

10163-120

6/23/2005

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JUN 23 2005

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Aimee Weber  
Gowan Company  
P.O. Box 5569  
Yuma, AZ 85366-5569

Dear Ms. Weber:

Subject: Revised Labeling  
Gowan Trifluralin 10G  
EPA Registration No. 10163-120  
Your Submission Dated June 8, 2005

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records.

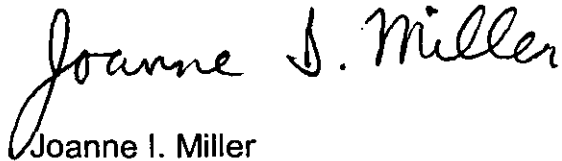
Policy and Criteria Notice 2163.1 states that the Agency will not conduct a detailed review of such liability disclaimers or purported buyer agreement to assume risk; the approval of labels with such statements should not be construed as a decision by the Agency that the language is not misleading and that the label language might eventually have to change.

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If you have any questions concerning this letter, please contact Mr. James Stone at 703-305-7391.

Sincerely yours,

A handwritten signature in black ink that reads "Joanne I. Miller". The signature is written in a cursive style with a large initial 'J'.

Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

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# GOWAN TRIFLURALIN 10G

## GRANULAR HERBICIDE

**ACTIVE INGREDIENT:**

Trifluralin ( $\alpha, \alpha, \alpha$ -trifluoro-2, 6-dinitro-N, N-dipropyl-p-toluidine)

% By Wt.

10.0%

**OTHER INGREDIENTS**

90.0%

**TOTAL 100.0%**

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**FIRST AID**

<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-888-478-1798** for emergency medical treatment information.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical resistant gloves category "A"
- Shoes plus socks
- Protective eyewear

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.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish. 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. Drift or runoff from treatment areas may be hazardous to aquatic organisms in neighboring aquatic sites. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not store near heat or open flame.

**DIRECTIONS FOR USE**

Read all directions carefully before applying. 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.

**NET WEIGHT \_\_\_\_\_ POUNDS**



EPA Reg. No. 10163-120  
EPA Est. No. 67545-AZ-1

Gowan Company  
P.O. Box 5569  
Yuma, AZ 85366-5569

**ACCEPTED**

JUN 23 2005

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

10163-120

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

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 category "A"
- Shoes plus socks
- Protective eyewear

**CROP USE PRECAUTIONS**

Applied according to the directions and under normal growing conditions, Gowan Trifluralin 10G will not harm the treated crop. Over-application may result in crop injury or a soil residue. Uneven application or improper soil incorporation can result in erratic weed control or crop injury. Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration or drought may weaken crop seedlings and increase the possibility of damage. Under these conditions, delayed crop development or reduced yields may result.

In Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming, sugar beets, red beets, or spinach should not be planted for 12 months after a spring application or for 14 months after a fall application. Plow the land to a depth of 12 inches prior to planting sugar beets to prevent the possibility of crop injury. Sorghum (milo), proso millet, corn, or oats should not be planted for 14 months after a spring application or for 16 months after a fall application to avoid crop injury. If land has not been irrigated, do not plant any of these crops for 18 months after a spring application or 20 months after a fall application of Gowan Trifluralin 10G.

If less than 20 inches of total water was used to produce the crop, do not plant sorghum, proso millet, or oats for 18 months after an application. Cool, wet weather conditions during the early stage of growth may increase the possibility of injury to sorghum.

In all other areas receiving greater than 20 inches of rainfall per year, moldboard plow before planting sugar beets where a spring application was made the previous season.

**Vegetable Growing Areas:** Vegetable crops other than those listed on this label should not be planted within 5 months following the application of Gowan Trifluralin 10G.

**Directions for use:** Gowan Trifluralin 10G is a preemergence herbicide that is incorporated into the soil to provide long lasting control of annual grasses and broadleaf weeds. This product controls weeds as they germinate, but will not control established weeds.

**WEEDS AND GRASSES CONTROLLED BY GOWAN TRIFLURALIN 10G**

**GRASSES**

Annual bluegrass	Poa annua
Barnyardgrass (Watergrass)	Echinochloa sp.
Brachiaria (Signalgrass)	Brachiaria sp.
Bromegrass (Cheatgrass) (Downy brome)	Bromus tectorum
Cheat (Chess)	Bromus secalinus
Crabgrass (Large crabgrass) (Smooth crabgrass)	Digitaria spp.
Cupgrass, southwestern	Eriochloa gracilis
Foxtail (Bottlegrass) (Bristlegrass) (Giant foxtail) (Green foxtail) (Foxtail millet) (Pigeongrass) (Robust foxtail) (Yellow foxtail)	Setaria spp.
Goosegrass (Silver crabgrass) (Silvergrass) (Wiregrass) (Yardgrass)	Eleusine indica
Johnsongrass (from seed)	Sorghum halepense
Junglerice	Echinochloa colonum
Sandbur (Burgrass)	Cenchrus incertus
Sprangletop	Leptochloa filiformis
Stinkgrass (Lovegrass)	Eragrostis cilianensis
Wild cane (Shattercane)	Sorghum bicolor
Wild oat**	Avena fatua
Woolly cupgrass	Eriochloa villosa
**Gowan Trifluralin 10G applied as a preplant incorporated (PPI) treatment will provide partial control of wild oats. This claim is for all PPI uses except fall applications for spring seeded cereals.	
<b>BROADLEAF WEEDS</b>	
Carpet weed	Mollugo verticillata
Chickweed	Stellaria media
Florida pusley (Florida purslane) (Mexican clover) (Pusley)	Richardia scabra
Goosefoot	Chenopodium hybridum
Henbit (fall app only)	Lamium amplexicaule
Knotweed	Polygonum aviculare
Lambsquarters	Chenopodium album
Pigweed (Carelessweed) (Prostrate pigweed) (Redroot pigweed) (Rough pigweed) (Spiny pigweed)	Amaranthus spp.
Puncturevine (Western U.S. only) (Caltrop) (Goathead)	Tribulus terrestris
Purslane	Portulaca oleracea
Stinging nettle (Nettle)	Urtica dioica

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### SOIL PREPARATION

**Crop Residues or Existing Weeds:** Apply Gowan Trifluralin 10G to soil that has a manageable trash level, been fallowed, pre-tilled or to soil that has standing stubble. A manageable level of such ground cover would allow the granules to be uniformly incorporated into the top 2 to 3 inches of the final seedbed.

**Roughness:** The soil surface should be smooth enough so the application and incorporation equipment can be operated efficiently and at speeds which ensure a uniform application and incorporation of Gowan Trifluralin 10G.

**General Soil Conditions:** To assure uniform incorporation of Trifluralin, soil moisture conditions should be such that large clods can be broken up during the incorporation process.

### SOIL TEXTURE GUIDE

The amount of Gowan Trifluralin 10G applied will vary with the soil texture and organic matter. A fine textured soil will require more Gowan Trifluralin 10G per acre than a coarse soil. Choose the proper rate for each application based on the following soil texture group and specific recommendations. Do not exceed recommended rates.

Soil Texture	Soil Classifications
Course soils (Light):	Sand, loamy sand, sandy loam
Medium soils:	Loam, silty clay loam*, silt loam, silt, sandy clay loam
Fine soils (Heavy):	Clay, clay loam, silty clay loam*, silty clay, sandy clay, sandy clay loam*

\*Silty clay loam and sandy clay loam soils are transitional soils and may be classified as either medium or fine textured soils. If silty clay loam or sandy clay loam soils are predominately sand or silt, they are usually classified as medium textured soils. If they are predominately clay, they are usually classified as fine textured soils.

### APPLICATION DIRECTIONS

Apply Gowan Trifluralin 10G with a properly calibrated herbicide applicator that will apply the granules uniformly. Calibrate the applicator according to the manufacturer's directions and check frequently during the application to be certain that equipment is working properly. Avoid concentration of the material in narrow bands.

Freezing will not adversely affect this product. If product is frozen at time of application, agitate or thaw to produce a free-flowing granule.

### INCORPORATION DIRECTIONS

#### Incorporation Equipment-General Directions

Use incorporation equipment that mixes Gowan Trifluralin 10G into the top 2 to 3 inches of the final seedbed, or erratic weed control and/or crop injury may result. Incorporation equipment such as a disc, will mix the granules approximately half as deep as the equipment is set to operate. For example, a disc set to cut 4 inches deep will incorporate most of the granules within the top 2 inches of the final seedbed.

#### Incorporation Before Planting

Gowan Trifluralin 10G must be incorporated one time within 24 hours after application. The second incorporation must be delayed at least five (5) days after the first, completed prior to planting, and should be run in a different direction from the first. Incorporate uniformly into the top 2 to 3 inches of the final seedbed.

#### Incorporation After Planting

Check specific crop for incorporation directions after planting.

#### Incorporation in Bedded Culture

For effective weed control, incorporate into the top 2 to 3 inches of the final seedbed.

**Application prior to bedding:** Apply and incorporate one time with recommended equipment. The bedding operation serves as the second incorporation. Do not expose untreated soil during post-bedding operations.\*

**Application after bedding:** Knock off beds to planting height before applying Gowan Trifluralin 10G. Apply and incorporate with recommended equipment that will conform to bed shape. Do not leave untreated soil exposed.\*

\*Avoid removal of treated soil from the seedbed before or during the planting operation. This would expose untreated soil, allowing weeds to germinate in the drill row.

### Recommended Equipment:

Any recommended incorporation tool may be used alone or in combination with any other recommended tool. Two incorporation passes are required unless specifically stated. The second incorporation should not be deeper than the first.

**Disc:** Set to cut 4 to 6 inches deep and operate at 4 to 6 mph.

**Field Cultivator:** Set to cut 3 to 4 inches deep and operate at 5 mph or more. A field cultivator is defined as an implement with 3 to 4 rows of sweeps, spaced at intervals of 7 inches or less and staggered so that no soil is left unturned. Chisel points should not be used.

**Chisel Plow:** (For use in Northern Great Plains) The chisel plow may be used for the first incorporation pass only. Any other recommended tool may be used for the second pass for row crops. The chisel plow may be used for any tillage or incorporation pass in the Summer Fallow program. Operate at 4 to 5 inches deep at 4 to 6 mph. A chisel plow is defined as having 3 rows of 14 to 18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned. Chisel points should not be used.

**Combination Seedbed Conditioners:** Set to cut 3 to 4 inches deep and operate at a speed of at least 5 mph. These implements are defined as three or more tillage devices combined and used as a single tool. For example, 2 to 3 rows of field cultivator "c" or "s" shaped shanks with an effective sweep spacing of 6 to 9 inches (staggered so that no soil is left unturned), followed by a spike-tooth of flexline harrow, followed by a ground-driven reel or basket.

**Rolling Cultivator:** Set to cut 2 to 4 inches deep and operate at 6 to 8 mph. Rolling cultivators are adequate for use on coarse and medium textured soils only.

**Mulch Treader** (other similar disc-type implements): Set to cut 3 to 4 inches deep and operate at 5 to 8 mph.

**P.T.O. Driven Equipment** (tillers, cultivators, hoes): Adjust to incorporate into the top 2 to 3 inches of the seedbed with rotors spaced to provide a clean sweep of the soil. Only one incorporation is necessary. P.T.O. driven equipment should not be operated at a speed greater than 4 mph.

Other equipment including the flexible tine-tooth harrow (Flexline, Melroe), is also recommended but only for the special programs for which it is specified in this label.

### CULTIVATION AFTER PLANTING

Treated soil may be shallow cultivated without reducing the weed control activity. Do not cultivate deeper than the treated soil since this may bring untreated soil to the surface, and poor weed control may result.

### CROP RECOMMENDATIONS

These recommendations are given as the broadcast rates per acre. Apply any time after January 1 when the soil can be worked and is suitable for good incorporation-see specific crop for recommendations. Where a rate range is shown, use the lower rate for coarser soils or soils with lower organic matter. This product should not be used on soils containing more than 10% organic matter or on muck soils.

#### ALFALFA-Established

For Barnyardgrass, Crabgrass, Dodder, Foxtail, Junglerice, Sandbur, and Cupgrass Control

Gowan Trifluralin 10G can be activated for barnyardgrass, crabgrass, foxtail, junglerice, sandbur, and cupgrass control in established alfalfa either by rainfall/overhead sprinkler irrigation, flood irrigation, or by mechanical incorporation.

Apply to established alfalfa stands prior to weed emergence at a broadcast rate of 20 lbs. per acre for all soil textures. Use properly calibrated ground or aerial application equipment. A single rainfall or overhead sprinkler irrigation of 0.5 inches or more or flood irrigation after application is required to activate Gowan Trifluralin 10G. If this does not occur within three (3) days after application, activate using incorporation equipment that will ensure thorough soil mixing with minimum damage to the established alfalfa.

**Precaution:** In the season following a 20 lb. per acre treatment, where established alfalfa is to be rotated to another crop, plant only those crops for which Gowan Trifluralin 10G can be applied as a preplant treatment or injury may result.

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**ASPARAGUS-Established**

Follow recommended soil preparation, application and incorporation procedures on this label. Gowan Trifluralin 10G can be applied to established asparagus as a single or as a split application. In the winter or early spring, apply to asparagus after ferns are removed but before spear emergence. Or, apply after harvest in the late spring or early summer before ferning begins. Gowan Trifluralin 10G will suppress volunteer seeding asparagus and field bindweed if you use the following recommended rates and application schedules.

**Broadcast Rates Per Acre:**

Gowan Trifluralin 10G				
Soil Texture	SPLIT APPLICATION		SINGLE APPLICATION	
	Before Harvest	After Harvest	Before Harvest	After Harvest
Coarse	5.0 lbs. +	5.0 lbs.	10.0 lbs. or	10.0 lbs.
Medium	7.5 lbs. +	7.5 lbs.	15.0 lbs. or	15.0 lbs.
Fine	10.0 lbs. +	10.0 lbs.	20.0 lbs. or	20.0 lbs.

In any single calendar year, the maximum Gowan Trifluralin 10G to apply is 10 lbs. per acre on coarse soils, 15 lbs. per acre on medium soils and 20 lbs. per acre on fine soils.

**FOR THE FOLLOWING CROP GROUPING, USE THE RATE TABLE BELOW.**

**CASTOR BEAN  
CELERY**

**COLE CROPS-Transplant**

Broccoli, Brussels Sprouts, Cabbage, and Cauliflower

Apply and incorporate prior to transplanting only.

**OKRA**

**PEPPER-Transplant**

Apply and incorporate prior to transplanting only.

**SOUTHERN PEA-Before Planting Only**

Apply and incorporate Gowan Trifluralin 10G before planting, at planting or immediately after planting, unless otherwise indicated.

**Broadcast Rates Per Acre:**

Gowan Trifluralin 10G		
Soil Texture	Areas receiving less than 20" average annual rainfall*	Areas receiving greater than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6 1/4 - 7 1/2 lbs.	7 1/2 lbs.
Fine	7 1/2 lbs.	10 lbs.

\*Use 7 1/2 lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 lbs. on all soils with 5-10% organic matter.

**COLE CROPS-Direct Seedbed**

Broccoli, Brussels Sprouts, Cabbage, and Cauliflower

For direct seeded cole crops, apply and incorporate Gowan Trifluralin 10G before planting at a broadcast rate of 5 lbs. per acre on coarse and medium soils and 7 1/2 lbs. on fine soils and soils with 2-5% organic matter. Direct seeded cole crops have exhibited marginal tolerance to recommended rates of Gowan Trifluralin 10G. Stunting or reduced stands may occur.

**CUCURBITS-Postplant Emerged**

Cantaloupe, Cucumber, and Watermelon

Western United States including Texas  
Apply Gowan Trifluralin 10G as a broadcast granule to the soil between the rows and beneath plants which are in the 3 to 4 true leaf stage.

**Broadcast Rates Per Acre:**

Gowan Trifluralin 10G		
Soil Texture	Areas receiving less than 20" average annual rainfall*	Areas receiving greater than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6 1/4 - 7 1/2 lbs.	7 1/2 lbs.
Fine	7 1/2 lbs.	10 lbs.

\*Use 7 1/2 lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 lbs. on all soils with 5-10% organic matter.

Set incorporation equipment to throw treated soil around the plants during incorporation.

**FRUIT AND NUT CROPS AND VINEYARDS**

For all areas receiving less than 20" average annual rainfall.

For all new plantings of almond, apricot, citrus, nectarine, peach, pecan, and walnut trees, apply and incorporate before planting at a broadcast rate of 5 lbs. per acre on coarse soils; 6 1/4 to 7 1/2 lbs. per acre on medium soils; 7 1/2 lbs. on fine soils; 7 1/2 to 10 lbs. on soils with 2-5% organic matter; and 10 lbs. on soils with 5-10% organic matter.

For new plantings of vineyards, apply and incorporate before planting at a broadcast rate of 5 to 7 1/2 lbs. per acre on coarse soils; 7 1/2 to 15 lbs. on medium soils; and 15 to 20 lbs. on fine soils or soils with 2-10% organic matter. Do not use more than 10 lbs. per acre on heat-treated grape rootings.

For postplant applications on bearing or nonbearing, established plantings of vineyards and almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine, and walnut trees, apply at a broadcast rate of 10 to 20 lbs. per acre for all soil textures. Do not apply to vineyards within 60 days of harvest. In established plantings, apply to the soil and use incorporation methods not injurious to the trees or vines.

**COTTON-Gowan Trifluralin 10G Alone**

This product can be applied and incorporated before or at planting, immediately after planting, or at layby.

**Preemergence Broadcast Rates Per Acre:**

Gowan Trifluralin 10G		
Soil Texture	Areas receiving less than 20" average annual rainfall*	Areas receiving greater than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6 1/4 - 7 1/2 lbs.	7 1/2 lbs.
Fine	7 1/2 lbs.	10 lbs.

\*Use 7 1/2 lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 lbs. on all soils with 5-10% organic matter.

**COTTON-Postplant**

When incorporating after planting (postplant), be careful not to disturb the seed.

**COTTON-Layby**

Apply and incorporate any time up to layby, but not less than 90 days before harvest. Direct the layby applications onto the soil between the rows and beneath emerged cotton plants. Use the same rates as for a preemergence application.

**COTTON-Fall Application**

Apply and incorporate any time between October 15 and December 31. The ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired height before planting, moving some treated soil from beds into furrows. Where soil is left flat over winter, be careful not to turn up untreated soil during spring bedding operations. Destroy established weeds during seedbed preparation. If weeds become established in furrows due to uncovering of untreated soil during bedding, destroy these weeds before planting. In the fall, do not apply to soils which are wet or subject to prolonged periods of flooding.

**Broadcast Rates Per Acre (Fall Application Only):**

In Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, Southeastern Missouri Bootheel, North Carolina, New Mexico, Oklahoma, South Carolina, Tennessee, and Texas, apply and incorporate at a broadcast rate of 10 lbs. per acre on coarse and medium soils and 12 1/2 lbs. on fine soils.

In Arizona, California, and Nevada, apply and incorporate at a broadcast rate of 7 1/2 lbs. per acre on coarse soils; 10 lbs. on medium soils; and 12 1/2 lbs. on fine soils.

**DRY BEAN-Gowan Trifluralin 10G Alone**

Apply and incorporate Gowan Trifluralin 10G before planting using the following rates.

**Broadcast Rates Per Acre:**

Gowan Trifluralin 10G		
Soil Texture	Areas receiving less than 20" average annual rainfall*	Areas receiving more than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6 1/4 - 7 1/2 lbs.	7 1/2 lbs.
Fine	7 1/2 lbs.	10 lbs.

\*Use 7 1/2 lbs. per acre on coarse and medium soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 lbs. on all soils with 5-10% organic matter.

**DRY BEAN-Fall Application**

Apply and incorporate any time between October 15 and December 31 at a broadcast rate of 5 lbs. per acre on coarse soils; 6¼ to 7½ lbs. on medium soils; and 7½ lbs. on fine soils. Destroy established weeds during seedbed preparation.

**FLAX-Fall Application**

Apply and incorporate in the fall from September 1-December 31.

**Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G
Coarse	5 lbs.
Medium	7½ lbs.
Fine	10 lbs.

**Special Instructions for Flax**

1. Incorporation operations or any other tillages performed in the spring prior to seeding should be relatively shallow so as to maintain a firm seedbed, and the seedbed should be packed just prior to seeding.
2. Seeding should be done with a press drill or hoe drill. Seed into a moist seedbed no more than 1½ inches deep.
3. Flax should not be seeded until the seedbed has warmed up.

**BEANS**

Lima Bean and Snap Bean

Apply and incorporate before planting at a broadcast rate of 5 lbs. per acre on coarse and medium soils and 7½ lbs. on fine soils.

**MUSTARD-Grown for seed or processing for food in Minnesota, Montana, and North Dakota**

Apply and incorporate before planting at a broadcast rate of 5 lbs. per acre on coarse soils and 7½ lbs. on medium and fine soils.

**PEANUT**

Spanish Peanut in Texas and Oklahoma

Apply and incorporate before planting, at planting or immediately after planting at a broadcast rate of 5 lbs. per acre on coarse soils. When incorporating after planting, take care not to disturb the seed.

**RAPE**

Apply and incorporate in the spring before planting or in the fall after September 1.

**Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G
Coarse	5 lbs.
Medium	7½ lbs.
Fine	10 lbs.

**SAFFLOWER**

Apply and incorporate in the spring before planting or in the fall between October 15 and December 31.

**Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G	
	Areas receiving less than 20" average annual rainfall*	Areas receiving more than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6¼ - 7½ lbs.	7½ lbs.
Fine	7½ lbs.	10 lbs.

\*Use 7½ lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 to 12½ lbs. on all soils with 5-10% organic matter.

**SAFFLOWER-Fall Application**

Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming

Apply and incorporate any time between October 15 and December 31. Ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired height before planting, moving some treated soil from tops into furrows. Where soil is left flat over winter, take care during spring bedding operations to prevent turning up untreated soil. Destroy established weeds during seedbed preparation. If weeds become established in furrows due to uncovering of untreated soil during listing, destroy these weeds before planting.

Apply and incorporate at a broadcast rate of 7½ lbs. per acre on coarse soils; 10 lbs. on medium soils; and 12½ lbs. on fine soils. Do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding.

**SOYBEAN-Gowan Trifluralin 10G Alone**

**Preemergence Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G*
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Soil Texture	Rate
Coarse	5 lbs.
Medium	7½ lbs.
Fine	10 lbs.

\*Use 7½ lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10-12½ lbs. on all soils with 5-10% organic matter.

**SOYBEAN-Fall Application**

Apply and incorporate any time between October 15 and December 31. Ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired height before planting, moving some treated soil from tops into furrows. Where soil is left flat over winter, take care during spring bedding operations to prevent turning up untreated soil. Destroy established weeds during seedbed preparation. If weeds become established in furrows due to uncovering of untreated soil during listing, destroy these weeds before planting. Do not apply in the fall to soils which are wet, are subject to prolonged periods of flooding, or where rice was grown the previous year.

For soybeans grown in Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, Southeastern Missouri Bootheel, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas, apply Gowan Trifluralin 10G at a broadcast rate of 10 lbs. per acre on coarse and medium soils and 12½ lbs. on fine soils.

For soybeans grown in states other than those listed above, apply and incorporate at a broadcast rate of 5 lbs. per acre on coarse soils; 7½ lbs. on medium soils; 10 lbs. on fine soils; 7½ lbs. on coarse soils with 2-5% organic matter; and 10 to 12½ lbs. on soils with 5-10% organic matter.

**SUGAR BEET**

Broadcast overtop when plants are between 2 and 6 inches tall at a rate of 5 lbs. per acre on coarse soils and 6¼ to 7½ lbs. on medium and fine soils. Use the higher rate for medium and fine soils for areas receiving more than 20" average annual rainfall. Set incorporation machinery to throw treated soil toward the plants in the row. Be careful that the incorporation machinery does not damage the sugar beet taproot.

Precaution: Exposed beetroots should be covered with soil before application to reduce the possibility of girdling.

**SUNFLOWER-Gowan Trifluralin 10G Alone**

Apply and incorporate in the spring or in the fall between October 15 and December 31. Follow recommended soil preparation, application and incorporation procedures.

**Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G	
	Areas receiving less than 20" average annual rainfall*	Areas receiving more than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6¼ - 7½ lbs.	7½ lbs.
Fine	7½ lbs.	10 lbs.

\*Use 7½ lbs. per acre on coarse and medium textured soils with 2-5% organic matter and 10 lbs. on all soils with 5-10% organic matter.

**TOMATO**

For direct seeded tomato, apply at blocking or thinning to the soil between rows and beneath the plants, and incorporate. For transplant tomato, apply and incorporate before transplanting. Do not apply Gowan Trifluralin 10G after transplanting.

**Broadcast Rates Per Acre:**

Soil Texture	Gowan Trifluralin 10G	
	Areas receiving less than 20" average annual rainfall*	Areas receiving more than 20" average annual rainfall*
Coarse	5 lbs.	5 lbs.
Medium	6¼ - 7½ lbs.	7½ lbs.
Fine	7½ lbs.	10 lbs.

\*Use 7½ lbs. per acre on coarse and medium textured soils and 10 lbs. on fine soils with 2-5% organic matter; use 10 lbs. on all soils with 5-10% organic matter.

**WHEAT (Spring), DURUM AND BARLEY-Summer Fallow**

Apply to coarse, medium or fine textured soils for control of labeled weeds in the summer fallow period, and for pigeongrass (foxtail) control in wheat, durum, and barley seeded the following spring.

This product may be applied to ground that has a manageable trash level, been fallowed, pre-tilled, or to soil left with a stubble cover. The first incorporation is required within 24 hours after application. The second incorporation and subsequent tillage may be done whenever necessary to destroy resistant weed growth during the remainder of the

8 7 12

fallow year, susceptible weeds may not be controlled until after the second incorporation.

**Broadcast Rates Per Acre:**

Application Date	Gowan Trifluralin 10G
April 15 to May 31	10 lbs.
June 1 to June 30	8½ lbs.
July 1 to July 31	7½ lbs.
August 1 to August 31	6½ lbs.

**Incorporation Directions**

Incorporate Gowan Trifluralin 10G one time within 24 hours after application. Care should be taken to ensure that the second incorporation and subsequent tillages are more shallow than the first. Incorporate and till treated ground with the following equipment:

1. Chisel plow: Operate at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of 14-18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned. Chisel points should not be used.
2. Tandem disc: Operate at 3-4 inches deep at 4-6 mph.
3. Field cultivator: Operate at 3-4 inches deep at 5 mph or more. A field cultivator is defined as having 3-4 rows of sweeps with "c" or "s" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned.

**Seeding Directions:** Wheat, durum, or barley should be seeded approximately 2 inches deep.

**Precautions:** While use of this practice may result in a stand reduction, slight stand reductions do not normally affect yield.

**WHEAT (Spring), DURUM AND BARLEY-Fall Application**

For the control of foxtail (pigeongrass), apply at a broadcast rate of 5 lbs. per acre on coarse and medium soils and 7½ lbs. per acre on fine soils.

**Incorporation Directions:** Any of the following tools are recommended for fall incorporation. The disc or field cultivator may be used for the spring incorporation pass. Care should be taken to operate the tool at a more shallow depth than the fall incorporation.

1. Chisel plow: May be used for first pass only. Operate at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of 14-18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned. Chisel points should not be used.
2. Tandem disc: Operate at 3-4 inches deep at 4-6 mph.
3. Field cultivator: Operate at 3-4 inches deep at 5 mph or more. A field cultivator is defined as having 3-4 rows of sweeps with "c" or "s" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned.

**Seeding Directions:** Wheat, durum, or barley should be seeded approximately 2 inches deep.

**Precautions:** While use of this practice may result in a stand reduction, slight stand reductions do not normally affect yield.

**WHEAT (Winter)**

Idaho, Montana, Oregon, and Washington

Gowan Trifluralin 10G may be applied for preplant preemergence control of cheatgrass and other annual grasses and broadleaf weeds which it controls.

Apply any time up to 3 weeks prior to planting. Broadcast at a rate of 7½ lbs. per acre on coarse and medium soils and 10 lbs. on fine soils.

**Incorporation Directions:** Incorporate into the soil with a flexible tine-tooth harrow, (Flextine or Melroe), set to cut 1-2 inches deep and operate at 3-6 mph.

**Seeding Directions:** Use only a deep furrow or semi-deep furrow drill that will place the seed below the treated zone of soil.

**Precaution:** Do not plant wheat directly into the treated zone of soil, as injury to the crop (delay in emergence or stand reduction) may occur. Delayed emergence or slight stand reductions do not normally affect yield.

**WHEAT (Winter)-Fallow Soil Application**

Idaho, Montana, Oregon, and Washington

This product applied and shallowly incorporated into fallow soil up to 4 months ahead of planting will control cheatgrass and certain annual grasses and broadleaf weeds.

Broadcast rates are 7½ lbs. per acre on coarse and medium soils and 10 lbs. on fine soils. Apply any time from May to September prior to the fall planting of winter wheat.

**Incorporation Directions:** Incorporate with a flexible tine-tooth harrow (Flextine or Melroe), set to cut 1-2 inches deep and operated at 3-6 mph. For thorough incorporation, 2 passes of the equipment in different directions over the field are necessary. Incorporate one time within 24

hours after application followed by a second incorporation at least 5 days after the first prior to seeding. Do not till the soil with a disc after the granules have been incorporated with a flexible tine harrow.

**Seeding Directions:** Use only a deep furrow or semi-deep furrow drill that will place the seed below the treated zone of soil.

**Precaution:** Do not plant wheat directly into the treated zone of soil as injury to the crop (delay in emergence or slight stand reduction) may occur. Delayed emergence or slight stand reductions do not normally affect yield.

**FALL APPLICATION**

**General:** (Areas receiving more than 20" average annual rainfall.) See specific crop for recommendations. For all crops for which there are not specific fall application instructions and for which Gowan Trifluralin 10G is recommended as a preemergence application, use the rates listed for spring applications. Do not apply in the fall for sugar beets, potatoes, and direct-seeded tomatoes.

**In most States:** Apply and incorporate Gowan Trifluralin 10G any time between October 15 and December 31.

**In California, Minnesota, Montana, North and South Dakota:** Apply and incorporate Gowan Trifluralin 10G any time between September 1 and December 31. Ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired heights before planting, moving some treated soil from beds into furrows. Where soil is left over winter, be careful not to turn up untreated soil during spring bedding operations. Destroy established weeds during seedbed preparation.

If weeds become established in furrows due to uncovering of untreated soil during bedding, destroy these weeds before planting. Do not apply in the fall to soils which are wet, are subject to prolonged periods of flooding, or where rice was grown the previous year.

**Container Grown Ornamentals, Landscape Ornamentals, Nursery Stock, Ground Covers, Established Flowers, Ornamental Bulbs, Non-bearing Fruit and Nut Trees and Non-Bearing Vineyards and Christmas Tree Plantations:**

Gowan Trifluralin 10G is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established flowers, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards and Christmas tree plantations. Apply 40lb/acre (9 lb/1000sq.ft) Gowan Trifluralin 10G before or after planting but prior to germination of target weeds, or immediately after cultivation. Length of weed control will vary with weed population, potting media or soil conditions, temperature, watering regime, and other factors. Following application, user should monitor and observe level of weed control over time to determine when additional applications may be needed. Repeat application should not be made sooner than 60 days after a previous application of Gowan Trifluralin 10G. Do not apply over 120 pounds per acre total of Gowan Trifluralin 10G within a 12 month period.

Gowan Trifluralin 10G does not control established weeds. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings and trash should be removed or thoroughly mixed in to soil prior to treatment. Soil should be in good condition and free of clods at the time of application. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation, is required to activate Gowan Trifluralin 10G. Optimum weed control is



obtained when Gowan Trifluralin 10G is activated within 3 days of application. If rainfall or irrigation has not occurred within 3 days of application and tillage is possible, Gowan Trifluralin 10G may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil. Failure to activate Trifluralin 10G within 3 days of application may result in erratic weed control. Do not apply when wind conditions favor drift of Trifluralin 10G granules from the target area. Optimum weed control will be obtained when followed by overhead irrigation or rainfall within a few hours after surface application.

**Special Use Precautions:** To avoid possible injury, do not apply Gowan Trifluralin 10G to:

- Nursery forest or Christmas Tree seedling beds, cutting beds or transplant beds
- Unrooted liners or cuttings that have been planted in pots for the first time
- Pots less than four inches wide
- Ground covers until they are established and well rooted

Do not apply Gowan Trifluralin 10G to newly transplanted ornamentals, nursery stock, ground covers, flowers and non-bearing fruit and nut crops and non-bearing vineyards until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or injury may occur.

Do not make preplant applications of Gowan Trifluralin 10G to areas where gladioli corms less than one inch in diameter will be planted or injury may occur.

Do not apply Gowan Trifluralin 10G in greenhouse or other enclosed structures.

Users who wish to use Gowan Trifluralin 10G on plant species not recommended on this label may determine suitability for such uses by making trial application of Gowan Trifluralin 10G at a recommended rate to small numbers of plants. Prior to using Gowan Trifluralin 10G on a large number of plants, the treated plants should be observed for signs of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from the use of Gowan Trifluralin 10G on plant species not recommended on this label. Gowan Trifluralin 10G may be used on the following established plant species when container grown or field grown:

**Scientific Name**

*Abies balsamea*  
*Abies concolor*  
*Abutilon hybridum*

*Acer ginnala*  
*Acer platanoides*  
*Acer rubrum*

*Acer saccharinum*  
*Acer saccharum*  
*Arecastrum romanzoffianum*  
*Betula nigra*  
*Betula papyrifera*  
*Betula pendula*  
*Brachychiton populneus*  
*Bucida buceras*  
*Castanea mollissima*  
*Ceratonia siliqua*  
*Cercis canadensis*  
*Chamaecyparis obtusa*

*Chamaecyparis pisifera*

*Chamaedorea cataractarum*  
*Chamaedorea costaricana*  
*Chamaedorea elegans*  
*Cornus florida*

*Cornus kousa*  
*Crataegus viridis*  
*Cupaniopsis anacardioides*  
*Cupressus glabra*

**TREES**

**Common Name**

Balsam fir  
 White fir  
 Albus-flowering maple  
 Luteus-flowering maple  
 Roseus-flowering maple  
 Tangerine-flowering maple  
 Vesuvius red-flowering maple  
 Flame maple  
 Norway maple  
 Red maple  
 Red sunset maple  
 Silver maple  
 Sugar maple  
 Queen palm  
 River birch  
 Paper birch  
 European white birch  
 Bottle tree  
 Black olive  
 Chinese chestnut  
 Carob  
 Redbud  
 Fillicoides-fernspray cypress  
 Gracilis-slender Hinoki cypress  
 Swara false cypress  
 Squarrosa-moss cypress  
 Palm  
 Palm  
 Parlor Palm  
 Cloud nine dogwood  
 Flowering dogwood  
 Dogwood, kousa  
 Green hawthorn  
 Carrot wood  
 Arizona cypress

**Scientific Name**

*Elaeagnus angustifolia*  
*Eucalyptus camaldulensis*  
*Eucalyptus cinerea*

*Eucalyptus microtheca*  
*Eucalyptus sideroxyion*  
*Ficus benjamina*

*Fraxinus americana*  
*Fraxinus udhei*  
*Ginkgo biloba*  
*Gleditsia triacanthos*

*Heteromeles arbutiflora*  
*Illicium floridanum*  
*Juniperus virginiana*  
*Larix kaempferi*  
*Liquidambar styraciflua*  
*Liriodendron tulipifera*  
*Magnolia grandiflora*  
*Malus spp.*  
*Morus alba*  
*Musa aluminata*  
*Nyssa sylvatica*  
*Oxydendrum arboreum*  
*Picea abies*

*Picea glauca conica*  
*Picea glauca*  
*Picea pungens*

*Pinus aristata*  
*Pinus canariensis*  
*Pinus contorta*  
*Pinus eldarica*  
*Pinus leucodermis*  
*Pinus mugo*  
*Pinus nigra*  
*Pinus radiata*  
*Pinus resinosa*  
*Pinus taeda*  
*Pinus strobus*  
*Pinus sylvestris*

*Pinus thunbergiana*  
*Platanus acerifolia*  
*Platanus occidentalis*  
*Platanus racemosa*  
*Podocarpus spp.*  
*Populus deltoides*  
*Prosopis chilensis*  
*Prunus yedoensis*  
*Pseudotsuga menziesii*  
*Quercus coccinea*  
*Quercus ilicifolia*  
*Quercus palustris*  
*Quercus phellos*  
*Quercus rubra*  
*Quercus virginiana*  
*Robinia pseudoacacia*  
*Salix spp.*  
*Sequoiadendron giganteum*  
*Swietenia mahogany*  
*Tabebuia caraiba*  
*Taxodium distichum*  
*Tsuga canadensis*  
*Ulmus parvifolia*  
*Washingtonia robusta*

**TREES**

**Common Name**

Russian olive  
 Redgum eucalyptus  
 Mealy eucalyptus  
 Silver dollar eucalyptus  
 Coolibah tree  
 Red ironbark eucalyptus  
 Ficus  
 Mini ficus  
 White ash  
 Shamel ash  
 Ginko-maidenhair tree  
 Honey locust  
 Shademaster honey locust  
 Toyon  
 Florida anise-tree  
 Eastern red cedar  
 Japanese larch  
 American sweet gum  
 Tuliptree  
 Southern magnolia  
 Crabapple  
 White mulberry  
 Banana  
 Blackgum  
 Sourwood  
 Norway spruce  
 Pendula-weeping Norway spruce  
 Repens-spreading Norway spruce  
 Dwarf Alberta spruce  
 White spruce  
 Dwarf globe blue spruce  
 Glauca-Colorado blue spruce  
 Hoopsii-Hoop blue spruce  
 Koster-Koster blue spruce  
 Bristlecone pine  
 Canary Island pine  
 Shore pine, beach pine  
 Eldarica pine  
 Bosnian pine  
 Pumilio-shrubby swiss mountain pine  
 Austrian black pine  
 Monterey pine  
 Red pine  
 Loblolly pine  
 White pine  
 Columnar Scotch pine  
 Scotch Pine  
 Japanese black pine  
 London planetree  
 American sycamore  
 California sycamore  
 Podocarpus  
 Cottonwood  
 Chilian mesquite  
 Yoshino flowering cherry  
 Douglasfir  
 Scarlet oak  
 Bear oak  
 Pin oak  
 Willow oak  
 Red oak  
 Live oak  
 Black locust  
 Willow  
 Giant sequoia  
 Mahogany  
 Yellow tab  
 Baldcypress  
 Eastern hemlock  
 Chinese elm  
 Mexican fan palm

**Ornamental Shrubs**

<u>Scientific Name</u>	<u>Common Name:</u>
<i>Abelia grandiflora</i>	Edward Goucher <i>abelia</i> Glossy <i>abelia</i>
<i>Acacia abyssinica</i>	<i>Abyssinica</i> acacia
<i>Acacia redolens</i>	Prostrate acacia
<i>Acacia stenophylla</i>	Shoestring acacia
<i>Acalypha wilkesiana</i>	Copper leaf
<i>Acer ginnala</i>	Amur maple
<i>Acer palmatum</i>	Coral bark Japanese maple Dwarf Japanese maple
<i>Agave americana</i>	Century plant
<i>Astilbe chinensis</i>	False <i>spiraea</i>
<i>Athyrium nipponicum</i>	Japanese painted fern
<i>Baccharis pilularis</i>	Coyotebush
<i>Berberis gladwynensis</i>	William Penn barberry
<i>Berberis mentorensis</i>	Mentor barberry
<i>Berberis thunbergii</i>	<i>Atropurea</i> -redleaf Japanese barberry <i>Aurea</i> -golden Japanese barberry Crimson pygmy barberry Rose glow barberry
<i>Bougainvillea</i> spp.	Barbara Karst California gold Pink pixie Scarlet O'Hara Temple fire Texas dawn
<i>Buxus microphylla japonica</i>	Japanese boxwood
<i>Buxus microphylla Koreana</i>	Korean boxwood
<i>Buxus sempervirens</i>	Common boxwood
<i>Callistemon citrinus</i>	Lemon bottlebrush
<i>Callistemon viminalis</i>	Weeping bottlebrush
<i>Calluna vulgaris</i>	Spring torch scotch heather
<i>Camellia sasanqua</i>	<i>Sasanqua</i> camellia
<i>Camellia japonica</i>	Japanese camellia
<i>Cassia artemisioides</i>	Feathery cassia
<i>Ceanothus</i> spp.	Wild lilac
<i>Cephalotaxus drupacea</i>	Plum yew
<i>Cerastium tomentosum</i>	Snow-in-summer
<i>Chamaecyparis obtusa</i> spp.	Kosteri cypress Nana-dwarf Hinoki cypress
<i>Chamaecyparis pisifera</i>	<i>Torulosa</i> cypress
<i>Chrysalidocarpus lutescens</i>	<i>Filifera</i> -thread cypress
<i>Clethra alnifolia</i>	Areca palm
<i>Cleyera japonica</i>	Summersweet
<i>Cornus alba</i>	Japanese <i>cleyera</i>
<i>Cornus stolonifera</i>	<i>Sibirica</i> -Siberian dogwood
<i>Cotinus coggygria</i>	Baileyi red osier dogwood
<i>Cotinus dammeri</i>	Flaviraqmea-yellowtwig dogwood Royal purple smoke tree Coral beauty smoke tree Eichholz smoke tree
<i>Cotoneaster adpressus</i>	Praecox-early cotoneaster
<i>Cotoneaster apiculatus</i>	Cranberry cotoneaster
<i>Cotoneaster congestus</i>	Pyrenees cotoneaster
<i>Cotoneaster dammeri</i>	Bearberry cotoneaster
<i>Cotoneaster himalayan</i>	Himalayan cotoneaster
<i>Cotoneaster horizontalis</i>	Rock cotoneaster
<i>Cotoneaster zabelii</i>	Zabel cotoneaster
<i>Cycas revoluta</i>	Saga palm
<i>Cytisus praecox</i>	Hollandia-warminster broom
<i>Cytisus scoparius</i>	Lena-Scotch broom
<i>Daphne odora</i>	Fragrant daphne
<i>Deutzia</i> spp.	Deutzia
<i>Dodonea viscosa</i>	Hopseed bush
<i>Elaeagnus pungens</i>	Fruitland silver berry
<i>Erica cinerea</i>	Purple bell heather
<i>Erica x darleyensa</i>	Mediterranean pink heather
<i>Erica vagans</i>	Cornish heather
<i>Euonymus alatus</i>	Winged <i>euonymus</i>
<i>Euonymus fortunei</i>	Candale gold <i>euonymus</i> Emerald'n gold <i>euonymus</i> Sunspot <i>euonymus</i> Wintercreeper <i>euonymus</i>
<i>Euonymus japonica</i>	Silver king- <i>euonymus</i>
<i>Euonymus kiautschovica</i>	Variiegated evergreen <i>euonymus</i> Spreading <i>euonymus</i>

**Ornamental Shrubs**

<u>Scientific Name</u>	<u>Common Name:</u>
<i>Feijoa sellowiana</i>	Pineapple guava
<i>Forsythia</i> spp.	Forsythia
<i>Gardenia jasminoides</i>	August beauty gardenia Gardenia Radican gardenia Sala/lemon leaf Carolina jessamine Woodwaxen
<i>Gaultheria shallon</i>	Ross Estey-hibiscus
<i>Gelsemium sempervirens</i>	Rose of Sharon-heart
<i>Genista pilosa</i>	Rose of Sharon-red bird
<i>Hibiscus rosa-sinensis</i>	Rose of Sharon-woodbridge
<i>Hibiscus syriacus</i>	Holly
<i>Ilex</i> spp.	Mystery gardenia
<i>Illicium annisatum</i>	Henry Garnet holly leaf sweetspire
<i>Itea ilicifolia</i>	<i>Ixora</i>
<i>Ixora collinea</i>	Juniper
<i>Juniperus</i> spp.	Mountain laurel
<i>Kalmia latifolia</i>	Crape myrtle
<i>Lagerstroemia indica</i>	<i>Lantana</i>
<i>Lantana</i> spp.	Coast <i>leucothoe</i>
<i>Leucothoe axillaris</i>	Drooping <i>leucothoe</i>
<i>Leucothoe fontainesiana</i>	Privet
<i>Ligustrum</i> spp.	Chinese fountain palm
<i>Livistona chinensis</i>	Flowering woodbine
<i>Lonicera periclymenum</i>	Serotina woodbine
<i>Lonicera sempervirens</i>	Trumpet honeysuckle
<i>Mahonia bealei</i>	Leather leaf <i>mahonia</i>
<i>Mahonia repens</i>	Creeping <i>mahonia</i>
<i>Myrica cerifera</i>	Wax myrtle
<i>Nandina domestica</i>	Compacta-dwarf heavenly bamboo Harbour dwarf-heavenly bamboo Heavenly bamboo Nana compacta-heavenly bamboo Nana <i>purpurea</i> -heavenly bamboo Woods dwarf heavenly bamboo
<i>Nerium oleander</i>	Hardy red oleander Oleander Ruby lace oleander Fortunes <i>osmanthus</i> Mockorange Pigmy date palm Fraser's <i>photinia</i> Japanese andromeda Mountain fire lily-of-the-valley Snowdrift lily-of-the-valley Templebells lily-of-the-valley Valley rose lily-of-the-valley Valley valentine lily-of-the-valley Forest flame lily-of-the-valley
<i>Osmanthus fortunei</i>	<i>Mugo</i> -mugho pine
<i>Philadelphus</i> spp.	Green <i>pittosporum</i>
<i>Phoenix roeioelenii</i>	Japanese <i>pittosporum</i>
<i>Photinia fraseri</i>	Wheeler's dwarf <i>pittosporum</i>
<i>Pieris japonica</i>	Blue cape <i>plumbago</i>
<i>Pieris japonica x forestii</i>	<i>Plumbago</i>
<i>Pinus mugo</i>	Yewpine
<i>Pittosporum tibiria</i>	Tallen fern
<i>Plumbago ariculata</i>	Cinquefoil
<i>Plumbago capensis</i>	Carolina laurel cherry
<i>Podocarpus macrophyllus</i>	Dwarf pink flowering almond
<i>Podocarpus polyblepharum</i>	<i>Pyracantha</i>
<i>Potentilla</i> spp.	Charisma-Monruce <i>rhapiolepis</i>
<i>Prunus caroliniana</i>	Enchantress-Moness <i>rhapiolepis</i>
<i>Prunus glandulosa</i>	India hawthorn
<i>Pyracantha</i> spp.	Springtime-Monme <i>rhapiolepis</i>
<i>Rhapiolepis indica</i>	Roundleaf <i>rhapiolepis</i>
<i>Rhapiolepis ovata</i>	Azalea/rhododendron
<i>Rhododendron</i> spp.	Africa sumac
<i>Rhus lancea</i>	Ramanas rose
<i>Rosa rugosa</i>	Rosemary
<i>Rosmarinus officinalis</i>	Japanese <i>skimmia</i>
<i>Skimmia japonica</i>	Reeve's <i>skimmia</i>
<i>Skimmia revesiana</i>	Anthony Waterer <i>spiraea</i>
<i>Spiraea bumalda</i>	Dolchia <i>spiraea</i>
<i>Spiraea japonica</i>	Japanese alpine <i>spiraea</i>

**Ornamental Shrubs**

<u>Scientific Name</u>	<u>Common Name:</u>
<i>Spiraea vanhouttii</i>	Shirobana spiraea
<i>Syringa rothomangensis</i>	Bridal wreath
<i>Syringa vulgaris</i>	Chinese lilac
<i>Taxus cuspidata</i>	Common lilac
<i>Taxus media</i>	Upright Japanese yew
<i>Tecomaria capensis</i>	Anglojap yew
<i>Temstroemia gymnanthera</i>	Cape honeysuckle
<i>Thuja occidentalis</i>	American arborvitae
	Emerald arborvitae
	Globosa-globe arborvitae
	Little giant-dwarf arborvitae
	Nigra-dark American arborvitae
	Pyramidalis-pyramid arborvitae
	Rheingold arborvitae
	Techny arborvitae
<i>Thuja orientalis</i>	Aureus nana-dwarf golden arborvitae
	Minima glauca-dwarf arborvitae
<i>Veitchia merrilli</i>	Christmas palm
<i>Viburnum spp.</i>	<i>Viburnum</i>
<i>Weigela spp.</i>	<i>Weigela</i>
<i>Xylosma congestum</i>	<i>Xylosma</i>
<i>Yucca filamentosa</i>	<i>Yucca</i>

**Ground Covers**

<u>Scientific Name</u>	<u>Common Name</u>
<i>Achillea tomentosa</i>	Woolly yarrow
<i>Agapanthus spp.</i>	Lily-of-the-nile
<i>Ammophila breviligulata</i>	Beechgrass
<i>Arctotheca calendula</i>	Cape weed
<i>Armeria maritima</i>	Thrift
<i>Asparagus densiflorus</i>	Asparagus fern
<i>Campanula spp.</i>	Bellflower
<i>Carex spp.</i>	Variegated <i>carex</i>
<i>Carpobrotus edulis</i>	Largeleaf iceplant
<i>Ceratostigma plumbaginoides</i>	Red plumbago
<i>Cistus spp.</i>	Rockrose
<i>Coreopsis spp.</i>	<i>Coreopsis</i>
<i>Coronilla vana</i>	Crown vetch
<i>Cortaderia selloana</i>	Pampas grass
<i>Cotoneaster spp.</i>	<i>Cotoneaster</i>
<i>Delosperma alba</i>	White iceplant
<i>Descampsia caespitosa</i>	<i>Descampsia</i>
<i>Drosanthemum floribundum</i>	Trailing rosea iceplant
<i>Drosantheumum hispidum</i>	Iceplant
<i>Festuca ovina glauca</i>	Blue fescue
<i>Fragaria chiloensis</i>	Strawberry, beach
<i>Gazania spp.</i>	<i>Gazania</i>
<i>Hakonechloa macroaureola</i>	Golden <i>hakonechloa</i>
<i>Hedera canariensis</i>	Algerian ivy
<i>Hedera helix</i>	English ivy
<i>Hemerocallis spp.</i>	Daylily
<i>Hemlaria glabra</i>	Rupturewort
<i>Hosta lancifolia</i>	Albo-marginata hosta
<i>Hypericum spp.</i>	Aaronsbeard
	St. Johnswort
<i>Jasminum nitidum</i>	Angelwing jasmine
<i>Lampranthus spectabilis</i>	Trailing iceplant
<i>Liriope gigantea</i>	White lily turf
<i>Liriope muscari</i>	Big blue lily turf
	Lilac beauty lily turf
	Magestic lily turf
	Silvery sunproof lily turf
	Variegated liriope lily turf
<i>Liriope spicata</i>	Green/creeping lily turf
<i>Miscanthus sinensis</i>	Eulalia grass
<i>Muehlenbeckia axillaris</i>	Creeping wirevine
<i>Myoporum laetum</i>	<i>Myoporum</i>
<i>Ophiopogon japonicus</i>	Dwarf Mondo grass
	Mondo grass
<i>Osteospermum fruticosum</i>	Trailing African daisy
<i>Pachysandra terminalis</i>	Japanese spurge
<i>Pennisetum alopecuroides</i>	Fountain grass
<i>Phalaris arundinacea picta</i>	Ribbon grass
<i>Sedum spp.</i>	Stonecrop (sedum)
<i>Teucrium chamaedrys</i>	Germander

**Ground Covers**

<u>Scientific Name</u>	<u>Common Name</u>
<i>Trachelospermum asiaticum</i>	Asian jasmine
<i>Verbena spp.</i>	Verbena
<i>Veronica spp.</i>	Speedwell
<i>Vinca spp.</i>	Periwinkle

**Established Flowers**

<u>Scientific Name</u>	<u>Common Name</u>
<i>Achillea spp.</i>	Yarrow
<i>Ageratum houstonianum</i>	Floss flower
<i>Alyssum spp.</i>	<i>Alyssum</i>
<i>Antirrhinum majus</i>	Snapdragon
<i>Arctotis spp.</i>	African daisy
<i>Artemisia stellerana</i>	Dusty miller
<i>Aster spp.</i>	Aster (perennial)
<i>Calendula officinalis</i>	<i>Calendula</i>
<i>Centaurea cyanus</i>	Cornflower
<i>Centaurea gymnocarpa</i>	Velvet centaurea
<i>Centaurea moschata</i>	Sweet sultan
<i>Chrysanthemum spp.</i>	<i>Chrysanthemum</i>
<i>Convolvulus spp.</i>	Morningglory
<i>Coreopsis spp.</i>	<i>Coreopsis</i>
<i>Cosmos spp.</i>	Cosmos
<i>Dahlia spp.</i>	Dahlia
<i>Dianthus spp.</i>	<i>Dianthus</i>
<i>Dimorphotheca spp.</i>	Marigold, cape
<i>Euphorbia marginata</i>	Snow-on-the-mountain
<i>Geum spp.</i>	<i>Geum</i>
<i>Gaillardia spp.</i>	<i>Gaillardia</i>
<i>Gladiolus spp.</i>	Gladiolus
<i>Gypsophila paniculata</i>	Baby's breath
<i>Helianthus spp.</i>	Sunflower
<i>Impatiens balsamina</i>	Balsam
<i>Impatiens spp.</i>	Impatiens
<i>Ixora spp.</i>	<i>Ixora</i>
<i>Lathyrus odoratus</i>	Sweet pea
<i>Limonium spp.</i>	Statice
<i>Lobelia spp.</i>	<i>Lobelia</i>
<i>Lobularia maritima</i>	Sweet alyssum
<i>Lupinus spp.</i>	Lupine
<i>Matthiola spp.</i>	Stock
<i>Mirabilis jalapa</i>	Four o'clock
<i>Myosotis spp.</i>	Forget-me-not
<i>Nicotiana spp.</i>	<i>Nicotiana</i>
<i>Papver spp.</i>	Poppy, California
<i>Petunia hybrida</i>	Petunia
<i>Phlox spp.</i>	Phlox
<i>Portulaca grandiflora</i>	<i>Portulaca</i>
<i>Rosa spp.</i>	Rose
<i>Rudbeckia hirta</i>	Blackeyed susan
<i>Rudbeckia laciniata</i>	Golden glow
<i>Salvia spp.</i>	<i>Salvia</i>
<i>Scabiosa spp.</i>	Pincushion flower
<i>Stachys spp.</i>	Lamb's ears
<i>Stokesia laevis</i>	Stoke's aster
<i>Tagetes spp.</i>	Marigold
<i>Tropaeolum spp.</i>	Nasturtium
<i>Vinca spp.</i>	<i>Vinca</i>
<i>Zinnia spp.</i>	<i>Zinnia</i>

**Ornamental Bulbs**

Gowan Trifluralin 10G may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth and tulip. Apply Gowan Trifluralin 10G to the soil surface 2-4 weeks after planting, but prior to the emergence of annual weeds. Gowan Trifluralin 10G may also be applied following bulb emergence. For fall planted bulbs, apply Gowan Trifluralin 10G again in late winter or early spring to weed-free soil surfaces.

**Non-bearing Fruit and Nut Trees and Non-bearing Vineyards†**

Almond	Kiwi
Apple	Lemon
Apricot	Loganberry
Avocado	Macadamia nut
Blackberry	Nectarine
Blueberry	Olive
Boysenberry	Orange
Cherry, sour	Peach

12 7 12

Cherry, sweet  
Currant  
Dewberry  
Elderberry  
Fig  
Filbert  
Gooseberry  
Grape, American  
Grape, European  
Grapefruit

Pear  
Pecan  
Pistachio  
Plum  
Pomegranate  
Prune  
Raspberry  
Walnut, black  
Walnut, English

†Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants which will not bear fruit for at least one year after treatment.

**Christmas Tree Plantations**

Apply Gowan Trifluralin 10G to established plantings of field grown Christmas tree species listed on this label. Do not apply to seedbeds or seedling transplant beds. Apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

**Non-cropland Areas**

Gowan Trifluralin 10G is recommended as a preemergence herbicide for control of certain annual grasses and broadleaf weeds on industrial sites, utility substations, highway guard rails, sign posts and delineators. Apply Gowan Trifluralin 10G anytime prior to germination of target weeds. Areas to be treated should be free of established weeds or existing weeds should be controlled with postemergence herbicides.

**Use Under Paved Surfaces**

**Site Preparation**

Gowan Trifluralin 10G should be used only where the area to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with grader blade to a depth sufficient to ensure their complete removal.

**Application**

Applications should be made only when the final grade is established or after additions of base rock. Do not move soils following Gowan Trifluralin 10G application and do not apply Gowan Trifluralin 10G to areas where asphalt is to be laid directly on top of soil. Paving should follow Gowan Trifluralin 10G applications as soon as possible.

Apply Gowan Trifluralin 10G to ensure thorough coverage of the base rock layer. Apply with any granular applicator that will apply uniformly.

**Apply the following amount of Gowan Trifluralin 10G**

Amount of Gowan Trifluralin 10G	
Per Acre	Per 1000 sq. ft.
120 - 160 lbs.	2.75-3.65 lbs.

**STORAGE AND DISPOSAL**

**DO NOT** contaminate water, food or feed by storage or disposal.  
**PESTICIDE STORAGE:** Store in original bag only. In case of puncture or spill, contain material and dispose of waste.  
**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.  
**CONTAINER DISPOSAL:** Do not reuse bag. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK, OR FIRE), CALL CHEMTREC® (800) 424-9300.**

**For other product information, contact Gowan Company or see Material Safety Data Sheet.**

**NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS**

**Important:** Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our recommendations for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. All such risks shall be assumed by the Buyer and User.

Gowan Company warrants that this product conforms to the specifications on the label and is reasonably fit for the intended purpose referred to on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY BUYER'S OR USER'S EXCLUSIVE REMEDY AND GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY'S SOLE DISCRETION.

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