf Myrtle)

Nandina domestica
 (Nandina, Heavenly Bamboo)

Nerium oleander
 (Oleander)

Ochna serrulata
 (Mickey Mouse Bush)

Osmanthus fragrans
 (Osmanthus, Sweet Olive)

Osmanthus heterophyllum
 (Osmanthus, Holly-leaf)

Pandorea rosea
 (Pink Trumpet Vine)

Phormium tenax
 (Flax, New Zealand)

Photinia fraser
 (Photinia, Fraser)

Photinia sp.
 (Photinia)

Shrubs (continued) **Listed by common name**

Pink Powder Puff
(*Calliandra haematocephala*)
Pittosporum, Variegated Japanese
(*Pittosporum tobira variegata*)
Plumbago, Cape
(*Plumbago capensis*)
Podocarpus, Yew
(*Podocarpus macrophyllus*)
Princess Flower
(*Tibouchina urvilleana*)
Privet
(*Ligustrum indica*)
Privet, Glossy (var: Lake Tresca)
(*Ligustrum lucidum*)
Privet, Japanese, Waxleaf
(*Ligustrum japonicum*)
Privet, Texas
(*Ligustrum texanum*)
Purple Hop Bush
(*Dodonaea viscosa*)
Pyracantha
(*Pyracantha graberii*)
Rhododendron - Azalea (var. *Hinocrimson*,
Hershey Red, Coral Blue, Hinodigiri,
Christmas Cheer, Pink Ruffle, Formosa Flame,
Delaware Valley White, New White)
(*Rhododendron* sp.)
Sandcherry, Purpleleaf
(*Prunus cistena*)
Serviceberry, Allegheny
(*Amelanchier laevis*)
Serviceberry Saskatoon (var. *Regent*)
(*Amelanchier alnifolia*)
Silver King
(*Euonymus japonica*)
Sky Flower, Brazilian
(*Duranta stenostachya*)
Snowball Bush
(*Viburnum opulus sterilis*)
Spindle Tree
(*Euonymus kiautschovica*)
Spiraea
(*Spiraea vanhouttei*)
Spiraea (var: Anthony Waterer, Froebellii, Goldflame)
(*Spiraea bumalda*)
Spiraea (var. *Fairy Queen*)
(*Spiraea trilobata*)
Spiraea (var. *Snowbound*)
(*Spiraea nipponica*)
Star Plant, Lavender
(*Grewia occidentalis*)
Tea Tree, Australian
(*Leptospermum laevigatum*)
Tea Tree, New Zealand
(var: *Red Glow*)
(*Leptospermum scoparium*)
Texas Ranger
(*Leucophyllum frutescens*)
Toyon, California Holly
(*Heteromeles arbutifolia*)
Trumpet Vine, Pink
(*Pandorea rosea*)
Veronica
(*Hebe 'Coed'*)
Viburnum, Japanese
(*Viburnum japonicum*)
Viburnum, Sandankwa
(*Viburnum suspensum*)

Listed by scientific name

Physocarpus opulifolius nanus
(Ninebark) (var: *Aureus*)
Physocarpus opulifolius
(Ninebark)
Pieris japonica
(Andromeda)
Pittosporum tobira
(Wheeler's Dwarf, variegated)
(var: *Wheeler*)
Pittosporum tobira variegata
(Pittosporum, Variegated Japanese)
Platycladus orientalis
(Arborvitae, Oriental)
Plumbago capensis
(Plumbago, Cape)
Podocarpus macrophyllus
(Yew, Podocarpus, Pine)
Prunus cistena
(Sandcherry, Purpleleaf)
Prunus tomentosa
(Cherry, Manchou, Nanking)
Pyracantha fortuneana
(Pyracantha, Firethorn)
Rhamnus frangula
(Buckthorn, Glossy, Alder)
Raphiolepis indica
(Pink Lady, Indian Hawthorn)
Rhododendron sp.
(Rhododendron - Azalea)
(var: *Hinocrimson*, *Hershey Red*, *Coral Blue*,
Hinodigiri *Christmas Cheer*, *Pink Ruffle*, *Formosa*
Flame, *Delaware Valley White*, *New White*)
R. x kosterianum
(Azalea, Mollis hybrid)
R. x kosterianum x R. priniphyllum
(Azalea, Northern lights hybrid)
Rhus integrifolia
(Lemonade Berry)
Ribes alpinum
(Currant, Alpine)
Rose banksiae
(Lady Banks' Rose)
Sarcococca ruscifolia
Simmondsia chinensis
(Jojoba)
Spiraea bumalda
(Spiraea) (var: Anthony Waterer Froebellii,
Goldflame)
Spiraea nipponica tosaensis
(Spiraea) (var: *Snowbound*)
Spiraea trilobata
(Spiraea) (var: *Fairy Queen*)
Spiraea vanhouttei
(Spiraea)
Syringa vulgaris purpurea
(Lilac, Common Purple)
Taxus cuspidata vigatum
(Yew)
Tecoma stans
(Yellow Bells, Yellow Trumpet Flower)
Tecomaria capensis
(Honeysuckle, Cape)
Ternstroemia gymnanthera
(Ternstroemia)
Thevetia peruviana
(Oleander, Yellow)
Tibouchina urvilleana
(Princess Flower)

Shrubs (continued)
Listed by common name

Wayfaring Tree
(*Viburnum lantanoides*)
Weeping Fig, Exotica
(*Ficus benjamina*)
Wheeler's Dwarf, Variegated
(var: *Wheeler*)
(*Pittosporum tobira*)
Yellow Bells
(*Tecoma stans*)
Yesterday-Today-and-Tomorrow
(*Brunfelsia calycina*)
Yew
(*Taxus cuspidata vigatum*)

Ornamentals, Bedding plants
Listed by common name

Alyssum
(*Alyssum* sp.)
Asparagus, Myers (var. *Meyeri*)
(*Asparagus densiflorus*)
Asparagus, Sprenger (var. *Sprengeri*)
(*Asparagus densiflorus*)
Aster, New York
(*Aster novi-belgii*)
Aster, Stokes (var: Blue, White)
(*Stokesia cyanaea*)
Baby's Breath (var: Bristle Fairy)
(*Gypsophila paniculata*)
Begonia
(*Begonia semperflorens*)
Bellflower, Tussock (var: Canterbury Bells)
(*Campanula carpatia*)
Bittersweet, American
(*Calcestrus scandens*)
Black-eyed Susan (var: Goldilocks)
(*Rudbeckia hirta*)
Bleeding Heart
(*Dicentra spectabilis*)
Butterfly Weed
(*Asclepias tuberosa*)
Bower Vine
(*Pandorea jasminoides*)
Cactus, Barrel
(*Echinocactus* sp.)
Candytuft
(*Iberis sempervirens*)
(*Iberis amara*)
Canna
(*Canna* sp.)
Cassia, Feathery
(*Cassia artemisioides*)
Chrysanthemum, Marguarite
(*Chrysanthemum frutescens*)
Chrysanthemum
(*Chrysanthemum indicum*)
Cockscomb
(*Celosia argentea*)
(*Canna*)
Coleus
(*Coleus blumei*)

Listed by scientific name

Trachelospermum asiaticum
(Jasmine, Asiatic)
Trachelospermum jasminoides
(Jasmine, Star)
Viburnum dentatum
(Arrowwood, Southern)
Viburnum japonicum
(Viburnum, Japanese)
Viburnum lentago
(Nannyberry)
Viburnum lantanoides
(Wayfaring Tree)
Viburnum opulus aureum
(Cranberry Bush, Golden)
Viburnum opulus sterilis
(Snowball Bush)
Viburnum suspensum
(Viburnum, Sandankwa)
Viburnum tinus
(Laurustinus)
Viburnum trilobum
(Cranberry Bush, American)

Listed by common name

Acorus gramineus
(Sweet Grass)
Achillea Millefolium
(Yarrow (var: Cerise Queen))
Achillea taygetea v.
(Yarrow, Debutante)
Agapanthus africanus
(Peter Pan, Lily of the Nile)
Allium tuberosum
(Chives, Chinese, Garlic, Oriental)
Alyssum sp.
(Alyssum)
Antirrhinum majus
(Snapdragon)
Arenaria verna
(Moss Sandwort)
Arisaemia pusillum
(Jack-in-the-Pulpit)
Armeria maritima
(Sea Pinks, Thrift)
Asclepias tuberosa
(Butterfly Weed)
Asparagus densiflorus Sprengeri
(Asparagus, Sprenger)
Asparagus densiflorus
(Myers Asparagus) (var: *meyeri*)
Aster novi-belgii
(New York Aster)
Begonia semperflorens
(Begonia)
Bougianvillea sp.
(Raspberry Ice)
Calcestrus scandens
(Bittersweet, American)
Campanula carpatia
(Bellflower, Tussock (var: Canterbury Bells))
Canna sp.
(Canna)
Capsicum sp.
(Pepper, Ornamental)
Cassia artemisioides
(Cassia, Feathery)
Catharanthus roseus
(Periwinkle, Madagascar)

Ornamentals, Bedding plants (continued) Listed by common name

Coneflower, Purple (var: Gloriosa Dairy)
(*Echinacea purpurea*)
Coralbells
(*Heuchera sanguinea*)
Coreopsis (var: Sunray)
(*Coreopsis lanceolata*)
Cup of Gold Vine
(*Solandra maxima*)
Daffodil
(*Narcissus* spp.)
Dahlia
(*Dahlia pinnata*)
Daisy Bush
(*Euryops pectinatus*)
Daisy Bush, Blue
(*Felicia amellioides*)
Daisy, Shasta (var: Alaska)
(*Chrysanthemum maximum*)
Daylily
(*Hemerocallis hybrids*)
Dianthus
(*Dianthus deltoides*)
Dragonhead, False
(*Physostegia virginiana*)
Dusty Miller
(*Centaurea cineraria*)
Fern, Sprenger Asparagus
(*Asparagus densiflorus Sprengeri*)
Fescue, Blue
(*Festuca ovina*)
Flowering tobacco
(*Nicotiana* sp.)
Fountain Grass, Red
(*Pennisetum setaceum*)
Gazania
(*Gazania ringens leucolaena*)
Gazania
(*Gazania* sp.)
Geranium
(*Geranium* sp.)
Geranium, Martha Washington
(*Pelargonium domesticum*)
Gerbera Daisy
(*Gerbera jamesonii*)
Geum (var: Lady Strathedon, Mrs. Bradshaw,
Mrs. Bradshaw Improved)
(*Geum quellyon*)
Gladiolus
(*Gladiolus* sp.)
Heather, False
(*Cuphea hyssopifolia*)
Honeysuckle, Amar
(*Lonicera maachii*)
Honeysuckle, Fly
(var: Emerald Mound, Clavey's Dwarf)
(*Lonicera xylosteum*)
Honeysuckle, Japanese
(*Lonicera japonica*)
Honeysuckle, Morrow
(*Lonicera morrowii*)
Honeysuckle, Tatarian (var: Zabeli)
(*Lonicera tatarica*)
Hopseed Bush, Purple
(var: Purpurea)
(*Dodonaea viscosa*)
Impatiens
(*Impatiens* sp.)
Iris
(*Iris* sp.)

Listed by scientific name

Ceanothus griseus
(Lilac, Mountain)
Celosia argentea
(Cockscomb)
Centaurea cineraria
(Dusty Miller)
Chrysanthemum frutescens
(Chrysanthemum, Marguerite)
Chrysanthemum indicum
(Chrysanthemum)
Chrysanthemum maximum
(Daisy, Shasta)
Cissus rhombifolia
(Ivy, Grape)
(var: Ellen Danica)
Clytostoma callistegioides
(Trumpet Vine, Lavender)
Coleus blumei
(Coleus)
Convallaria majalis
(Lily-of-the-Valley)
Coprosma baurei
(Mirror Plant)
Coprosma repens
(Mirror Plant, Variegated)
Coreopsis lanceolata
(Coreopsis (var: Sunray))
Crassula argentea
(Jade Plant)
Cuphea hyssopifolia
(Heather, False)
Dahlia pinnata
(Dahlia)
Dianthus barbatus
(Sweet William)
Dianthus deltoides
(Dianthus)
Dicentra spectabilis
(Bleeding Heart)
Dietes bicolor
(Iris, African)
Distictis buccinatoria
(Trumpet Vine, Blood Red)
Dodonaea viscosa
(Hopseed Bush)
(var: Purpurea)
Echinocactus sp.
(Cactus, Barrel)
Echinacea purpurea
(Coneflower, Purple (var: Gloriosa Dairy))
Euryops pectinatus
(Daisy Bush)
Felicia amellioides
(Daisy Bush, Blue)
Festuca ovina glauca
(Fescue, Blue)
Gazania sp.
(Gazania)
Gazania ringens leucolaena
(Gazania)
Geranium sp.
(Geranium)
Gerbera jamesonii
(Daisy, Gerbera, Transvaal)
Geum quellyon
(Geum (var: Lady Strathedon, Mrs. Bradshaw,
Mrs. Bradshaw Improved))
Gladiolus sp.
(Gladiolus)

Ornamentals, Bedding plants (continued)
Listed by common name

Iris, African
 (*Iris bicolor*)
 Ivy, Grape
 (var: *Ellen Danica*)
 (*Cissus rhombifolia*)
 Jack-in-the-Pulpit
 (*Arisaema pusillum*)
 Mrs. Bradshaw Improved))
 Jade Plant
 (*Crassula argentea*)
 Jasmine, Madagascar
 (*Stephanotis floribunda*)
 Lamb's Ear
 (*Stachys lanata*)
 Lavender, English
 (*Lavandula vera*)
 Lavender, French
 (*Lavandula dentata*)
 Lavender, Cotton
 (*Santolina chamaecyparissus*)
 Lilac, Chinese
 (*Syringa chinensis*)
 Lilac, Common Purple
 (var: *Charles Joly*, *Ludwig Spaeth*, *Jay Tree*)
 (*Syringa vulgaris purpurpa*)
 Lilac, Meyer (var: *Palibin*)
 (*Syringa* sp.)
 Lilac, Korean
 (var: *Miss Kim*)
 (*Syringa patula*)
 Lilac, Mountain
 (*Ceanothus griseus*)
 Lily-of-the-Nile, Peter Pan
 (*Agapanthus africanus*)
 Lily-of-the-Valley
 (*Convallaria majalis*)
 Lobelia
 (*Lobelia erinus*)
 Marigold
 (*Tagetes* sp.)
 Mirror Plant
 (*Coprosma baueri*)
 Mirror Plant, Variegated
 (*Coprosma repens*)
 Moneywort, Creeping Jenny
 (*Lysimachia nummularia*)
 Moss, Rose
 (*Portulaca grandiflora*)
 Moss, Sandwort
 (*Arenaria verna*)
 Pansy, Johnny-Jump-Up
 (*Viola tricolor*)
 Pepper, Ornamental
 (*Capsicum* sp.)
 Periwinkle, Madagascar
 (*Catharanthus roseus*)
 Periwinkle
 (*Vinca minor*)
 Petunia
 (*Petunia* sp.)
 Phlox, Perennial
 (*Phlox paniculata*)
 Plantain Lily
 (*Hosta* sp.)
 Purple Loosestrife
 (var: *Morden's Gleam*)
 (*Lythrum virgatum*)

Listed by scientific name

Gypsophila paniculata
 (Baby's Breath (var: *Bristo Fairy*))
Hardenbergia violacea
Hemerocallis Hybrids
 (Daylily)
Heuchera sanguinea
 (Coralbells)
Hosta sp.
 (Lily, Plantain)
Iberis amara
 (Candytuft)
Iberis sempervirens
 (Candytuft)
Impatiens sp.
 (Impatiens)
Iris sp.
 (Iris)
Justicia brandegeana
 (Shrimp Plant)
Lavandula dentata
 (Lavender, French)
Lavandula vera
 (Lavender, English)
Limonium perezii
 (Statice, Perennial)
Lobelia erinus
 (Lobelia)
Lonicera japonica
 (Honeysuckle, Japanese)
Lonicera maackii
 (Honeysuckle, Amar)
Lonicera morrowii
 (Honeysuckle, Morrow)
Lonicera tatarica
 (Honeysuckle, Tatarian) (var: *Zabeli*)
Lonicera xylosteum
 (Honeysuckle, Fly)
 (var: *Emerald Mound*, *Clavey's Dwarf*)
Lysimachia nummularia
 (Moneywort, Creeping Jenny)
Lythrum virgatum
 (Loosestrife, Purple)
 (var: *Morden's Gleam*)
Macfadyena unguis-cati
 (Yellow Trumpet)
Mattiola incana
 (Stock)
Narcissus spp.
 (Daffodil)
Nicotiana sp.
 (Tobacco, Flowering)
Pandorea jasminoides
 (Vine, Bower)
Pandorea rosea
 (Pink Trumpet Vine)
Pelargonium domesticum
 (Geranium, Martha Washington)
Pennisetum setaceum
 (Fountain Grass, Red)
Petunia sp.
 (Petunia)
Phlox paniculata
 (Phlox, Perennial)
Portulaca grandiflora
 (Moss Rose)
Physostegia virginiana
 (Dragonhead, False)

Ornamentals, Bedding plants (continued)
Listed by common name

Raspberry Ice
(Bougainvillea sp.)
 Sage
(Salvia greggii)
 Sea Pinks, Thrift
(Armeria maritima)
 Sedum, Stonecrop
(Sedum x rubrotinctum)
(Lavender cotton)
 Shrimp Plant
(Justicia brandegeana)
 Sky Flower, Brazilian
(Duranta stenostachya)
 Snail Vine
(Vigna caracalla)
 Snapdragon
(Antirrhinum majus)
 Speedwell, Spike
(Veronica spicata)
 Statice, Perennial
(Limonium perezii)
 Stock
(Matthiola incana)
 Sweet Grass
(Acorus gramineus)
 Sweet William
(Dianthus barbatus)
 Transvaal Daisy
(Gerbera jamesonii)
 Trumpet Vine, Blood red
(Distictis buccinatoria)
 Trumpet Vine, Lavender
(Clytostoma callistegioides)
 Trumpet Vine, Pink
(Pandorea rosea)
 Tulip
(Tulipa spp.)
 Verbena
(Verbena sp.)
 Wandering Jew
(Tradescantia sp.)
 Wisteria
(Wisteria sinensis)
 Yarrow (var: Cerise Queen)
(Achillea Millefolium)
 Yarrow, Debutante
(Achillea taygetea v.)
 Yellow Trumpet
(Macfadyena unguis-cati)
 Zinnia
(Zinnia elegans)

Ground covers
Listed by common name

Aaron's Beard
(Hypericum calycinum)
 Aptenia (var: Red Apple)
(Aptenia cordifolia)
 Bergenia, Winter-blooming
(Bergenia crassifolia)
 Bugleweed
(Ajuga reptans)
 Capeweed
(Arctotheca calendula)
 Carpathian, Harebell
(Campanula carpatica)

Listed by scientific name

Rudbeckia hirta
 (Black-eyed Susan (var: Goldilocks))
Salvia greggii
 (Sage)
Santolina chamaecyparissus
Sedum x rubrotinctum
 (Sedum, Stonecrop)
Solandra maxima
 (Cup of Gold Vine)
Stachys lanata
 (Lamb's Ear)
Stephanotis floribunda
 (Jasmine, Madagascar)
Stokesia cyanaea
 (Aster, Stokes (var: Blue, White))
Syringa chinensis
 (Lilac, Chinese)
Syringa patula
 (Lilac, Korean)
 (var: Miss Kim)
Syringa sp.
 (Lilac, Meyer)
 (var: Palibin)
Syringa vulgaris purpurpa (Lilac, Common Purple)
 (var: Charles Joly, Ludwig Spaeth, Jay Tree)
Tagetes sp.
 (Marigold)
Tulipa spp.
 (Tulip)
Tradescantia sp.
 (Wandering Jew)
Verbena sp.
 (Verbena)
Veronica spicata
 (Spike Speedwell)
Vinca minor
 (Periwinkle)
Vigna caracalla
 (Snail Vine)
Viola tricolor
 (Pansy, Johnny-Jump-Up)
Wisteria sinensis
 (Wisteria)
Zinnia elegans
 (Zinnia)

Listed by scientific name

Ajuga reptans
 (Bugleweed)
Aptenia cordifolia
 (Aptenia) (var: Red Apple)
Arctotheca calendula
 (Capeweed)
Baccharis pilularis
 (Coyote Brush) (var: Twin Peaks)
Bergenia crassifolia
 (Bergenia, Winter-blooming)
Calocephalus brownii
 (Cushion bush)

Ground covers (continued)
Listed by common name

Cinquefoil, Spring
 (*Potentilla tabernaemontanii*)
 Coyote brush (var. Twin Peaks)
 (*Baccharis pilularis*)
 Crownvetch
 (*Coronilla varia*)
 Cushion Bush
 (*Calocephalus brownii*)
 Daisy, Trailing African, Freeway
 (*Osteospermum*)
 Daisy, White African
 (*Osteospermum fruticosum alba*)
 Gazania, Trailing
 (*Gazania regens leucolaena*)
 Green Carpet
 (*Hemaria glabra*)
 Ivy, Algerian
 (*Hedera canaiensis*)
 Ivy, Boston
 (*Parthenocissus tricuspidata*)
 Ivy, English
 (*Hedera helix*) (var. California)
 Ivy, Grape
 (var. Ellen Danica)
 (*Cissus rhombifolia*)
 Ivy, Hahn's (var. Hahnii)
 (*Hedera helix*)
 Lantana, Lavender
 (*Lantana montevidensis*)
 Lily-turf, Big Blue
 (*Liriope muscari*)
 Lippla
 (*Phyla nodiflora*)
 Mondo Grass
 (*Ophiopogon japonicus*)
 Myoporum (var. Prostratum)
 (*Myoporum parvifolium*)
 Pachysandra
 (*Pachysandra terminalis*)
 Periwinkle
 (*Vinca major*)
 Plumbago, Dwarf
 (*Ceratostigma plumbaginoides*)
 Pork and Beans
 (*Sedum rubrotinctum*)
 Rosea Ice Plant
 (*Drosanthemum floribundum*)
 Rosemary, Dwarf (var. Prostratus)
 (*Rosmarinus officinalis*)
 Rupture Wort
 (*Hemaria glabra*)
 St. Johnswort, Creeping
 (*Hypericum calycinum*)
 Stonecrop, Sedum
 (*Sedum rubrotinctum*)
 Verbena
 (*Verbena officinalis*)
 Verbena, Blue
 (*Verbena peruviana*)

Listed by scientific name

Campanula carpatica
 (Harebell, Carpathian)
Ceratostigma plumbaginoides
 (Plumbago, Dwarf)
Cissus rhombifolia
 (Ivy, Grape) (var. Ellen Danica)
Coronilla varia
 (Crownvetch)
Drosanthemum floribundum
 (Rosea Ice Plant)
Gazania regens leucolaena
 (Gazania, Trailing)
Hedera helix
 (Ivy, English) (var. California)
 (Hahn's Ivy) (var. Hahnii)
Hemaria glabra
 (Green Carpet, Rupture Wort)
Hypericum calycinum
 (Creeping St. Johnswort, Aaron's Beard)
Juniperus scopulorum
Lantana montevidensis
 (Lavender, Lantana)
Liriope muscari
 (Lily-turf, Big Blue)
Myoporum parvifolium
 (Myoporum) (var. Prostratum)
Ophiopogon japonicus
 (Mondo Grass)
Osteospermum fruticosum
 (Daisy, Trailing African, Freeway)
Osteospermum fruticosum alba
 (Daisy, White African)
Pachysandra terminalis
 (Pachysandra)
Parthenocissus tricuspidata
 (Ivy, Boston)
Phyla nodiflora
 (Lippia)
Potentilla cinerea
Potentilla tabernaemontanii
 (Cinquefoil, Spring)
Rosmarinus officinalis
 (Dwarf Rosemary) (var. Prostratus)
Sedum rubrotinctum
 (Stonecrop, Sedum, Pork & Beans)
Verbena officinalis
 (Verbena)
Verbena peruviana
 (Blue Verbena)
Vinca major
 (Periwinkle, Myrtle)

Nonbearing Food Crops and Nursery Liners

Almonds
Apples
Apricots
Asparagus
Avocados
Blackberries
Blueberries
Cherries
Crabapples
Cranberries
Dates
Figs

Grapes
Grapefruit
Lemons
Limes
Macadamia
Nectarines
Olives
Oranges
Peaches
Peanuts, Perennial*
Pears
Pecans
Pistachios
Plums

Pomegranates
Prunes
Raspberries
Tangelos
Tangerines
Walnuts

Do not apply to nonbearing food crops within 1 year of harvest.
* Not approved in California.

In limited testing with the following plants, some unacceptable phytotoxicity has been found, though

usually occurring at application rates above those recommended on the product label.

Listed by Common Name	Listed by Scientific Name
Trees	
Red Oak	<i>Quercus rubra</i>
White Oak	<i>Quercus alba</i>
Shrubs	
Azalea (var Snow)	<i>Rhododendron sp.</i>
Potentilla	<i>Potentilla fruticosa</i>
(var Jackmanni, K. VanDyke)	<i>Potentilla verna</i>
Privet, Japanese	<i>Ligustrum japonica</i>
Ornamental	
Snow-in-summer	<i>Cerastium tomentosum</i>

Wildflower

Common Name	Scientific Name	Common Name	Scientific Name
African daisy	<i>Dimorphotheca aurantiaca</i>	Johnny-jump-up	<i>Viola pedata</i>
Baby blue eyes	<i>Nemophila insignis</i>	Lance-leaved coreopsis	<i>Coreopsis lanceolata</i>
Baby snapdragon	<i>Linaria macrocanna</i>	Lemon mint	<i>Monarda citriodora</i>
Baby's breath	<i>Gypsophila muralis</i>	Liatris	<i>Liatris spicata</i>
Bachelor button	<i>Centaurea cyanus</i>	Lupine	<i>Lupinus spp.</i>
Bird's eyes	<i>Gilia tricolor</i>	Moss verbena	<i>Verbena tenuisecta</i>
Black eyed Susan	<i>Rudbeckia hirta</i>	New England aster	<i>Aster novi-angliae</i>
Blanketflower	<i>Gaillardia aristata</i>	Nodding catchfly pink	<i>Silene sp.</i>
Blue Fescue	<i>Festuca ovina glauca</i>	Oxeye daisy	<i>Chrysanthemum leucanthemum</i>
Blue flax	<i>Linum lewisii</i>	Painted daisy	<i>Chrysanthemum carinatum</i>
Butterflyweed	<i>Asclepias tuberosa</i>	Perennial lupine	<i>Lupinus perennis</i>
Calendula	<i>Calendula officinalis</i>	Plains coreopsis	<i>Coreopsis tinctoria</i>
California poppy	<i>Eschscholzia californica</i>	Poor man's weather glass	
Calliopsis	<i>Coreopsis tinctoria</i>	Prairie aster	<i>Machaeranthera tanacetifolia</i>
Candytuft	<i>Iberis sempervirens</i>	Purple coneflower	<i>Echinacea purpurea</i>
Camation	<i>Dianthus</i>	Purpleknot toadflax	<i>Linaria sp.</i>
Catchfly	<i>Silene armeria</i>	Queen Anne's lace	<i>Daucus carota</i>
Chicory	<i>Chicory intybus</i>	Red ribbons	<i>Clarkia concinna</i>
Chinese houses	<i>Collinsia heterophylla</i>	Rocket larkspur	<i>Delphinium ajacis</i>
Columbine	<i>Aquilegia spp.</i>	Sainfoin	<i>Conobrychis vicifolia</i>
Corn poppy	<i>Papaver rhoeas</i>	Sand bluebonnet	<i>Lupinus subcarneus</i>
Cornflower	<i>Centaurea cyanus</i>	Scarlet flax	<i>Linum rubrum</i>
Cosmos	<i>Cosmos bipinnatus</i>	Showy primrose	<i>Oenothera speciosa</i>
Creeping daisy		Siberian wallflower	<i>Cheiranthus spp.</i>
Dames rocket	<i>Hesperis matronalis</i>	Spurred snapdragon	<i>Linaria macrocanna</i>
Drummond phlox	<i>Phlox drummondii</i>	Stock	<i>Matthiola maritima</i>
Dwarf primrose	<i>Oenothera sp.</i>	Sulfur cosmos	<i>Cosmos sulfureus</i>
Firewheel	<i>Gaillardia pulchella</i>	Sweet alyssum	<i>Lobularia maritima</i>
Five spot cornflower	<i>Centaurea sp.</i>	Sweet William	<i>Dianthus barbatus</i>
Foxglove	<i>Digitalis purpurea</i>	Texas bluebonnet	<i>Lupinus texensis</i>
Godetia	<i>Clarkia amoena</i>	Tickseed	<i>Coreopsis lanceolata</i>
Grayhead coneflower	<i>Echinacea pallida</i>	Tidy tips	<i>Layia platyglossa</i>
Hard fescue	<i>Festuca longifolia</i>	Virginian stock	<i>Malcolmia maritima</i>
Indian blanket	<i>Gaillardia pulchella</i>	Wallflower	<i>Cheiranthus allionii</i>
Indian paintbrush	<i>Castilleja coccinea</i>	White yarrow	<i>Achillea millefolium</i>
Jewels of Opar	<i>Talinum paniculatum</i>		

The following are scientific names for the weeds listed in this label.

Grasses

Common Name	Scientific Name
Bahiagrass	<i>Paspalum notatum</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bentgrass, Highland/Colonial	<i>Agrostis tenuis</i>
Bermudagrass	<i>Cynodon dactylon</i>
Bluegrass, Annual	<i>Poa annua</i>
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>
Brome, Downy	<i>Bromus tectorum</i>
Centipedegrass	<i>Eremochloa ophiuroides</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>
, Smooth	<i>Digitaria ischaemum</i>
Cupgrass, Woolly	<i>Eriochloa villosa</i>
Fescue, Fine	<i>Festuca sp.</i>
, Chewings	<i>Festuca rubra</i>
, Creeping Red	<i>Festuca rubra</i>
, Hard	<i>Festuca longifolia</i>
, Rattail	<i>Festuca myuros</i>
, Sheep	<i>Festuca ovina</i>
, Tall	<i>Festuca arundinacea</i>
Foxtails, Giant	<i>Setaria faberi</i>
, Green	<i>Setaria viridis</i>
, Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Johnsongrass	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Lovegrass	<i>Eragrostis ciliaris</i>
Orchardgrass	<i>Dactylis glomerata</i>
Pigeon grass (See Foxtails)	
Panicum, Browntop	<i>Panicum fasciculatum</i>
, Fall	<i>Panicum dichotomiflorum</i>
, Texas	<i>Panicum texanum</i>
Quackgrass	<i>Agropyron repens</i>
Red Sprangletop	<i>Leptochloa filiformis</i>
Ryegrass, Annual	<i>Lolium multiflorum</i>
Sandbur, Field	<i>Cenchrus incertus</i>
Shattercane/Wildcane	<i>Sorghum bicolor</i>
Torpedograss	<i>Panicum repens</i>
Velvetgrass, German	<i>Holcus mollis</i>
Volunteer Barley	<i>Hordeum vulgare</i>
, Oats	<i>Avena sativa</i>
, Rye	<i>Secale cereale</i>
, Wheat	<i>Triticum aestivum</i>
Watergrass (See Barnyardgrass)	
Wild Oats	<i>Avena fatua</i>
Wild Proso Millet	<i>Panicum miliaceum</i>
Wiregrass (See Bermudagrass)	
Wirestem Muhly	<i>Muhlenbergia frondosa</i>
Witchgrass	<i>Panicum capillare</i>

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The Directions 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer.

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