

Please read instructions on reverse before completing form. Form Approved, OMB No. 2070-0060. Approval expires 05-31-98



United States Environmental Protection Agency Washington, DC 20460

<input type="checkbox"/> Registration
<input type="checkbox"/> Amendment
<input checked="" type="checkbox"/> Other

OPP Identifier Number
249355

Application for Pesticide - Section I

1. Company/Product Number 7969-88	2. EPA Product Manager R. Taylor	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Torpedo Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation Agricultural Products PO Box 13528 Research Triangle Park North Carolina 27709-3528 <input type="checkbox"/> 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

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)
Correction of previously submitted label; Torpedo Herbicide

Section - III

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

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name TR Nelsen	Title Manager Regulatory Affairs	Telephone No. (Include Area Code) (919) 547-2774
2. Signature 		6. Date Application Received (Stamped)
3. Title Manager Regulatory Affairs		
4. Typed Name TR Nelsen	5. Date 1/8/96	

BASF

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1/11/96 NOTIFICATION

Torpedo[®]

herbicide

Postemergence Grass Herbicide For use in citrus

Active Ingredient:

Sethoxydim 2-[1-(ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-

cyclohexen-1-one*13.0%

Inert Ingredients:87.0%

Total100.0%

*Equivalent to 1 pound per gallon

EPA Reg. No. 7969-88

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: 2.5 gallons

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

**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 ≥
14 mils, neoprene rubber ≥ 14
mils, or viton ≥ 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 man-
ner that meets the requirements
listed in the Worker Protection
Standard (WPS) for agricultural pes-
ticides [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, drink-
ing, 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 remov-
ing. 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 inter-
tidal 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 man-
ner that may kill or otherwise harm
an endangered or threatened
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 inconsis-
tent with its labeling.

Do not apply this product in a way
that will contact workers or other
persons, either directly or through
drift. Only protected handlers may
be in the area during application.
For any requirements specific to
your State or Tribe, consult the
agency responsible for pesticide
regulation.

Agricultural Use Requirements

Use this product only in accor-
dance with its labeling and with the
Worker Protection Standard, 40
CFR part 170. This standard con-
tains requirements for the protec-
tion of agricultural workers on
farms, forests, nurseries, and
greenhouses, and handlers of agri-
cultural pesticides. It contains
requirements for training, deconta-
mination, notification, and emer-
gency assistance; It also contains
specific instructions and excep-
tions pertaining to the statements
on this label about personal protec-
tive equipment (PPE), and restric-
ted-entry interval. The requirements
in this box only apply to uses of
this product that are covered by
the Worker Protection Standard.

Do not enter or allow worker entry
into treated areas during the
restricted entry interval (REI) of 12
hours.

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

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

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

Storage and Disposal

Do not contaminate water, food, or
feed by storage or disposal.
Pesticide wastes are toxic.

Improper disposal of excess pesti-
cide, spray mixture or rinsate is a
violation of federal law. If these
wastes cannot be disposed of
according to label instructions, con-
tact your State Pesticide or
Environmental Control Agency, or
the Hazardous Waste representa-
tive at the nearest EPA Regional
Office for guidance.

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

General Information

Torpedo® herbicide is a selective
broad spectrum postemergence
herbicide that may be used to con-
trol and suppress annual and
perennial grass weeds in bearing or
nonbearing orange, lemon, lime,
grapefruit, tangerine, and tangerine
hybrid crops.

Torpedo does not control sedges
or broadleaf weeds. Because all
grass crops (such as sorghum,
corn, small grains, and rice), as well
as ornamental grasses such as turf,
can be injured or killed by **Torpedo**,
avoid all direct or indirect contact
with any desired grass plants.

Nonbearing Citrus:

Citrus crops are tolerant to
Torpedo, but under some condi-
tions, a slight leaf speckling/leaf
burn can occur. Citrus plants will
outgrow these symptoms and later
growth is not affected.

Bearing Citrus:

Torpedo should be directed away
from citrus foliage as well as devel-
oping and mature fruit because
injury may occur under certain con-
ditions.

Consult **Restrictions and
Limitations** for the preharvest
interval.

Control Symptoms: Torpedo® herbicide rapidly enters the plant through the foliage and translocates throughout the plant. Control symptoms exhibited by grasses progress from a slowing and stopping of growth (generally within 2 days), to reddening of foliage, and leaf tip burn. Later, burnback of the foliage occurs. These symptoms will generally be observed within 3 weeks, depending on environmental conditions.

Prodigy™ System

Torpedo may be supplied in the **Prodigy System**, a unique, 120-gallon mini-bulk closed delivery system. It consists of a self-discharging tank that does not require any pumping mechanism, and has a dry lock connector which protects the user from exposure to tank contents.

Do not refill **Prodigy System**. Return **Prodigy System** to BASF for cleaning and refilling.

Torpedo in a dedicated, returnable **Prodigy System** can only be used with the closed **Prodigy System** in which it comes packaged.

See **Prodigy System Operating Procedure** below.

Prodigy System Operating Procedure

- 1) Install a male dry lock connector to the spray tank.
- 2) Connect the female dry lock connector (at the end of the hose attached to the tank) with the male dry lock connector installed on the spray tank.
- 3) Turn on the nitrogen gas supply.
- 4) Set measuring meter to zero.
- 5) Turn on the tank manifold until the desired amount of product, as indicated on the measuring meter, has been discharged into the spray tank.
- 6) Turn off the tank manifold to stop the discharge of product into the sprayer tank.
- 7) Disconnect the female dry lock connector on the tank hose from the male dry lock connector on the spray tank.
- 8) Turn off the nitrogen gas supply when the **Prodigy System** is empty, operation is completed or tank is ready to be returned to the point of purchase.

Application Information

Apply **Torpedo** to actively growing grasses before they exceed the maximum growth stage in **Tables 1 and 2**.

Thorough coverage of grass foliage is essential because the effectiveness of **Torpedo** depends on the absorption and movement of **Torpedo** throughout the plant. For this to occur, enough leaf surface must be treated to absorb **Torpedo**, and the grass must be actively growing to translocate **Torpedo** to the roots and buds.

Ground Applications

Spray equipment: Torpedo should be applied by handgun or boom application only. Direct the nozzles toward the grass foliage. Application to the soil is ineffective. Heavy tree growth that covers and protects grass weeds from spray coverage may reduce the activity of **Torpedo**.

Nozzle selection: Use standard high-pressure pesticide hollow cone or flat fan nozzles. Do not use flood or whirl chamber nozzles.

Spray gallonage: On a broadcast basis, 10-20 gallons of spray solution per acre should be used. Under most conditions, 10 gallons per acre is optimum.

Spray pressure: Adjust pressure to 40-60 psi (measured at the nozzle) when using standard high-pressure hollow cone or flat fan nozzles.

Other spray equipment: Do not apply **Torpedo** with control drop applicator (CDA) nozzles because erratic coverage can cause inconsistent weed control.

Do not use selective application equipment such as recirculating sprayers, wiper applicators, or shielded equipment.

Addition of Crop Oil Concentrate

A nonphytotoxic crop oil concentrate (commonly referred to as crop oil concentrate) should always be added to the spray tank. The crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria:

- be nonphytotoxic
- contain only EPA-exempt ingredients
- provide good mixing quality in the jar test (see next section)
- be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers that provide good mixing quality.

Highly refined vegetable oils have been observed to be more satisfactory than *unrefined vegetable oils*. For additional information, see **Jar Test for Estimating Suitability of Oil Concentrates**.

Rate of Crop Oil Concentrate: 1% by volume

Mixing

Fill the tank of a thoroughly clean sprayer half to two-thirds full with clean water. Start agitation and add oil concentrate; allow to mix thoroughly. Add **Torpedo** and the remaining volume of water. Apply **Torpedo** soon after mixing. Maintain constant agitation during application.

Jar Test for Estimating Suitability of Oil Concentrates

- 1) **Water supply:** Use only water from the intended source and at the source temperature.
- 2) **Amount of water in jar:** For 20 gallons per acre spray volume, use 3 1/3 cups (800 ml) of water. For 10 gallons per acre spray volume, use 1 2/3 cups (400 ml) of water. For 5 gallons per acre spray volume, use 5/6 cup (200 ml) of water. For other spray volumes, adjust proportionately to above.
- 3) **Amount of herbicide and oil concentrate to add:** Add 1 teaspoon (5 ml) of herbicide and oil concentrate for each pint of recommended label rate.
- 4) Add components in following sequence, gently mixing between component additions:
 - a) Crop oil concentrate
 - b) **Torpedo**
- 5) **Cap jar**, invert 10 cycles, let stand for 15 minutes, evaluate.
- 6) **Evaluation:** An ideal tank mix combination will be uniform, thus, the suitability of the crop oil concentrate is questionable if any of the following are observed:

Free oil at the surface-film or globules.

Flocculation-fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.

Clabbering-thickening texture (coagulated) resembling yogurt or a curdlike texture as with cottage cheese.

Attention! Clean the sprayer thoroughly before and after applying **Torpedo® herbicide**, particularly if a herbicide with the potential to injure the crop was used. Failure to clean the sprayer thoroughly after applying **Torpedo** may result in injury to any grass crop subsequently sprayed, such as corn, sorghum, small grains, rice, and turf.

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 cleaning 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.

Recommendations for Grass Control — Citrus

Apply to actively growing grasses before tillering or seed head formation.

Follow **Water Volume and Spray Pressure** recommendations.

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

Always add crop oil concentrate at 1% by volume.

Spot Treatment Application

To control or suppress grasses when using knapsack sprayers or high-volume equipment (handguns or other suitable nozzle arrangement), prepare a solution of **Torpedo** plus oil concentrate in water according to **Table 3** or **4, Spot Treatment Application**. The best spray application will be a fine spray that will cover the leaves but not drench them and run off. By keeping the spray gallonage low, a relatively concentrated solution (1.5-2.25%) of **Torpedo** is used. The best performance is obtained by using 10-20 gallons of spray solution per acre. Do not make spot treatments in addition to broadcast treatments.

Table 1. Annual Grass Control-Broadcast Application

Grass	Torpedo (rate per acre)*		Crop Oil Concentrate (rate)
	Grass (up to 6")	Grass (up to 12")	
Barnyardgrass Crabgrass, Large , Smooth Foxtails: Giant , Green , Yellow Goosegrass Johnsongrass, Seedling Junglerice Millet, Wild Proso Orchardgrass, Seedling Panicum, Fall , Texas Shattercane/Wildcane Signalgrass, Broadleaf Sprangletop, Red Tall Fescue, Seedling Witchgrass Woolly Cupgrass	2.25 pints	3.75 pints	1% by volume
* Repeat applications as needed. Do not apply more than 15 pints per season.			

Table 2. Perennial Grass Suppression-Broadcast Application

Grass	Maximum Size	Torpedo (rate per acre)*	Crop Oil Concentrate (rate)
Bermudagrass (wiregrass)	Up to 6" runners	3.75 pints	1% by volume
Johnsongrass, Rhizome	15-20"		
Guineagrass	6"	2.25 pints	
	8"	3.75 pints	
Torpedograss	6"	2.25 pints	
	8"	3.75 pints	
* Repeat applications as needed. Do not apply more than 15 pints per season.			

Table 3. Annual Grass Control-Spot Treatment Application Concentration in Spray Solution*

Grass	Torpedo**		Crop Oil Concentrate
	Grass (up to 6")	Grass (up to 12")	
See annual grasses listed in Broadcast Application Table.	1.5%	2.25%	1%

* Refer to **Solution Table** for preparation of desired spray solution volume.
 ** Repeat applications as needed.

Table 4. Perennial Grass Suppression-Spot Treatment Application Concentration in Spray Solution*

Grass	Maximum Size	Torpedo**	Crop Oil Concentrate
Bermudagrass (wiregrass)	Up to 6" runners	2.25%	1% by volume
Johnsongrass, Rhizome	15-20"	2.25%	
Quackgrass	6-8"	2.25%	
Wirestem Muhly	Up to 6"	1.5%	

* Refer to **Solution Table** for preparation of desired spray solution volume.
 ** Repeat applications as needed.

Table 5. Solution Table

Desired Spray Solution Volume	Amount of Torpedo or Crop Oil Concentrate to be Added for Solution		
	Torpedo (1.5%)	Torpedo (2.25%)	Crop Oil Concentrate (1%)
1 gallon	1.9 fluid ounces	2.9 fluid ounces	1.3 fluid ounces
3 gallons	5.8 fluid ounces	8.75 fluid ounces	3.75 fluid ounces
5 gallons	9.5 fluid ounces	14.5 fluid ounces	6.4 fluid ounces

1 tablespoon = 1/2 fluid ounce

Restrictions and Limitations

Citrus at all stages of growth is tolerant to **Torpedo® herbicide**. Do not apply to grasses under stress, such as stress due to lack of moisture, herbicide injury, mechanical injury or cold temperatures, as unsatisfactory control may result. Do not apply **Torpedo** if rainfall is expected within 1 hour following application as grass control will probably be unsatisfactory. Do not apply **Torpedo** within 15 days of harvesting fruit. Physical incompatibility, reduced weed control, or crop injury may result from mixing **Torpedo** with other pesticides, (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

BASF does not recommend using **Torpedo** tank mixes other than those listed on BASF labels, supplemental labels, or technical bulletins. Local agricultural authorities may be a source of information when using other than BASF-recommended combinations. Do not apply more than a total of 15 pints of **Torpedo** per acre in one season (including spot treatments). **Torpedo** may be applied to citrus by ground equipment only. Do not apply this product through any type of irrigation system. Citrus pulp and waste may be fed to animals. Do not allow applications of **Torpedo** to come in contact with developing or mature fruit.

Appendix

The following are scientific names for the weeds listed in this label. For specific recommendations on control of these weeds, refer to the major and/or tank mix sections.

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bermudagrass	<i>Cynodon dactylon</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>
, Smooth	<i>Digitaria ischaemum</i>
Cupgrass, Woolly	<i>Eriochloa villosa</i>
Fescue, Tall	<i>Festuca arundinacea</i>
Foxtail, Giant	<i>Setaria faberi</i>
, Green	<i>Setaria viridis</i>
, Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Guineagrass	<i>Panicum maximum</i>
Johnsongrass	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Lovegrass/Stinkgrass	<i>Eragrostis ciliaris</i>
Millet, Wild Proso	<i>Panicum miliaceum</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
, Texas	<i>Panicum texanum</i>
Shattercane/Wildcane	<i>Sorghum bicolor</i>
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>
Sprangletop, Red	<i>Leptochloa filiformis</i>
Torpedograss	<i>Panicum repens</i>
Witchgrass	<i>Panicum capillare</i>

Conditions of Sale and Warranty
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.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. **BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL BASF OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

Torpedo is a registered trademark of BASF AG.
Prodigy is a trademark of BASF Corporation.

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NVA 0995/TD 4200-0550
 EPA Approved
 revised

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



BASF

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10/20/98 Notification

Torpedo[®]

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 per gallon

EPA Reg. No. 7969-88

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: 2.5 gallons

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

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 ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 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 or threatened 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.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

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

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

Storage and Disposal

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

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

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

General Information

Torpedo® herbicide is a selective broad spectrum postemergence herbicide that may be used to control and suppress annual and perennial grass weeds in bearing or nonbearing orange, lemon, lime, grapefruit, tangerine, and tangerine hybrid crops.

Torpedo does not control sedges or broadleaf weeds. Because all grass crops (such as sorghum, corn, small grains, and rice), as well as ornamental grasses such as turf, can be injured or killed by **Torpedo**, avoid all direct or indirect contact with any desired grass plants.

Nonbearing Citrus:

Citrus crops are tolerant to **Torpedo**, but under some conditions, a slight leaf speckling/leaf burn can occur. Citrus plants will outgrow these symptoms and later growth is not affected.

Bearing Citrus:

Torpedo should be directed away from citrus foliage as well as developing and mature fruit because injury may occur under certain conditions.

Consult **Restrictions and Limitations** for the preharvest interval.

Control Symptoms: Torpedo® herbicide rapidly enters the plant through the foliage and translocates throughout the plant. Control symptoms exhibited by grasses progress from a slowing and stopping of growth (generally within 2 days), to reddening of foliage, and leaf tip burn. Later, burnback of the foliage occurs. These symptoms will generally be observed within 3 weeks, depending on environmental conditions.

Prodigy™ System

Torpedo may be supplied in the **Prodigy System**, a unique, 120-gallon mini-bulk closed delivery system. It consists of a self-discharging tank that does not require any pumping mechanism, and has a dry lock connector which protects the user from exposure to tank contents.

Do not refill **Prodigy System**.

Return **Prodigy System** to BASF for cleaning and refilling.

Torpedo in a dedicated, returnable **Prodigy System** can only be used with the closed **Prodigy System** in which it comes packaged.

See **Prodigy System Operating Procedure** below.

Prodigy System Operating Procedure

- 1) Install a male dry lock connector to the spray tank.
- 2) Connect the female dry lock connector (at the end of the hose attached to the tank) with the male dry lock connector installed on the spray tank.
- 3) Turn on the nitrogen gas supply.
- 4) Set measuring meter to zero.
- 5) Turn on the tank manifold until the desired amount of product, as indicated on the measuring meter, has been discharged into the spray tank.
- 6) Turn off the tank manifold to stop the discharge of product into the sprayer tank.
- 7) Disconnect the female dry lock connector on the tank hose from the male dry lock connector on the spray tank.
- 8) Turn off the nitrogen gas supply when the **Prodigy System** is empty, operation is completed or tank is ready to be returned to the point of purchase.

Application Information

Apply **Torpedo** to actively growing grasses before they exceed the maximum growth stage in **Tables 1 and 2**.

Thorough coverage of grass foliage is essential because the effectiveness of **Torpedo** depends on the absorption and movement of **Torpedo** throughout the plant. For this to occur, enough leaf surface must be treated to absorb **Torpedo**, and the grass must be actively growing to translocate **Torpedo** to the roots and buds.

Ground Applications

Spray equipment: Torpedo should be applied by handgun or boom application only. Direct the nozzles toward the grass foliage. Application to the soil is ineffective. Heavy tree growth that covers and protects grass weeds from spray coverage may reduce the activity of **Torpedo**.

Nozzle selection: Use standard high-pressure pesticide hollow cone or flat fan nozzles. Do not use flood or whirl chamber nozzles.

Spray gallonage: On a broadcast basis, 10-20 gallons of spray solution per acre should be used. Under most conditions, 10 gallons per acre is optimum.

Spray pressure: Adjust pressure to 40-60 psi (measured at the nozzle) when using standard high-pressure hollow cone or flat fan nozzles.

Other spray equipment: Do not apply **Torpedo** with control drop applicator (CDA) nozzles because erratic coverage can cause inconsistent weed control.

Do not use selective application equipment such as recirculating sprayers, wiper applicators, or shielded equipment.

Addition of Crop Oil Concentrate

A nonphytotoxic crop oil concentrate (commonly referred to as crop oil concentrate) should always be added to the spray tank. The crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria:

- be nonphytotoxic
- contain only EPA-exempt ingredients
- provide good mixing quality in the jar test (see next section)
- be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers that provide good mixing quality.

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Highly refined vegetable oils have been observed to be more satisfactory than unrefined vegetable oils. For additional information, see **Jar Test for Estimating Suitability of Oil Concentrates**.

Rate of Crop Oil Concentrate:
1% by volume

Mixing

Fill the tank of a thoroughly clean sprayer half to two-thirds full with clean water. Start agitation and add oil concentrate; allow to mix thoroughly. Add **Torpedo** and the remaining volume of water. Apply **Torpedo** soon after mixing. Maintain constant agitation during application.

Jar Test for Estimating Suitability of Oil Concentrates

- 1) **Water supply:** Use only water from the intended source and at the source temperature.
- 2) **Amount of water in jar:** For 20 gallons per acre spray volume, use 3 1/3 cups (800 ml) of water. For 10 gallons per acre spray volume, use 1 2/3 cups (400 ml) of water. For 5 gallons per acre spray volume, use 5/8 cup (200 ml) of water. For other spray volumes, adjust proportionately to above.
- 3) **Amount of herbicide and oil concentrate to add:** Add 1 teaspoon (5 ml) of herbicide and oil concentrate for each pint of recommended label rate.
- 4) Add components in following sequence, gently mixing between component additions:
 - a) Crop oil concentrate
 - b) **Torpedo**
- 5) **Cap jar**, invert 10 cycles, let stand for 15 minutes, evaluate.
- 6) **Evaluation:** An ideal tank mix combination will be uniform, thus, the suitability of the crop oil concentrate is questionable if any of the following are observed:

Free oil at the surface-film or globules.

Flocculation-fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.

Clabbering-thickening texture (coagulated) resembling yogurt or a curdlike texture as with cottage cheese.

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Attention! Clean the sprayer thoroughly before and after applying **Torpedo® herbicide**, particularly if a herbicide with the potential to injure the crop was used. Failure to clean the sprayer thoroughly after applying **Torpedo** may result in injury to any grass crop subsequently sprayed, such as corn, sorghum, small grains, rice, and turf.

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 cleaning 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.

Recommendations for Grass Control — Citrus

Apply to actively growing grasses before tillering or seed head formation.

Follow **Water Volume and Spray Pressure** recommendations.

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

Always add crop oil concentrate at 1% by volume.

Spot Treatment Application

To control or suppress grasses when using knapsack sprayers or high-volume equipment (handguns or other suitable nozzle arrangement), prepare a solution of **Torpedo** plus oil concentrate in water according to **Table 3 or 4, Spot Treatment Application**. The best spray application will be a fine spray that will cover the leaves but not drench them and run off. By keeping the spray gallonage low, a relatively concentrated solution (1.5-2.25%) of **Torpedo** is used. The best performance is obtained by using 10-20 gallons of spray solution per acre. Do not make spot treatments in addition to broadcast treatments.

Table 1. Annual Grass Control-Broadcast Application

Grass	Torpedo (rate per acre)*		Crop Oil Concentrate (rate)
	Grass (up to 6")	Grass (up to 12")	
Barnyardgrass Crabgrass, Large , Smooth Foxtails: Giant , Green , Yellow Goosegrass Johnsongrass, Seedling Junglerice Millet, Wild Proso Orchardgrass, Seedling Panicum, Fall , Texas Shattercane/Wildcane Signalgrass, Broadleaf Sprangletop, Red Tall Fescue, Seedling Witchgrass Woolly Cupgrass	2.25 pints	3.75 pints	1% by volume

* Repeat applications as needed. Do not apply more than 15 pints per season.

Table 2. Perennial Grass Suppression-Broadcast Application

Grass	Maximum Size	Torpedo (rate per acre)*	Crop Oil Concentrate (rate)
Bermudagrass (wiregrass)	Up to 6" runners	3.75 pints	1% by volume
Johnsongrass, Rhizome	15-20"		
Guineagrass	6"	2.25 pints	
	8"	3.75 pints	
Torpedograss	6"	2.25 pints	
	8"	3.75 pints	

* Repeat applications as needed. Do not apply more than 15 pints per season.

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Table 3. Annual Grass Control-Spot Treatment Application Concentration in Spray Solution*

Grass	Torpedo**		Crop Oil Concentrate
	Grass (up to 6")	Grass (up to 12")	
See annual grasses listed in Broadcast Application Table.	1.5%	2.25%	1%

* Refer to **Solution Table** for preparation of desired spray solution volume.
 ** Repeat applications as needed.

Table 4. Perennial Grass Suppression-Spot Treatment Application Concentration in Spray Solution*

Grass	Maximum Size	Torpedo**	Crop Oil Concentrate
Bermudagrass (wiregrass)	Up to 6" runners	2.25%	1% by volume
Johnsongrass, Rhizome	15-20"	2.25%	
Quackgrass	6-8"	2.25%	
Wirestem Muhly	Up to 6"	1.5%	

* Refer to **Solution Table** for preparation of desired spray solution volume.
 ** Repeat applications as needed.

Table 5. Solution Table

Desired Spray Solution Volume	Amount of Torpedo or Crop Oil Concentrate to be Added for Solution		
	Torpedo (1.5%)	Torpedo (2.25%)	Crop Oil Concentrate (1%)
1 gallon	1.9 fluid ounces	2.9 fluid ounces	1.3 fluid ounces
3 gallons	5.8 fluid ounces	8.75 fluid ounces	3.75 fluid ounces
5 gallons	9.5 fluid ounces	14.5 fluid ounces	6.4 fluid ounces

1 tablespoon = 1/2 fluid ounce

Restrictions and Limitations

Citrus at all stages of growth is tolerant to **Torpedo®** herbicide. Do not apply to grasses under stress, such as stress due to lack of moisture, herbicide injury, mechanical injury or cold temperatures, as unsatisfactory control may result. Do not apply **Torpedo** if rainfall is expected within 1 hour following application as grass control will probably be unsatisfactory. Do not apply **Torpedo** within 15 days of harvesting fruit. Physical incompatibility, reduced weed control, or crop injury may result from mixing **Torpedo** with other pesticides, (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

BASF does not recommend using **Torpedo** tank mixes other than those listed on BASF labels, supplemental labels, or technical bulletins. Local agricultural authorities may be a source of information when using other than BASF-recommended combinations. Do not apply more than a total of 15 pints of **Torpedo** per acre in one season (including spot treatments). **Torpedo** may be applied to citrus by ground equipment only. Do not apply this product through any type of irrigation system. Citrus pulp and waste may be fed to animals. Do not allow applications of **Torpedo** to come in contact with developing or mature fruit.

Appendix

The following are scientific names for the weeds listed in this label. For specific recommendations on control of these weeds, refer to the major and/or tank mix sections.

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bermudagrass	<i>Cynodon dactylon</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>
, Smooth	<i>Digitaria ischaemum</i>
Cupgrass, Woolly	<i>Eriochloa villosa</i>
Fescue, Tall	<i>Festuca arundinacea</i>
Foxtail, Giant	<i>Setaria faberi</i>
, Green	<i>Setaria viridis</i>
, Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Guineagrass	<i>Panicum maximum</i>
Johnsongrass	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Lovegrass/Stinkgrass	<i>Eragrostis ciliaris</i>
Millet, Wild Proso	<i>Panicum miliaceum</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
, Texas	<i>Panicum texanum</i>
Shattercane/Wildcane	<i>Sorghum bicolor</i>
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>
Sprangletop, Red	<i>Leptochloa filiformis</i>
Torpedograss	<i>Panicum repens</i>
Witchgrass	<i>Panicum capillare</i>

Conditions of Sale and Warranty

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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.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL BASF OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

Torpedo is a registered trademark of BASF AG.

Prodigy is a trademark of BASF Corporation.

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NVA 0995/TD 4200-0550

EPA Approved
revised

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

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October 20, 1995

Agricultural Products

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504C)
U.S. Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460-0001

**Subject: Torpedo® Herbicide, EPA Registration No. 7969-88
Notification per PR Notice 95-2**

Dear Sir/Madam:

This letter serves as notification for an amendment to the product labeling for **Torpedo**, EPA registration number 7969-88, as per PR Notice 95-2.

The purpose of this amendment is to add directions pertaining to use of the product in a unique delivery system owned by BASF, known as the Prodigy™ System. These same directions already appear on current labeling for Poast Plus® Herbicide (EPA Registration No. 7969-88), another BASF product which is identical to **Torpedo** (**Poast Plus** label submitted to EPA as notification, letter dated February 24, 1995).

Attached are an application form (OPP ID No. 249329) and a copy of the **Torpedo** label with directions pertaining to the **Prodigy System** highlighted (page 3).

If you have any questions regarding this submission, please contact me at (919) 361-5483.

Best regards,
BASF Corporation
Agricultural Products

ORIGINAL SIGNED BY

Charlotte A. Sanson
Senior Registration Specialist

enc.

cc: R. Taylor (PM 25) - EPA

BASF Corporation

BASF

15 7 54

January 11, 1996

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504C)
U.S. Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460-0001

Agricultural Products

**Subject: Torpedo® Herbicide, EPA Registration No. 7969-88
Notification per PR Notice 95-2**

Dear Sir/Madam:

On October 20, 1995 BASF made minor modifications to the TORPEDO label by notification. A copy of that letter and the label submitted on October 20 (marked 10/20/95 Notification) is enclosed for your reference. In preparation for printing this label three errors on that label were noted. On page 1 the descriptive term "Postemergence Grass Herbicide for Use in Citrus" was inadvertently deleted. On page 2 the endangered species notification is incorrect and finally on page 4 the words "by using" were inadvertently left out of the last sentence. This notification seeks to correct those errors.

Enclosed is are an application form (OPP ID No. 249355) and a copy of the corrected **Torpedo** label (marked 1/11/96 Notification). The corrections are highlighted in yellow. In addition, I have highlighted, in blue, the changes made in the October 20 notification. In this way, the label submitted with this correspondence (marked 1/11/96 Notification) can be substituted for the one submitted on October 20, 1995. If you have any questions regarding this submission, please contact me at (919) 547-2174.

Best regards,
BASF Corporation
Agricultural Products



T.R. Nelsen, Ph.D.
Manager, Regulatory Affairs

xc: R. Taylor EPA PM-25

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Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 05-31-98



United States Environmental Protection Agency Washington, DC 20460

Registration Amendment Other

OPP Identifier Number 249321

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) Roast Plus Herbicide PM# 25
5. Name and Address of Applicant BASF Corporation Agricultural Products
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. Resubmission in response to Agency letter dated. Notification - Explain below. Final printed labels in response to Agency letter dated. "Me Too" Application. Other - Explain below.

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

NOTIFICATION OF CHANGES TO ROAST PLUS label for Distributor product; PRESTIGE Herbicide

Section - III

1. Material This Product Will Be Packaged In: Child-Resistant Packaging, Unit Packaging, Water Soluble Packaging, 2. Type of Container, 3. Location of Net Contents Information, 4. Size(s) Retail Container, 5. Location of Label Directions, 6. Manner in Which Label is Affixed to Product

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.) Name TR Nelson, Title Manager Regulatory Affairs, Telephone No. 919 547 2174. Certification: I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. 2. Signature TR Nelson, 3. Title Manager Regulatory Affairs, 4. Typed Name TR Nelson, 5. Date 1/5/96, 6. Date Application Received (Stamped)

Prestige[®] 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 1.0 pound per gallon
EPA Reg. No. 7969-88-241

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.

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 (PPE):
Some materials that are chemically 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 ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 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.

Distributed by American Cyanamid Company.

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. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements
 Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

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

IN CASE OF EMERGENCY

In case of large-scale spillage regarding this product: Avoid contact, isolate area and keep out animals and unprotected persons.

Confine spill and call:

CHEMTREC 800-424-9300
American Cyanamid Company 201-835-3100

In case of medical emergency regarding this product, call:

1. Your local doctor for immediate treatment.
2. Your local poison control center (hospital).
3. American Cyanamid Company 201-835-3100.

STORAGE AND DISPOSAL

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

GENERAL INFORMATION

Prestige is an improved formulation for broad spectrum postemergence control of annual and perennial grass weeds. **Prestige** does not control sedges or broadleaf weeds. Essentially, all grass crops such as sorghum, corn, small grains, and rice, as well as ornamental grasses such as turf, are susceptible to **Prestige**. Avoid all direct or indirect contact with any desired grass crop unless otherwise specified on the **Prestige** label.

Control Symptoms

Prestige rapidly enters the plant 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. These symptoms will generally be observed within 3 weeks depending on environmental conditions.

APPLICATION INFORMATION

Applications can be made as broadcast, band, or spot spray application at the rates and growth stages listed in the weed tables. Do not exceed the application rates and use restrictions specified in **Restrictions and Limitations**.

Apply **Prestige** to actively growing grasses at the proper growth stage as specified in the rate charts. Do not apply to grasses or crops under stress, such as stress due to lack of moisture, herbicide injury, mechanical injury, or cold temperatures, as unsatisfactory control and crop injury may probably result. All **Prestige** applications to control volunteer cereals (barley, corn, oats, rye, wheat) should be made before tillering.

Volunteer cereals that emerge from late spring through early summer (May through July) may be partially or incompletely controlled due to unfavorable conditions at time of application in the Western Region.

Prestige is not recommended for spring control of volunteer cereals that emerged the previous fall.

Cultivation Information

Do not cultivate within 5 days before applying **Prestige** or within 7 days after application.

A timely cultivation after 7 days may help provide season-long control. To control quackgrass, cultivate 14-21 days after an initial or sequential application to aid control.

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

Ground Application

Spray Volume: Under most conditions, a spray volume of 10 gallons per acre is optimal (5-20 gallons of spray solution per acre for broadcast application may be used).

Spray Pressure: When using standard high-pressure or flat fan nozzles, adjust pressure to 40-60 psi measured at the nozzle.

Nozzle Selection: Thorough spray coverage of grass foliage is essential. For broadcast application, use standard high-pressure pesticide nozzles. **Do not use flood or whirl chamber nozzles. Applying Prestige® herbicide with control drop applicator (CDA) nozzles is not recommended because erratic coverage can cause inconsistent weed control.**

Boom Height: Always adjust spray pressure, spray volume, and height of spray boom to ensure penetration of plant canopy and thorough coverage of target grasses. When tall weeds such as volunteer corn are to be controlled, the boom should be high enough to cover the entire plant. Refer to the nozzle manufacturer's directions for recommended height.

Band Application: Banding of **Prestige** may be used to control annual grasses. Grasses that are not covered or only partly covered by the spray mix will not be adequately controlled. When treating taller weeds such as volunteer corn, the spray boom must be high enough to thoroughly cover the top leaves and whorls of the plant. All recommendations are on a broadcast basis unless otherwise stated.

When banding, rates of **Prestige**, additives, and water should be reduced in proportion to the area sprayed. Banding is not recommended for perennial grasses.

Air Application

Special Directions: Do not apply **Prestige** by aircraft when wind is blowing more than 10 mph (or more than 5 mph in California). Coarse sprays (large droplets) are less likely to drift. The applicator must follow the most restrictive use precautions to avoid drift hazards, including those in this labeling as well as applicable state and local regulations and ordinances.

Spray Volume: 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 or crop canopy is dense.

Spray Pressure: The spray pressure should not exceed 40 psi.

Nozzle Selection: Use only diaphragm nozzles producing cone or fan spray patterns.

Boom Height: Do not exceed a maximum height of 10 feet above the crop.

Nozzle Orientation: Nozzles must be oriented to discharge with the air stream (opposite the direction of travel of the aircraft) at approximately a 45° angle downward. Nozzles must not be located farther out than three-fourths the distance from the center of the aircraft to the end of the wing or rotor.

Spot or Small Area Treatment

Do not make spot treatments in addition to broadcast or band treatments.

When using knapsack sprayers or high-volume spray equipment utilizing hand guns or other suitable nozzle arrangements, prepare a 1.5-2.25% solution of **Prestige** in water unless otherwise specified under specific crops. **Dash HC[®] spray adjuvant** or a recommended oil concentrate must also be used at a concentration of 0.5% for **Dash HC** and 1.0% for oil concentrate.

Apply to foliage of grasses on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of runoff. Prepare the desired volume of spray solution by mixing the amount of **Prestige** and the amount of **Dash HC** or oil concentrate in water according to **Table 1**. For additional information regarding spot treatment, see page 10.

ADDITIVES

Dash HC may be substituted for an oil concentrate with some exceptions. **Dash HC** is not recommended for use in some tank mixes (see **Directions For Use** in appropriate crop sections). A nonphytotoxic oil concentrate (commonly referred to as oil concentrate) or **Dash HC** should always be added to the spray tank as recommended. The oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the jar test
- be successful in local experience.

The exact composition of suitable oil concentrates will vary, however, vegetable and petroleum oil concentrates should contain emulsifiers that provide good mixing quality. Highly refined vegetable oils have been observed to be more satisfactory than unrefined vegetable oils.

For additional information, see **Jar Test for Estimating Suitability of Oil Concentrates**.

Addition of Urea Ammonium Nitrate Solution (UAN) or Ammonium Sulfate (AMS)

Adding UAN solution or AMS is recommended. UAN solution is commonly referred to as 28%, 30%, or 32% nitrogen and is a water solution of urea and ammonium nitrate. When AMS is used, 3 quarts of liquid AMS (8-8-0 analysis) may be substituted for 2.5 pounds of solid AMS.

In some areas, using a nitrogen additive may improve control of rhizome johnsongrass. Consult your local American Cyanamid Company representative for recommendations for your area.

Because most nitrogen solutions are mildly corrosive to galvanized, mild steel, and brass spray equipment, rinse the entire spray system with water soon after use. Use high-quality AMS to avoid plugging of spray nozzles. The AMS must be readily soluble in water and

contain no insoluble materials. Local sources of high-quality, fine feed-grade AMS may be better than fertilizer-grade AMS. Low-quality AMS may contain material that will not readily dissolve which could result in nozzle tip plugging. To determine quality, perform a jar test adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If any undissolved sediment is observed, predissolve the AMS in water and filter before adding it to the spray tank. If AMS is added directly to the spray tank, add it slowly while agitating. Adding the AMS too quickly may clog outlet lines. **Ensure that ammonium sulfate is completely dissolved before adding other products.**

Table 2. Additive Rate per Acre

Additive	Ground Application	Air Application
UAN Solution	4-8 pints	4 pints
Ammonium Sulfate	2.5 pounds	2.5 pounds
Oil Concentrate	2 pints	2 pints
Dash HC	1 pint	1 pint

MIXING

Fill the tank of a thoroughly clean sprayer one-half to two-thirds full with clean water. Start agitation and add UAN or ammonium sulfate first. Next, add **Dash HC** or oil concentrate; allow the components to mix thoroughly. Add **Prestige[®] herbicide** and the remaining volume of water. Apply the spray mix soon after mixing. Maintain constant agitation during application.

Jar Test for Estimating Suitability of Oil Concentrate

1. **Water supply:** Use only water from the intended source at the source temperature.
2. **Amount of water in jar:**
For 20 gallons per acre spray volume, use 3 1/3 cups (800 ml) of water. For 10 gallons per acre spray volume, use 1 2/3 cups (400 ml) of water. For 5 gallons per acre spray volume, use 5/8 cup (200 ml) of water. For other spray volumes, adjust proportionately to above.
3. **Amount of herbicide and oil concentrate to add:** Add 1 teaspoon (5 ml) of herbicide and oil concentrate for each 1 pint of recommended label rate.
4. **Add components in following sequence, gently mixing between additions:**
 - 1) Water miscible or soluble products (such as **Status herbicide**, ammonium sulfate, UAN solution) when applicable.
 - 2) **Dash HC** or oil concentrate.
 - 3) **Prestige** (and other emulsifiable concentrates when applicable).

Table 1

Desired Spray Solution Volume	Amount of Prestige to be Added			
	Prestige (1.5%)	Prestige (2.25%)	Dash HC (0.5%)	Oil Concentrate (1.0%)
1 gallon	1.9 fl. oz*	2.9 fl. oz*	0.7 fl. oz*	1.3 fl. oz*
25 gallons	1.5 quarts	2.25 quart	1 pint	1 quart
50 gallons	3 quarts	4.5 quarts	1 quart	2 quarts
100 gallons	6 quarts	9 quarts	2 quarts	4 quarts

* 2 tablespoons = 1 fluid ounce

- 5. Cap jar, invert 10 cycles, let stand for 15 minutes, evaluate.
- 6. **Evaluation:** An ideal tank mix will be uniform; thus, the suitability of the oil concentrate is questionable if any of the following are observed:
 Free oil at the surface-film or globules.
 Flocculation-fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.
 Clabbering-thickening texture (coagulated) resembling yogurt or a curd-like texture as with cottage cheese.

Procedure for Cleaning Spray Equipment
Clean sprayer thoroughly before applying Prestige, particularly if a herbicide with the potential to injure crops was used.

Consult the label of previously used herbicides for cleaning instructions. If no instructions are available, the steps listed below are suggested for cleaning spray equipment before or following applications of **Prestige**.

- 1. Thoroughly hose down the inside and the outside of equipment while filling the spray tank half full of water. Flush the system by operating sprayer until the rinse water has been purged.
- 2. Refill the tank with water while adding 1 gallon of household ammonia or 1 pint of household dish-washing detergent per 100 gallons of water. Or add a commercial sprayer cleaner according to the manufacturer's directions. Operate the pump to circulate the detergent solution through the sprayer system for 5-10 minutes and discharge a small amount of solution through the boom and nozzles. Let the solution stand for 24 hours.
- 3. Flush the detergent solution out of the spray tank through the boom.
- 4. Remove the nozzles and screens and flush the system with two tankfuls of water.

General Restrictions and Limitations

All Crops

Do not apply if rainfall is expected within 1 hour following application as grass control will probably be unsatisfactory. Do not apply to grasses or crops under stress, such as stress due to lack of moisture, herbicide injury, mechanical injury, or cold temperatures, as unsatisfactory control and crop injury may result.

Do not make spot treatments in addition to broadcast or band treatments.

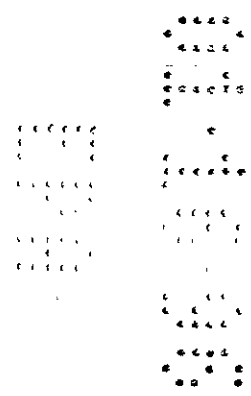
Physical incompatibility, reduced weed control, or crop injury may result from mixing **Prestige** with pesticides (fungicides, herbicides, insecticides, or miticides), additives or fertilizers. American Cyanamid Company does not recommend using **Prestige** tank mixes other than those listed on American Cyanamid Company labels, supplemental labeling, or Technical Information Bulletins. Local agricultural authorities may be a source of information when using combinations other than those recommended by American Cyanamid Company. Do not apply **Prestige** with other pesticides whose labels caution against their use with oil adjuvants. Do not apply **Prestige** as a preplant or pre-emergent treatment before planting corn, milo, millet, or sorghum.

Do not apply through any type of irrigation system. Do not tank mix **Prestige** with **Classic**® or **Scepter**® herbicides because of antagonistic activities. **Classic** herbicides may cause antagonism when sprayed from 7 days before application, to 1 day after application of **Prestige**. This antagonism is more likely to occur in grasses under stress conditions.

Other Spray Equipment: Do not use selective application equipment such as recirculating sprayers or wiper applicators.

Herbicide Resistance

Naturally occurring biotypes of certain grass species with resistance to this herbicide and related products (same mode of action) are known to exist. Selection of resistant biotypes, through repeated use of these herbicides, may result in control failures. If poor performance cannot be attributed to adverse weather conditions or improper application methods, a resistant biotype may be present. In such a case, additional treatments with this herbicide or related products is not recommended. Consult your local representative or agricultural advisor for assistance.



Soybeans
DIRECTIONS FOR USE

Apply to actively growing grasses at the sizes indicated in Tables 5 and 6. Always follow recommendations given in Application Information section (page 4). Do not apply to drought-stressed grass or grass that has gone through an extended dry period.

Always adjust spray pressure, spray volume, and height of spray boom to ensure penetration of plant canopy and thorough coverage of grasses to be controlled. In irrigated areas, it may be necessary to irrigate before treating with Prestige® herbicide to ensure active weed growth. Labeled crops at all stages of growth are tolerant to Prestige.

Always add 1 pint of Dash HC spray adjuvant or 1 quart of oil concentrate per acre. For maximum use rate and minimum time from last application to harvest, consult Table 3.

Use Area: Prestige may be applied to soybeans as directed in Tables 5-9 in the following states: Indiana, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin.

Soybean Tank Mix or Sequential Application
General Information

Prestige® may be tank mixed with Basagran®, Blazer®, and Status herbicides for postemergence control of broadleaf and/or grass weeds. Apply to actively growing weeds at the recommended growth stages.

Separate applications should be made if:

- all weeds to be controlled are not at the correct growth stage for treatment at the same time, or
- grasses to be controlled include rhizome johnsongrass, quackgrass, bermudagrass, wirestem muhly, volunteer corn, shattercane, volunteer cereals, wild oats, red rice or witchgrass.

Ground Application

For tank mixes with Prestige, use 20 gallons of total spray solution per acre (broadcast basis) and a minimum of 40 psi. Use standard high-pressure or flat fan nozzles spaced 20 inches apart. Do not use flood or whirl chamber nozzles.

Air Application: Use a minimum of 5 gallons of water per acre and a maximum of 40 psi.

MIXING

Fill the spray tank half full with water, and add the recommended amount of product in the following order. Allow components to mix thoroughly. Maintain constant agitation during application. Apply as soon as possible.

A) **Prestige + Basagran**

Add Basagran, UAN or AMS, Dash HC spray adjuvant or oil concentrate, and Prestige while the agitator is running. Add the remaining quantity of water.

B) **Prestige + Status**

Add Status, oil concentrate, and Prestige while the agitator is running. Add the remaining quantity of water.

C) **Prestige + Blazer**

Add Blazer, oil concentrate, and Prestige while the agitator is running. Add the remaining quantity of water.

Table 3 — Restrictions and Limitations for Prestige

Crop	Minimum Time From Application to Harvest (days)	Maximum Rate Per Acre Per Application (pints)	Maximum Rate Per Acre Per Season (pints)	Livestock Grazing or Feeding	Aircraft Application	Comments
Soybeans	75	3.75	7.5	Only seed and hay	Yes	See tank mix section for use with other herbicides.

Table 4. Sequential Applications

Order of Application		Minimum Time Between Applications
First Applied	Second Applied	
Basagran	Prestige	48 hours*
Basagran + Blazer or Status	Prestige	7 days
Prestige	Blazer or Basagran or Status	24 hours
Status	Prestige	7 days

*The Restricted Entry Interval for Basagran is 48 hours as required by the Worker Protection Standard. Basagran may be applied after 24 hours provided the early entry requirements are followed as described in the Basagran labeling.

Table 5
Soybeans — Annual Grasses

Rate and Maximum Height at Application						
Grass	Special Early		Standard		Rescue ¹	
	Max. Ht. (inches)	Rate Per Acre (pints)	Max. Ht. (inches)	Rate Per Acre (pints)	Max. Ht. (inches)	Rate Per Acre (pints)
Barnyardgrass	4	1.125	8	1.5	12	2.25
Crabgrass, Large	—	—	6	1.5	8	2.25
Smooth	—	—	6	1.5	8	2.25
Cupgrass, Woolly	—	—	8	1.5	—	—
Foxtail, Giant	4	1.125	8	1.5	16	2.25
Green	4	1.125	8	1.5	16	2.25
Yellow	—	—	8	1.5	16	2.25
Goosegrass	3	1.125	6	1.5	8	2.25
Itchgrass	—	—	4	3	—	—
Johnsongrass (seedling)	—	—	8	1.5	16	2.25
Junglerice	—	—	8	1.5	—	—
Millet, Wild Proso	10	0.75	10	0.75	24	1.5
Oats, Wild	—	—	4	1.5	—	—
Panicum, Browntop	—	—	8	1.5	—	—
Fall	4	1.125	8	1.5	12	2.25
Texas	4	1.125	8	1.5	12	1.5
Red Rice	—	—	4	3	—	—
Ryegrass, Annual	—	—	8	1.5	—	—
Sandbur, Field	—	—	3	1.875	—	—
Shattercane/Wildcane	—	—	18	1.5	—	—
Signalgrass, Broadleaf	4	1.125	8	1.5	12	2.25
Sprangletop	—	—	8	1.5	—	—
Volunteer ² Barley	—	—	4	2.25	—	—
Corn	12	1.125	20	1.5	—	—
Oats	—	—	4	2.25	—	—
Rye	—	—	4	2.25	—	—
Wheat	—	—	4	2.25	—	—
Witchgrass	—	—	8	1.5	—	—

¹ **Rescue Treatment for Controlling Selected Annual Grasses**
For best results, always apply Prestige to annual grasses at the growth stage as specified in Table 5 (Annual Grasses — Standard Recommendations). However, if Prestige cannot be applied at the recommended time, larger annual grasses can be controlled with a later application by increasing the rate of Prestige. (See Table 3 for maximum application rates.)
² See page 4 Application Information on volunteer cereals.
Add 0.5-1 gallon of UAN or 2.5 pounds of AMS to control crabgrass and all volunteer cereals.

Table 6
Soybeans — Perennial Grasses

Rate and Maximum Height at Application				
Grass	Standard Initial Application		Sequential Application	
	Maximum Height (inches)	Rate Per Acre (pints)	Maximum Height (inches)	Rate Per Acre (pints)
Bermudagrass	6" stolon	2.25	4" stolon	1.5
Johnsongrass (Rhizome)	25	1.5	12	1.5
Johnsongrass (No-Till)	20	1.5	12	1.5
Muhly, Wirestem	6	2.25	6	2.25
Quackgrass	8	2.25	8	1.5

Add 0.5-1 gallon of UAN or 2.5 pounds of AMS to control quackgrass.

SOYBEANS
Separate Applications of Prestige,
Preceded or Followed by Basagran

or
Basagran + Status Tank Mix

Applications of **Prestige** can be preceded or followed by **Basagran** and/or **Status**, or **Basagran** and/or **Blazer** to obtain broad spectrum control of weeds listed on the respective product labels (refer to this label and the labels for **Basagran** and **Status**). Also, refer to these product labels for timing, rate, and other information for ground and aerial applications. For best results when making separate applications, a minimum period of time is recommended between applications, depending upon their order according to **Table 4**.

Restrictions and Limitations
(partial list)

Read and follow the **Restrictions and Limitations** on the labels for **Prestige**, **Basagran**, **Status**, and **Blazer**. The most restrictive labeling applies in tank mixes.

Table 7. Prestige® Herbicide Tank Mix Combinations

Basagran (1-2 pints per acre) + Prestige			Status (0.5-1 pint per acre) + Prestige	
Grass	Max. Ht. (inches)	Prestige Rate/Acre (pints)	Max. Ht. (inches)	Prestige Rate/Acre (pints)
Barnyardgrass	8	2.25	8	2.25
Crabgrass, Large	6	2.25	6	2.25
Smooth	6	2.25	6	2.25
Cupgrass, Woolly	8	2.25	8	2.25
Foxtail, Giant	8	2.25	8	2.25
Green	8	2.25	8	2.25
Yellow	8	2.25	8	2.25
Goosegrass	6	2.25	6	2.25
Johnsongrass (seedling)	8	2.25	8	2.25
Junglerice	8	2.25	8	2.25
Millet, Wild Proso	10	1.125	10	1.125
Panicum, Browntop	—	—	8	2.25
Fall	—	—	8	2.25
Texas	8	2.25	8	2.25
Signalgrass, Broadleaf	8	2.25	8	2.25
Sprangletop, Red	8	2.25	8	2.25
Volunteer, Corn	12	1.5	—	—
Witchgrass	8	1.5	8	2.25
Additive Rate Per Acre: Dash HC 1 pint + UAN 4-8 pints or Oil Concentrate 2 pints			Additive Rate Per Acre: Oil Concentrate 2 pints	

Table 8
Spot Treatment Application Table
Annual Grass Control

Grass	Concentration in Spray Solution ¹		
	Prestige ²		Oil Concentrate
	Grass up to 6" Height	Grass up to 12" Height	
See annual grasses listed in Broadcast Application tables under specific crop.	1.5%	2.25%	1%

¹ Refer to Table 10 (Solution Table) for preparation of desired solution volume.
² Repeat application as needed.

Table 9
Perennial Grass Suppression

Grass	Maximum Height (inches)	Concentration in Spray Solution ¹	
		Prestige ²	Oil Concentrate
Bermudagrass (Wiregrass)	6" stolon	2.25%	1%
Johnsongrass, (Rhizome)	20	2.25%	1%
Muhly, Wirestem	6	1.5%	1%
Quackgrass	8	2.25%	1%

¹ Refer to Table 10 (Solution Table) for preparation of desired solution volume.
² Repeat application as needed.

Table 10
Solution Table

Desired Spray Solution Volume	Amount of Prestige or Oil Concentrate to be Added for Solution		
	Prestige (1.5%)	Prestige (2.25%)	Oil Concentrate (1%)
1 gallon	1.9 fl. oz	2.9 fl. oz	1.3 fl. oz
3 gallons	5.8 fl. oz	8.75 fl. oz	3.75 fl. oz
5 gallons	9.5 fl. oz	14.5 fl. oz	6.4 fl. oz

1 tablespoon = 0.5 fluid ounce

Appendix

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

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bermudagrass	<i>Cynodon dactylon</i>
Brome Downy	<i>Bromus tectorum</i>
Cheatgrass	<i>Bromus secalinus</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>
Smooth	<i>Digitaria ischaemum</i>
Cupgrass, Southwestern	<i>Eriochloa gracillis</i>
Woolly	<i>Eriochloa villosa</i>
Fescue, Tall	<i>Festuca arundinacea</i>
Foxtail, Giant	<i>Setaria faberi</i>
Green	<i>Setaria viridis</i>
Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Itchgrass	<i>Rottboellia exaltata</i>
Johnsongrass	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Lovegrass (See Stinkgrass)	
Millet, Wild Proso	<i>Panicum miliaceum</i>
Muhly, Wirestem	<i>Muhlenbergia frondosa</i>
Oats, Tame	<i>Avena sativa</i>
Wild	<i>Avena fatua</i>
Orchardgrass	<i>Dactylis glomerata</i>
Pigeongrass (See Foxtail)	
Panicum, Browntop	<i>Panicum fasciculatum</i>
Fall	<i>Panicum dichotomiflorum</i>
Texas	<i>Panicum texanum</i>
Quackgrass	<i>Agropyron repens</i>
Red Rice	<i>Oryza sativa</i>
Ryegrass, Annual	<i>Lolium multiflorum</i>
Perennial	<i>Lolium perenne</i>
Sandbur, Field	<i>Cenchrus incertus</i>
Shattercane/Wildcane	<i>Sorghum bicolor</i>
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>
Sprangletop, Red	<i>Leptochloa filiformis</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
Volunteer, Barley	<i>Hordeum vulgare</i>
Corn	<i>Zea mays</i>
Oats	<i>Avena sativa</i>
Rye	<i>Secale cereale</i>
Wheat	<i>Triticum aestivum</i>
Watergrass (See Barnyardgrass)	
Wiregrass (See Bermudagrass)	
Witchgrass	<i>Panicum capillare</i>

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. 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, herbicide resistant weed populations, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user. American Cyanamid Company shall not be responsible for losses or damages

resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label. American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR**

PURPOSE. BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF PRESTIGE AND STATUS. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

Uses With Other Products (Tank Mixes)

If this product is used in combination with any other product except as specifically recommended in writing by American Cyanamid Company, then American Cyanamid Company shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically recommended. If used in combination recommended by American Cyanamid Company, the liability of American Cyanamid Company shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the American Cyanamid Company product in such combination use, and in any event shall be limited to return of the account of the purchase price of the American Cyanamid Company product.

Basagran is a registered trademark of BASF AG.
Blazer, Prestige, and Status are registered trademarks of BASF Corporation.
Classic is a registered trademark of E. I. DuPont de Nemours and Company.
Pursuit and Scepter are registered trademarks of American Cyanamid Company.
Sun-It II is a registered trademark of ASSCO, Inc.

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 05-31-98



United States
Environmental Protection Agency
Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number
249356

Application for Pesticide - Section I

1. Company/Product Number 7969-88	2. EPA Product Manager R. Taylor	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) VANTAGE Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation Agricultural Products PO Box 13528 Research Triangle Park North Carolina 27709-3528 <input type="checkbox"/> 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

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

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

Correction of previously submitted notification;
Vantage label

Section - III

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

Section - IV

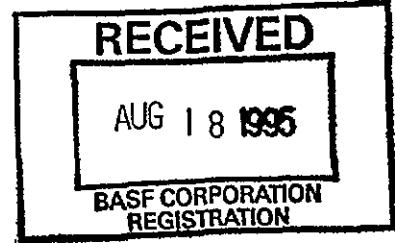
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name TR Nelsen	Title Manager Regulatory Affairs	Telephone No. (Include Area Code) 919 547 2174
Certification I certify that the statements I have made on this 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 1/9/96	

BASF

1/11/96

NOTIFICATION

27 7 54



VantageTM
herbicide

Postemergence Grass Herbicide

Active Ingredient:

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

Inert Ingredients:87.0%

Total100.0%

*Equivalent to 1 pound 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.

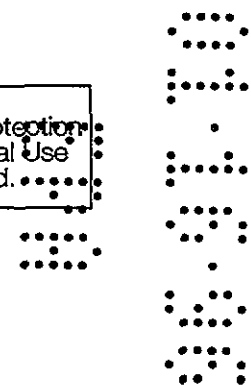
Agricultural Use Requirements

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

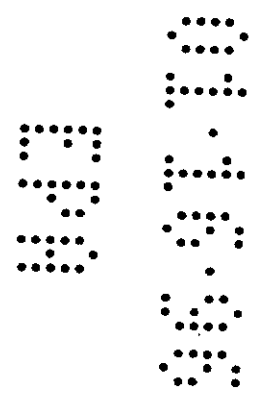
P.O. Box 13528, Research Triangle Park, NC 27709



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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 ≥
14 mils, neoprene rubber ≥ 14
mils, or viton ≥ 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 man-
ner that meets the requirements
listed in the Worker Protection
Standard (WPS) for agricultural pes-
ticides [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, drink-
ing, 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 remov-
ing. 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 inter-
tidal 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 man-
ner 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 inconsis-
tent 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 accor-
dance with its labeling and with the
Worker Protection Standard, 40
CFR part 170. This standard con-
tains requirements for the protec-
tion of agricultural workers on
farms, forests, nurseries, and
greenhouses, and handlers of agri-
cultural pesticides. It contains
requirements for training, deconta-
mination, notification, and emer-
gency 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.

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 treat-
ed, such as plants, soil, or water,
is:

- Coveralls
- Chemical-resistant gloves such as
barrier laminate, nitrile rubber ≥ 14
mils, neoprene rubber ≥ 14 mils,
or viton ≥ 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 greenhous-
es. Do not allow people or pets to
come into contact with treated
areas until sprays have dried.

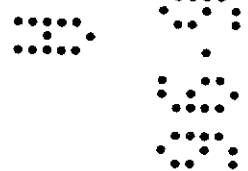
Storage and Disposal

Do not contaminate water, food, or
feed by storage or disposal.
Pesticide wastes are toxic.
Improper disposal of excess pesti-
cide, spray mix, or rinsate is a viola-
tion 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 recondi-
tioning, or puncture and dispose of
in a sanitary landfill or by incinera-
tion, 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.

- Centipede 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 two days), to reddening of the foliage and to leaf tip burn. Subsequently, burnback of the foliage occurs. This will generally be observed within three 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 therefore recommended that the professional user determine if **Vantage** can be used safely prior to broad use.

This determination can be made in the following manner: On a small test area, apply a recommended use rate of **Vantage** on a nonlabeled species or variety under the conditions expected to be encountered. Any adverse effects should be visible within seven days.

Application Information

Apply **Vantage** to actively growing grasses when they are at the proper growth stage as specified in this labeling. In irrigated areas, it may be necessary to irrigate prior to treatment with **Vantage** to ensure that weeds are growing actively. Grass weeds that have been mowed or have regrown from mowed stubble may result in poor control. 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. Application of **Vantage** herbicide with control drop applicator (CDA) nozzles is not recommended due to erratic coverage which causes inconsistent weed control. Use a minimum volume of 5 gallons per acre (1 pint per 1000 sq. ft.) and a maximum volume of 50 gallons per acre (10 pints per 1000 sq. ft.) of spray solution. Adjust pressure to a minimum of 30 psi and a maximum of 60 psi at the nozzle. Always adjust spray pressure, spray volume and height of spray boom to ensure thorough coverage of grasses to be controlled.

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/Spraying

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

Cultivation Information

If cultivation is an option, do not cultivate within 5 days prior to **Vantage** application or within 7 days following application. A timely cultivation 14-21 days after application may aid in providing control of perennial grasses.

General Restrictions and Limitations

Do not apply if rainfall is expected within one hour following 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

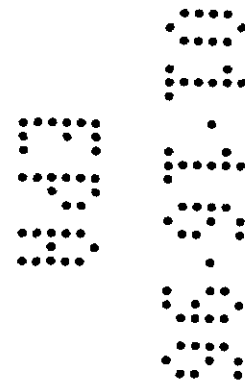
Vantage may be tank mixed with any registered herbicide for the use intended with each product. All

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

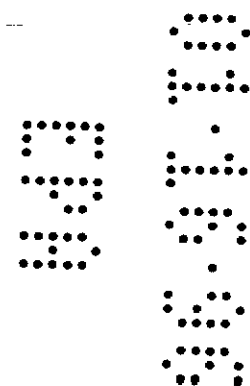
Grass	Time of Application	Vantage	
		Rate Per Acre	Rate Per 1,000 sq. ft.
Crabgrass; Large Smooth Goosegrass	Up to 4". Apply before grass weeds become well established through tiller development.	2.25 pints	0.75 fluid ounces*

* 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* First Application	Up to 4"	2.25 pints	0.75 fluid ounces**
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



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.

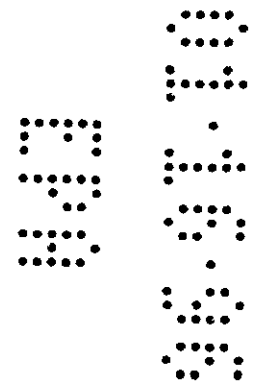
Read each product label for directions, restrictions, and limitations before using. The most restrictive labeling applies to all tank mixes.

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.



Vantage for Use in Fine Fescue (creeping red, chewings, hard and sheep) Grown for Turf Seed (not applicable in CA)

Directions For Use

Vantage may be used for control of annual and perennial grass weeds in fine fescue. For control of 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**.) Application of **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 centipede), 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.

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.

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 Red Sprangletop* Ryegrass, Annual 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 1000 square feet	3.75 pints per acre or 1.4 fluid ounces per 1000 square feet

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

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

Grass	Application Time (Weed Size)	Vantage	
		Rate per acre	Rate per 1000 square feet
Bermudagrass	Up to 6" runners	3.75 pints	1.4 fluid ounces
Johnsongrass, Rhizome	15-20" height	3.75 pints	1.4 fluid ounces
Quackgrass	6-8" height	3.75 pints	1.4 fluid ounces
Wirestem Muhly	Up to 6" height	2.25 pints	0.8 fluid ounces

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

34 9 54

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 and 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 prior to treatment with **Vantage** to ensure that weeds are growing actively. Do not mow within 20 days prior to application or within 7 days after application. Grasses that have been mowed or have regrown from mowed stubble may result in poor control. Repeat application if new germination or regrowth occurs.

Restrictions and Limitations

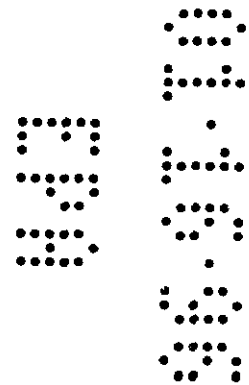
Read and abide by all **General Restrictions and Limitations** listed on page 4.

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 1000 square feet	3.75 pints per acre or 1.4 fluid ounces per 1000 square feet
* Not recommended in CA, AZ, or Western NM.		

Perennial Grass Control with Vantage

Grass	Maximum Size Range	Vantage	
		Rate per acre	Rate per 1000 square feet
Bermudagrass	Up to 6" runners	3.75 pints	1.4 fluid ounces
Johnsongrass, Rhizome	15-20" height		
Quackgrass	6-8" height	2.25 pints	0.8 fluid ounces
Wirestem Muhly	Up to 6" height		



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.

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.

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	12.5 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 mensiesii</i>
, Fraser	<i>Abies fraseri</i>
, Grand	<i>Abies grandis</i>
, Noble	<i>Abies procera (A. nobilis)</i>
, 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.

Vantage™ Herbicide Use in Christmas Trees and Deciduous Tree Farms

Vantage may be used to control annual and perennial grasses in Christmas and deciduous tree farms. Consult the tree listing or the **Appendix** for tolerant species for postemergence application. Apply post-directed to species not listed, avoiding direct or indirect application to the foliage. For the control of grasses, consult the tables **Annual Grass Control with Vantage** and **Perennial Grass Control with Vantage**.

Vantage may be applied to the following Christmas trees. If a Christmas tree or deciduous tree is not listed to the right or in the **Appendix**, the user may determine if **Vantage** can be used safely prior to broad use. On a small test area, apply a recommended use rate of **Vantage** to the target plant under the conditions expected to be encountered. Any adverse effects should be visible within 7 days.

Christmas Trees

Common Name	Scientific Name
Fir, Balsam	<i>Abies balsamea</i>
, Douglas	<i>Pseudotsuga mensiesii</i>
, Frasier	<i>Abies fraseri</i>
, Grand	<i>Abies grandis</i>
, Noble	<i>Abies procera (A. nobilis)</i>
, 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.

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

(This tank mix is not applicable in California)

A tank mix application of **Vantage + Goal 1.6E** will 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 following species.

Vantage and Goal 1.6E rates

A maximum of 60 fluid ounces per acre of **Vantage** 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 prior pages for minimum recommended rates of **Vantage** and see the **Goal 1.6E** label for minimum rates of **Goal 1.6E**. Two or three applications may be needed for season-long control. In some cases, reduced grass control with **Vantage** may be experienced when tank mixed with **Goal 1.6E**.

Timing

Applications should be made when weeds are actively growing and before conifer bud break or after conifer foliage have 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.

Common Name	Scientific Name
Fir, Frasier	<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.

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, Frasier, 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.

Vantage™ Herbicide for Use 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, for optimum control, do not mow tall fescue turf for 30 days before or 14 days after application of **Vantage**.

Rate

Apply **Vantage** at a rate of 24-30 fluid ounces per acre. For greater fescue suppression, up to 60 fluid ounces per acre of **Vantage** can be used. Because of environmental differences at application and growth differences of tall fescue, suppression of tall fescue may exceed or fall short of that desired. Users of **Vantage** are advised to begin use of **Vantage** at a 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.

Vantage for Use in Wildflowers

Vantage may be used for grass control 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. An application should take place 4-6 weeks after wildflowers have emerged but applications timing should always be based 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 prior to treatment with **Vantage** to ensure that weeds are growing actively.

Spot Treatment

Vantage can be applied using tank-type or knapsack sprayers or high volume equipment utilizing 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.

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

(Not intended for domestic use, except by professional applicators) **Vantage**, when used under the conditions specified in this labeling will suppress the initiation and development of the seedheads of established tall fescue. **Vantage** rapidly enters the grass plant through the foliage and translocates to areas of active growth. Growth of the grass plant is slowed. Discoloration of the fescue will occur in time after application. This discoloration of the leaf tissue may persist for 2-8 weeks depending on environmental conditions. Avoid applications 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 make applications 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, for optimum control do not mow turf for 30 days before or 14 days after application of **Vantage**.

Rate

Apply **Vantage** at 1.5 pints 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 a minimum spray volume of 30 gallons and maximum spray volume of 50 gallons per acre.

Total Vegetation Suppression

A reduction in grass competition may make certain broadleaf weeds appear more prominent or may allow for germination of new weeds.

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

The user should test any combination treatment with **Vantage**, either tank mixed or sequential, 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 sprayer thoroughly before and after application of **Vantage**.

Clean sprayer thoroughly before application of **Vantage**, particularly if a herbicide with the potential to injure the crop to be sprayed with **Vantage** was used.

Failure to clean sprayer thoroughly after the application of **Vantage** may result in injury to any grass crop subsequently sprayed. Fill the sprayer with clean water and add a commercial sprayer cleaner or a surfactant/adjuvant at the recommended rate on its label. Circulate through 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
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.

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
(*Cornus florida*)
Dogwood, Silky
(*Cornus amomum*)
Dogwood, Pagoda
(*Cornus alternifolia*)
Elm, Chinese Evergreen
(*Ulmus parvifolia*)

Listed by scientific name

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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)
Cornus alternifolia
(Dogwood, Pagoda)
Cornus amomum
(Dogwood, Silky)
Cornus 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 citriodera*)

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 dioicus*)

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 Southern
 (*Magnolia grandiflora*)

Maple, Red
 (*Acer rubrum*)

Maple, Japanese
 (*Acer palmatum*)

Maple, Silver
 (*Acer saccharinum*)

Mimosa Tree (*silk tree*)
 (*Albizia julibrissin*)

Listed by scientific name

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Eucalyptus citriodera
 (Gum, Lemon-scented)

Eucalyptus globulus
 (Gum, Blue)

Eucalyptus granis
 (Eucalyptus)

Eucalyptus lehmannii
 (Bushy Yate)

Eucalyptus nicholi
 (Nichol's Willow)

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 dioicus
 (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 caribean*)
 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

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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 caribean
 (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 phillyraeoides
 (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*)
- Poplar, 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 phillyraeoides*)
- 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: *Pyramidiformus, caneari*)
(*Juniperus virginiana*)
Cherry, Brush
(*Eugenia myrtifolia*)
Cherry, Manchu, Nanking
(*Prunus tomentosa*)
Chokecherry sp.
(*Aronia meloelata*)
Copper Plant, Caribbean
(*Euphoria 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*)

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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 graberi*)
 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 huegellii*)
 Hibiscus, Chinese
 (*Hibiscus rosa-sinensis*)
 Holly, Dwarf Burford
 (var. Burfordii Nana)
 (*Ilex cornuta*)
 Honeysuckle, Bush
 (*Dierville lonicera*)
 Honeysuckle, Cape
 (*Tecomaria capensis*)
 Hydrangea
 (*Hydrangea macrophylla*)
 Jasmine Asiatic
 (*Trachelospermum asiaticum*)
 Jasmine, Orange
 (*Murraya paniculata*)
 Jasmine, Star
 (*Trachelospermum jasminoides*)
 Jasmine, Winter
 (*Jasmine nudiflorum*)
 Jessamine, Carolina
 (*Gelsemium sempervirens*)
 Jojoba
 (*Simmondsia chinensis*)
 Juniper, Chinese (var. Maneyi, Old Gold, Phtzerana,
 Sea Green, Hekii, Nana, Torulosa, Phtzerana
 Aurea, Pfitzer, Golden Pfitzer)
 (*Juniperus chinensis*)

Listed by scientific name

Dierville 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)
Jasmine 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)

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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 heterophyillus*)
 Osmanthus, Sweet Olive
 (*Osmanthus fragrans*)
 Palm, Natal
 (var. *Green Carpet Tuttle*)
 (*Carissa grandiflora*)
 Pampas Grass
 (*Cortaderia selloana*)
 Photinia
 (*Photinia sp.*)
 Photinia, Fraser
 (*Photinia fraser*)
 Pink Lady
 (*Rahioleis indica*)

Listed by scientific name

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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: *Pyramidiformus, Caneariti*)
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)
Muraya 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 heterophyillus
 (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 graberi*)
 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
(Wheelers Dwarf, variegated)
(var: *Wheller*)
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, Manchu, Nanking)
Pyracantha fortuneana
(Pyracantha, Firethorn)
Rhamnus frangula
(Buckthorn, Glossy, Alder)
Rhaphiolepis 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 purpura
(Lilac, Common Purple)
Taxus cuspidata vigatum
(Yew)
Tecoma stans
(Yellow Bells, Yellow Trumpet Flower)
Tecomaria capensis
(Honeysuckle, Cape)
Temstroemia gymnanthera
(Temstroemia)
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: *Wheller*)
(*Pittosporum tobira*)
- Yellow Bells
(*Tecoma stans*)
- Yesterday-Today-and-Tomorrow
(*Brunfelsia calycina*)
- Yew
(*Taxus cuspidata vigatum*)

**Ornamentals, Bedding plants
Listed by common name**

- Allysum
(*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: Bristo Fairy)
(*Gypsophila paniculata*)
- Begonia
(*Begonia semperflorens*)
- Bellflower, Tussock (var: Canterbury Bells)
(*Campanula carpatica*)
- Bittersweet, American
(*Calatrus 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.
(Allysum)
- 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)
- Calatrus scandens*
(Bittersweet, American)
- Campanula carpatica*
(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 Sprengerii*)
- 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 xylostereum*)
- 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
(*Dietes bicolor*)
- Ivy, Grape
(var: *Ellen Danica*)
(*Cissus rhombifolia*)
- Jack-in-the-Pulpit
(*Arisaemia 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 maachii*
(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*)
- Snappdragon
(*Antirrhinum majus*)
- Speedwell, Spike
(*Veronica spicata*)
- Statice, Perennial
(*Limonium perezii*)
- Stock
(*Mattiola 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
(*Hemiaria glabra*)
- Ivy, Algerian
(*Hedera canariensis*)
- 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*)
- Lippia
(*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
(*Drosantherum floribundum*)
- Rosemary, Dwarf (var. Prostratus)
(*Rosmarinus officinalis*)
- Rupture Wort
(*Hemiaria 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)
- Drosantherum floribundum*
(Rosea Ice Plant)
- Gazania regens leucolaena*
(Gazania, Trailing)
- Hedera helix*
(Ivy, English) (var: California)
(Hahn's Ivy) (var: Hahnii)
- Hemiaria 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)

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

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

Other

Listed by Common Name	Listed by Scientific Name
Trees Red Oak White Oak	<i>Quercus rubra</i> <i>Quercus alba</i>
Shrubs Azalea (var Snow) Potentilla (var Jackmanni, K. VanDyke) Privet, Japanese	<i>Rhododendron sp.</i> <i>Potentilla fruticosa</i> <i>Potentilla verna</i> <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-anglae</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>
Carnation	<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 subcarinosus</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 lanceolate</i>
Grayhead coneflower	<i>Echinacea pallida</i>	Tidy tips	<i>Layia platyglossa</i>
Hard fescue	<i>Festuca longifolium</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
Bahlagrass	<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 cilianensis</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>Tritium 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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