

10163-101 Pmol 10116

US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (TS-767) WASHINGTON, DC 20460	EPA REGISTRATION NO.	DATE OF ISSUANCE
	10163-101	JUN 13 1986
	TERM OF ISSUANCE	
NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> REGISTRATION <input type="checkbox"/> REREГИSTRATION (Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)	Conditional NAME OF PESTICIDE PRODUCT Gowan Trifluralin 4	
	NAME AND ADDRESS OF REGISTRANT (Include ZIP code)	
Gowan Company P.O. Box 5696 Yuma, AZ 85364		
<p>NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.</p> <p>On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.</p> <p>A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.</p> <p>Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA section 3(c)(7)(C) provided that you:</p> <ol style="list-style-type: none"> 1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data. 2. Make the labeling changes listed below before you release the product for shipment: <ol style="list-style-type: none"> a. Add the phrase "EPA Registration No. 10163-101." b. Add the statement - Contains petroleum distillate - to the label in proximity to the ingredient statement. c. Check your label dosage rates carefully. You have used rates for the 5 lb/gallon product at several places, including soybeans - rhizome johnsongrass and wild cane; sugarcane - itchgrass and under winter wheat. 3. The maximum total nitrosamine content permitted for this product is 0.445 ppm. Submit a corrected formula statement. We have completed evaluation of your additional nitrosamine data submitted January 20. These data are adequate and support the above maximum content. <p><input type="checkbox"/> ATTACHMENT IS APPLICABLE</p>		
SIGNATURE OF APPROVING OFFICIAL		DATE
		JUN 13 1986

4. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Richard F. Mountfort *RFM*
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Enclosures

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear safety glasses when handling. Wash thoroughly with soap and water after handling. Harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

ENVIRONMENTAL HAZARDS

Do not apply directly to any body of water. Direct contamination of any body of water with this product may kill fish and other aquatic organisms. Do not contaminate any body of water by direct application, cleaning of equipment or disposal of wastes.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

RE-ENTRY STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written and oral warnings must include the following information: WARNING--Area treated with Trifluralin on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, follow instructions under Statement of Practical Treatment section.

GOWAN
TRIFLURALIN

Herbicide

Active Ingredient:
Trifluralin (alpha, alpha, alpha-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine).....
Inert Ingredients.....

Contains 4 lbs. Trifluralin per gallon

KEEP OUT OF REACH

WARNING

Precaucion al usuario: si usted no lee esta etiqueta hasta que la etiqueta haya sido traducida a su idioma.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED, call a physician or doctor. Drink 1 or 2 glasses of water and induce vomiting with 1/2 ounce of ipecac. Do not induce vomiting if the person is unconscious. IF INHALED, remove victim to fresh air and give artificial respiration if indicated. IF IN EYES, flush eyes with plenty of water for 15 minutes. Get medical attention immediately. IF ON SKIN, wash with soap and water.

NET CONTENTS

GOWAN COMPANY
Agricultural Chemicals

? Petroleum
Distillates

EPA Reg. No.
EPA Est. No.

ACCEPTED
with comments
JUN 13 1986
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 10463-101

STORAGE AND DISPOSAL

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

STORAGE: Avoid freezing. Store above 40 F. If frozen, poor weed control may result. Do not store near heat or flame.

PESTICIDE 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 by use 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.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CROP USE DIRECTIONS

See directions for use inside booklet.

NOTICE ON CONDITIONS OF SALE

Our recommendations for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.

app_____

00000

00000

40F/6



Crabgrass (Large crabgrass) (Smooth crabgrass)	(Digitaria spp.)
Foxtail (Bottlegrass) (Bristlegrass) (Common foxtail) (Green foxtail) (Millet) (Pigeongrass) (Robust foxtail) (Yellow foxtail)	(Setaria spp.)
Goosegrass (Silver crabgrass) (Silvergrass) (Wiregrass) (Yardgrass)	(Eleusine indica)
Johnsongrass (from seed) (Rhizome - see cotton and soybean sections for special instructions)	(Sorghum halepense)
Junglerice	(Echinochloa colonum)
Panicum Fall panicum (Spreading panicgrass - see cotton and soybean sections for special instructions)	(Panicum dichotomiflorum)
Guineagrass (See sugarcane section for special instructions)	(Panicum maximum)
Texas panicum (Buffalograss) (Coloradograss)	(Panicum texanum)
Itchgrass (Raoulgrass) (See sugarcane section for special instructions)	(Rottboellia exaltata)
Red rice (See soybean section for suppression or partial control directions)	(Oryza sativa)
Sandbur (Burggrass)	(Cenchrus incertus)
Sprangletop	(Leptochloa filiformis)
Stinkgrass (Lovegrass)	(Eragrostis cilianensis)
Wild cane (Shattercane) (See soybean section for special instructions)	(Sorghum bicolor)
Wild oat (Preplant only. Not for fall applications for spring seeded cereals)	(Avena sativa)
Woolly cupgrass	(Eriochloa villosa)
BROADLEAF WEEDS	
Carpetweed	(Mollugo verticillata)
Chickweed	(Stellaria media)
Field bindweed (See fruit and nut crops and vineyards section for special instructions)	(Convolvulus arvensis)
Florida pusley (Florida purslane) (Mexican clover) (Pusley)	(Richardia scabra)
Goosefoot Henbit (fall application only)	(Chenopodium hybridum)
Knotweed	(Lanium amplexicaule)
Kochia (Fireweed) (Mexican fireweed)	(Polygonum aviculare)
Lambquarters Figweed (Carelessweed) (Prostrate pigweed) (Redroot) (Rough pigweed) (Spiny pigweed)	(Kochia scoparia)
Functurevine (Western U.S. only) (Caltrop) (Goathead)	(Chenopodium album)
Purslane Russian thistle (Tumbleweed)	(Amaranthus spp.)
Stinging nettle (Nettle)	(Chenopodium album)
	(Portulaca oleracea)
	(Salsola kal)
	(Urtica dioica)

per acre than the following soil texture group and specific crop recommendations. Do not exceed recommended rates.

Soil Texture	Soil Classification
Coarse Soils: (Light)	Sand, loamy sand, sandy loam
Medium Soils:	Loam, silty clay loam*, silt loam, silt, sandy clay loam*
Fine Soils:	Clay, clay loam, silty clay loam*, silty clay, sandy clay, sandy clay loam*

*Silty clay loam and sandy clay loam soils are transitional soil and may be classified as either medium or fine textured soils. 1. 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.

MIXING AND APPLICATION DIRECTIONS

Gowan Trifluralin Alone in Water

Start with a clean spray tank. Fill sprayer 1/3 to 1/2 full with clean water. Start agitation. Add correct quantity of Gowan Trifluralin, continue agitation and finish filling tank.

Gowan Trifluralin Tank Mix in Water

Vigorous, continuous agitation is required for all tank mixes. (Sparger pipe agitators generally provide the best agitation in spray tanks). Avoid stirring or splashing air into the mixture during filling to prevent foaming. To do this, place the end of the fill pipe below the surface of the water in the spray tank. Do not allow the mixture to siphon back into the water source. Mixing order: Fill the tank 1/4 to 1/3 full with clean water. Start the agitation. Add dry flowables, wettable powders (WP), aqueous suspensions (AS), flowables (F), and liquids (L) to the water and agitate until the product(s) are completely dispersed in the water. Allow additional mixing and dispersion time when using dry flowable products. Continue agitation and fill tank to 3/4 full, add the Gowan Trifluralin, mix thoroughly. Then add any solution (S) formulations, agitate and finish filling. Maintain agitation during filling and through application. If spraying and agitation must be stopped before the tank is empty, the materials may settle to the bottom. In this case, it is important to resuspend all of the material in the bottom of the tank before continuing the spray application. A sparger agitator is particularly useful for this purpose. Sometimes it is more difficult to resuspend settled material than it is to suspend it originally.

Read and carefully follow all label instructions for each material added to the tank. Premixing dry and flowable formulations with water (slurrying) and pouring the slurry through a 20 or 35 mesh wetting screen in the top of the tank will help assure good initial dispersion in the tank water. Line screens in the tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

If you see a buildup of material on the walls of the spray tank, wash the tank with soapy water between fillings. Rinse and continue the spraying operation. Clean the tank, lines, and screens thoroughly after use.

As the spray volume decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Do not apply Gowan Trifluralin when the wind can cause drifting of spray particles which can result in non-uniform application. Gowan Trifluralin should not be applied to soils which are wet or are subject to prolonged periods of flooding as poor weed control may result.

Ground application: Apply Gowan Trifluralin in 5 to 40 gallons of water or liquid fertilizer per acre (broadcast basis), using any properly calibrated, low pressure herbicide sprayer that will apply the spray uniformly.

Aerial application: Apply Gowan Trifluralin in 5 to 10 gallons of water or liquid fertilizer per acre. Adjust pump pressure, nozzle arrangements, speed and height to provide a uniform application to the soil surface. Use swath markers or flags to assure proper application spray widths.

Incorporation Equipment-General Directions

Use incorporation equipment that mixes Gowan Trifluralin 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 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 Gowan Trifluralin within the top 2 inches of soil.

Incorporation Before Planting

Gowan Trifluralin must be incorporated one time within 24 hours after application. Then any time prior to planting, a second incorporation is necessary, this time running the equipment in a different direction from the first. You should incorporate the Gowan Trifluralin 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, Gowan Trifluralin needs to be incorporated into the top 2 to 3 inches of the final seedbed.

Application prior to bedding: Apply Gowan Trifluralin and incorporate it 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. Apply and incorporate it with recommended equipment that will conform to the bed shape. Do not leave treated soil exposed.*

*Avoid removal of untreated 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.

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 or flexline harrow, followed by a ground-driven reel or basket. Gowan Trifluralin can be incorporated with one pass when using combination seedbed conditioners when soil conditions allow for optimum mixing of soil. Soil conditions such as excessive trash, roughness, cloddiness, moisture extremes, or high clay content which prevent optimum soil mixing action will require two incorporations.

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, except when used in sugarcane where the rolling cultivator may be used on fine textured soils.

Bed Conditioner (Do-All): set to cut 2 to 4 inches deep and operate at 4 to 6 mph. The do-all is adequate for use on coarse and medium textured soils only. When using the do-all in bedded culture, only one incorporation pass is required. However, two passes with a do-all are required in flat planted culture.

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, Helroe), is also recommended but only for the special programs for which it is specified in this label.

CULTIVATION AFTER PLANTING

Soil treated Gowan Trifluralin may be shallow cultivated without reducing the product's 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.

FALL APPLICATION

General: (Areas receiving more than 20" average annual rainfall) See specific crop for recommendations. For all crops for which there are no specific fall application instructions and for which Gowan Trifluralin is recommended as a preemergence application, use the rates listed for spring applications. Do not apply Gowan Trifluralin in the fall for sugarbeets, potatoes, and direct-seeded tomatoes.

In most states apply and incorporate Gowan Trifluralin any time between October 15 and December 31. In Minnesota, Montana, North and South Dakota, and California, apply and incorporate anytime between September 1 and December 31. Ground may be left flat or bedded up over winter. On bedded ground, knock down to desired height before planting, moving some treated soil beds into furrows. Where soil is left over winter, be careful not to turn up untreated soil during spring bedding operations. Destroy established

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.

CROP RECOMMENDATIONS

These recommendations are given as the broadcast rates of Gowan Trifluralin per acre. For band applications, decrease the amount in proportion to the amount of surface treated per acre. Apply any time after January 1 when the soil can be worked and is suitable for good incorporation. Gowan Trifluralin can be applied in the fall - see above paragraph and specific crops for recommendations. Where a rate range is shown, use the lower rate for coarser soils or soils with lower organic matter. Gowan Trifluralin should not be used on soils containing more than 10% organic matter.

COTTON - GOWAN TRIFLURALIN ALONE

Gowan Trifluralin can be applied and incorporated before or at planting, immediately after planting, and from four true leaf stage to layby.

COTTON - Preemergence:
Broadcast Rates Per Acre

Soil Texture	Areas receiving less than 20" average annual rainfall*	Areas receiving greater than 20" average annual rainfall*
	(pints)	(pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

*Use 1.2 pints per acre one coarse and medium soils and 1.6 pints on fine soils with 2-5% organic matter; use 1.6 to 2 pints on all soils with 5-10% organic matter.

Incorporation with Bedding Implements

Bedding implements (listers and hippers) may be used to incorporate Gowan Trifluralin into the soil for weed control in cotton. Since bedding equipment does not provide thorough incorporation under all conditions, it is important to closely follow the directions below to optimize weed control performance. Weed control resulting from single pass incorporation with bedding implements will be reduced compared to conventional double pass incorporation. Apply the amount of Gowan Trifluralin recommended in the label.

Soil Preparation: See general soil preparation

Bedder Use Directions: Either a lister or disk bedder may be used. Operate the bedder in the manner recommended by the equipment manufacturer in order to bed to the desired height. A ripper shank, sweep or chisel shank should be mounted on the bedder behind the spray nozzles and ahead of the bedder tool to help distribute Gowan Trifluralin in the center of the bed. The use of bed tillage equipment such as rolling cultivators, P.T.O. driven rod weeder or bed conditioners after the bedding operation will provide additional mixing of the soil.

Weather conditions, cultural practices, bed tillage and planting procedures will determine location of the Gowan Trifluralin in the soil. Weed control obtained will be dependent upon location of the Gowan Trifluralin at the time of planting.

If Gowan Trifluralin is moved during bed tillage or planting, a band application of Gowan Trifluralin at planting or a postemergence application of Gowan Trifluralin may be required to ensure good weed control.

Precautions: Do not incorporate with the bedder if the soil is too wet for good mixing.

COTTON - Postplant:

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

COTTON - Postemergence:

Directions for Use

Gowan Trifluralin can be used as a post emergence soil incorporated application in cotton. Gowan Trifluralin may be applied after final bed preparation any time from the four true leaf stage up to layby, but not less than 90 days before harvest.

Application Directions

Gowan Trifluralin may be applied to cotton from the four true leaf stage as either a broadcast application or as a post directed spray. Drop nozzles should be used if cotton foliage prevents uniform coverage of the soil surface. Refer to the Gowan Trifluralin label for ground and aerial application directions.

Application Rates

Apply Gowan Trifluralin to cotton at the following broadcast rates per acre:

Soil Texture	Gowan Trifluralin 5 pints
Coarse	3/4 - 1
Medium	1 - 1 1/2
Fine	1 1/2 - 2

Incorporation Directions

Final beds should be established before the Gowan Trifluralin application is made. The soil surface should be free of existing weeds and excessive trash clods. Gowan Trifluralin should be incorporated within 24 hours following application and may be accomplished

176111

In one pass with a rolling cultivator. The sweep type cultivator should have 3 to 5 sweeps per row middle and be operated at 6 to 8 mph. Set sweeps to provide maximum soil mixture and to insure movement of treated soil into the crop row. One pass with the sweep cultivator properly set will provide adequate soil incorporation. The rolling cultivator should be set to provide maximum soil mixing and to insure movement of treated soil into the crop row. The rolling cultivator should be operated at 6 to 8 mph. Care should be taken to insure that middle sweeps do not expose untreated soil. One pass with the rolling cultivator properly set will provide adequate incorporation.

Rotational Crops
Wheat or barley can be planted in the fall following this application at recommended rates.

Special Precautions:
Do not apply to cotton before the four true leaf stage or crop injury may result.
Soil treated with Gowan Trifluralin may be shallow cultivated, rotary, or hand hoed without reducing the weed control activity of the product. Do not cultivate deeper than the treated layer of soil (1 to 2 inches) since this may bring untreated soil to the surface and poor weed control may result.

COTTON - Fall Application:
Apply and incorporate Gowan Trifluralin 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 soils are 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 Gowan Trifluralin 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, North Carolina, New Mexico, Oklahoma, South Carolina, Tennessee and Texas, apply and incorporate at a broadcast rate of 2 pints per acre on coarse and medium and 1 1/2 pints on fine soils.
In Arizona, California, and Nevada, apply and incorporate Gowan Trifluralin at a broadcast rate of 1 1/2 pints per acre on coarse soils; 2 pints on medium soils; and 2 1/2 pints on fine soils.
For cotton grown in other states, apply and incorporate at a broadcast rate of 1 pint per acre on coarse soils; 1 1/2 pints on medium soils; 2 pints on fine soils; 1 1/2 pints on coarse soils with 2-5% organic matter; and 2 to 2 1/2 pints on soils with 5-10% organic matter.

COTTON - SPECIAL USE DIRECTIONS

COTTON - Fall panicum:
Apply and incorporate Gowan Trifluralin at the broadcast rate of 2 pints per acre on both coarse and medium soils.

COTTON - Rhizome johnsongrass:
In all cotton-producing states except Arizona and California, you can obtain commercially acceptable control of rhizome johnsongrass with a double rate program which you apply for 2 consecutive years in accordance with the following directions.
Soil Preparation - Proper preparation of the soil before application is very important for satisfactory results. Use a chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc two times before application to cut the rhizomes into small (2 to 3 inch) pieces. This should also destroy any emerged johnsongrass.
Application - Choose the one application program that best fits your cultural practices:
Spring Application - Apply Gowan Trifluralin any time before planting in the spring for 2 years in a row. Use a broadcast rate of 2 pints per acre on coarse soils; 3 pints on medium soils; and 4 pints on fine soils.
OR
Fall Application - Apply Gowan Trifluralin between October 15 and December 31 for 2 years in a row at the same rates as a spring application for the control of rhizome johnsongrass.

Incorporation - Deep incorporation is essential for good rhizome johnsongrass control. Incorporate Gowan Trifluralin thoroughly with a disc set to cut 4 to 6 inches deep and operate at 4 to 6 mph. Two passes are necessary, with the second pass in a different from the first.
Cultivation - Some johnsongrass plants will escape. Timely cultivations during the crop season to remove escaped plants are necessary to obtain commercially acceptable control. You cannot obtain commercially acceptable control with only 1 year of double rate use.
Crop Rotation - In the season following a double rate treatment, plant only rice and those crops for which Gowan Trifluralin can be applied as a preplant treatment or injury may result.

COTTON - Fig weed and seedling johnsongrass control: In Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, southeastern Missouri, North Carolina, South Carolina, Tennessee, and southern Virginia, Gowan Trifluralin may be applied preplant at a broadcast rate of 1 to 1 1/2 pints per acre on coarse soils; 1 1/2 to 2 pints on medium soils; and 2 pints on fine soils. In the state of Louisiana, 3 pints per acre are recommended on fine soils.

COTTON - Additional weed and grass control (Texas Gulf Coast): In the Texas Gulf Coast counties of Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller and Wharton, Gowan Trifluralin

may be applied up to 7 weeks before planting at a broadcast rate of 1 1/2 pints per acre on coarse soils, 2 pints on medium soils, and 3 pints on fine soils.

COTTON Precautions: Cotton should be planted after early season adverse weather conditions have passed, especially when using higher rate programs. Cool, wet weather early in the growth cycle causes additional stress to the cotton plant. This may result in reduced stands, delayed maturity, and reduced yields.

COTTON - TANK MIXES AND OVERLAYS

Follow recommended soil preparation and incorporation procedures for Gowan Trifluralin.

COTTON - Gowan Trifluralin/Zorial Tank Mix
A tank mix combination of Gowan Trifluralin and Zorial is recommended as a preplant soil incorporated treatment for broad spectrum control of grass and broadleaf weeds in cotton. Gowan Trifluralin/Zorial may also be tank mixed and incorporated using one-half the recommended rate of Zorial with the remaining one-half rate of Zorial surface applied after planting. Gowan Trifluralin/Zorial will effectively control suppress the following weeds in addition to those controlled by Gowan Trifluralin alone:

Control	
Cocklebur*	Sickle pod
Morningglory*	Spotted spurge
Pennsylvania smartweed	Spurred anoda
Prickly sida	Velvetleaf
Suppression	
Bermudagrass	Morningglory
Johnsongrass (rhizome)	Nutsedge
Cocklebur	Ragweed
Hemp sesbania	Other smartweeds

*Controlled by Zorial split application only.

Application
Follow soil preparation procedures normally used with Gowan Trifluralin. The tank mix of Gowan Trifluralin/Zorial may be applied up to 30 days before planting using any properly calibrated, low pressure herbicide sprayer that will apply the spray uniformly. Fill the spray tank three-fourths full with clean water and start agitation. Premix the required amount of Zorial with a small amount of water and add to the spray tank. Continue agitation and add the required amount of Gowan Trifluralin to the spray tank. Agitate continuously during filling and throughout the spraying operation. Agitation, such as a sparger system, should be used to sweep bottom contents of the tank up into the main body of the spray mixture for thorough mixing and uniform suspension. If a bypass line is used, discharge at the bottom of the tank to minimize foaming. Apply in from 10-20 gallons of water per acre with a sprayer equipped with herbicide tips and screens sized 50 mesh or larger. Do not allow the spray mixture to remain in the tank overnight as settling could occur and resuspension would be difficult.

Apply Gowan Trifluralin/Zorial at the following broadcast rates per acre:

Soil Texture	Gowan Trifluralin ⁴ pints per acre	Zorial 80 WP ⁴⁴ lbs. per acre
Coarse	1 1/2	1.25
Medium	2	1.9
Fine	2	2.5

**Split application - Apply and incorporate the full rate of Gowan Trifluralin with half the recommended rate of Zorial. Surface apply the remaining half-rate of Zorial preemergence.

Incorporation Directions
Incorporate Gowan Trifluralin plus Zorial one time within 24 hours after application. A second incorporation is required with most equipment. Consult the complete label for Gowan Trifluralin for recommendations regarding specific incorporation tools. Refer to the Zorial label for all cautions, precautions, etc. regarding use of the product.

COTTON - Gowan Trifluralin/Caparol tank mix for cotton grown in California, Arizona, New Mexico and west Texas:
The Gowan Trifluralin/Caparol combination will control certain grass and broadleaf weeds listed for Gowan Trifluralin alone plus the following weeds:

Smartweed	Groundcherry (Annual)
Prickly sida (Teasweed)	Mustard
Annual morningglory	Malva
Ragweed	Wild Oat

The tank mix also controls shallow germinating seedlings of cocklebur and coffeeweed.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Caparol 80W (pounds)
Coarse	1	2 1/2
Medium	1 1/4 - 1 1/2	2 1/2
Fine	2	2 1/2

*Do not use on sands and loamy sands. For band applications use proportionately less.

Mixing Directions: Carefully follow the procedures on the Caparol 80W label for making a slurry and adding it to a partially filled tank of water. After the Caparol is thoroughly mixed with the par-

ially filled tank of water, add the Gowan Trifluralin and continue filling. Agitate continuously during the filling and spraying operation.

Avoid leaving the spray mixture in the tank without constant agitation. If bypass agitation is used, the bypass line should stop at the bottom of the tank to minimize foaming.

Additional Precautions: The combination of Gowan Trifluralin/ Caporal should not be used in the cut areas of newly leveled fields, in areas of excess salt, or where flooding over the beds is likely to happen. Do not plant cotton in tractor wheel depressions. These conditions may cause crop injury. On mulch-planted cotton, water back only after cotton seedlings are well established.

Crop Rotations: Cabbage, okra, onions and peas may be planted in the fall after a spring application of Gowan Trifluralin plus Caporal. Winter wheat, winter rye and winter wheat can be planted in the fall also, if they are plowed down and not used for food or feed. Refer to the Caporal label for directions, cautions and precautions.

COTTON - Gowan Trifluralin/Cotoran tank mix (except in Arizona and California):

Follow the recommended soil preparation and incorporation procedures for Gowan Trifluralin.

The Gowan Trifluralin/Cotoran tank mix effectively controls all the annual grasses and broadleaf weeds listed for Gowan Trifluralin alone plus these additional weeds:

Ryegrass	Prickly sida (Teaveed)
Bullweed	Ragweed
Cocklebur	Sesbania
Groundcherry, Wright	Sicklepod
Jimsonweed	Smartweed
Morningglory	Tumbleweed

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Cotoran 80W (pounds)
Coarse	1 1/2	1 1/4
Medium	2	2
Fine	2	2 1/2

Mixing Directions: Carefully follow the procedures on the Cotoran label for making a Cotoran slurry and adding it to a partially filled tank of water. After the Cotoran is thoroughly mixed with the partially filled tank of water, add the Gowan Trifluralin and continue filling. Agitate continuously throughout the filling and application operations. Do not leave spray mixture in tank without constant agitation. If bypass agitation is used, the bypass line should stop at the bottom of the tank to minimize foaming. Apply in 25 - 40 gallons of water per acre.

Additional Precautions: Do not plant crops other than cotton on the treated land within 6 months after the application of Gowan Trifluralin plus Cotoran, or crop injury may result. Do not feed foliage from treated cotton plants or gin trash to livestock. Do not mix Gowan Trifluralin plus Cotoran with liquid fertilizer.

West Texas Only: Do not use the tank mix of Gowan Trifluralin plus Cotoran on sandy, loamy sand or fine sandy loam soils. Do not use on cotton planted in furrows.

Arkansas, Louisiana, and Mississippi Only: Use 1 pound Cotoran 80W in tank mix with Gowan Trifluralin on sandy loam soils low in organic matter.

New Mexico: Do not plant treated land with crops other than cotton until 1 year after the last application. Do not use on sandy or coarse textured soils of less than 1% organic matter.

COTTON - Gowan Trifluralin preplant followed by Karmex overlay: For cotton grown east of the Mississippi River plus Arkansas, South-eastern Missouri, Louisiana and Eastern Texas, incorporate before planting. Then follow with a preemergence application of Karmex. This will effectively control all the weeds controlled by Gowan Trifluralin alone plus these additional weeds:

Ryegrass	Shepherdspurse
Annual groundcherry	Velvetgrass
Dogfennel	Wild lettuce
Pennycress	Wild mustard
Annual morningglory	

Broadcast Rate Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Karmex 80W (pounds)
Coarse	1	1/3
Medium	1 1/2	2/3
Fine	2	1

Additional Precautions: Do not use Karmex on soils with less than 1% organic matter as crop injury may result. Do not allow livestock to graze on cotton treated with Karmex. Consult the Karmex label for additional instructions, cautions and precautions.

SOYBEAN - GOWAN TRIFLURALIN ALONE

SOYBEAN - Preemergence:

Follow recommended soil preparation, application, and incorporation procedures for Gowan Trifluralin.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)
Coarse	1
Medium	1 1/2
Fine	2

use 1 1/2 pints per acre on coarse and medium textured soils and 2 pints on fine soils with 2-5% organic matter; use 2-2 1/2 pints on all soils with 5-10% organic matter.

SOYBEAN - Fall Application:

Apply and incorporate anytime between October 15 and December 31. Ground may be left fall 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 fall apply to soil 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, North Carolina, South Carolina, Oklahoma, South Carolina, Tennessee and Texas, apply and incorporate at a broadcast rate of 2 pints per acre on coarse and medium soils and 2 1/2 pints on fine soils.

For soybeans grown in states other than those listed above, apply and incorporate at a broadcast rate of 1 pint per acre on coarse soils; 1 1/2 pints on medium soils; 2 pints on fine soils; 2 1/2 pints on coarse soils with 2-5% organic matter; and 2 to 2 1/2 pints on soils with 5-10% organic matter.

SOYBEAN - SPECIAL USE DIRECTIONS

SOYBEAN - Fall panicum:

Apply Gowan at the broadcast rate of 2 pints per acre on both coarse and medium soils.

SOYBEAN - Pigweed and seedling johnsongrass:

In Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Mississippi, southeastern Missouri, North Carolina, Oklahoma, South Carolina, Tennessee and southern Virginia, Gowan Trifluralin may be applied at a broadcast rate of 1 to 1 1/2 pints per acre on coarse soils; 1 1/2 to 2 pints on medium soils; and 2 pints on fine soils. Exception: in the state of Louisiana, 3 pints per acre are recommended on fine soils.

SOYBEAN - Additional weed and grass control (Texas Gulf Coast):

In the Texas Gulf Coast counties of Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller and Wharton, Gowan Trifluralin may be applied up to 2 weeks before planting at a broadcast rate of 1 1/2 pints per acre on coarse soils; 2 pints on medium soils; and 3 pints on fine soils.

SOYBEAN - Charcoal soils in Arkansas, Louisiana and Mississippi:

Newly cleared land often contains high organic matter (5-10%) and charcoal from burning debris. This charcoal and/or organic matter tends to bind Gowan Trifluralin and reduce its weed control activity. Under these conditions, higher rates of Gowan Trifluralin are necessary for weed control. Increased rates, however, can cause crop injury if charcoal or organic matter is not present to bind some of the Gowan Trifluralin. In the burn row a high level of charcoal is present; consequently, poor weed control may result even with an increased rate of Gowan Trifluralin.

Apply at the broadcast rate of 1 1/2 to 2 1/2 pints per acre on coarse soils; 2 1/2 pints on medium soils; and 3 pints on fine textured soils. Follow recommended soil preparation, application and incorporation procedures for Gowan Trifluralin.

SOYBEAN - Red rice in Arkansas, Louisiana, Mississippi and Texas only:

You can obtain suppression or partial control of red rice when you apply Gowan Trifluralin at the following recommended rates. Follow recommended soil preparation and incorporation procedures for Gowan Trifluralin.

Apply and incorporate in the spring before planting.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴	
	Application Year 1 (pints)	Application Year 2 (pints)
Coarse	3	1
Medium	4	1 1/2
Fine	4	2
Coarse soils with 2 to 5% organic matter	3	1 1/2
Soils with 5 to 10% organic matter	4	2-2 1/2

If a combination of high organic matter (5-10%) and charcoal are present in the soil, apply Gowan Trifluralin the second year at the following rates for charcoal soils in Arkansas, Louisiana and Mississippi:

Soil Texture	Gowan Trifluralin ⁴ (pints)
Coarse	1 1/2 - 2 1/2
Medium	2 1/2
Fine	3

For more information on charcoal soils (see above).

Crop Rotation: The program for red rice control in soybeans is a 2-year program. In the first year use the normal rates listed and plant soybeans. In the second year use the normal rates listed for your soil type and charcoal level and plant only those crops for which Gowan Trifluralin has been registered as a preplant

treatment, or crop injury may result. Do not plant rice the second year. Rice may be planted the third year.

SOYBEAN - Rhizome johnsongrass (Eastern United States and the state of Texas):

You can obtain commercially acceptable control of rhizome johnsongrass with a double rate program applied for 2 consecutive years in accordance with the following directions.

Soil Preparation : Proper preparation of the soil before application is very important for satisfactory results. Use a chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc, two times before application to cut the rhizomes into small (2 to 3 inch) pieces and to destroy any escaped johnsongrass.

Application - Choose the one application program that best fits your cultural practices:

Spring Application - Apply Gowan Trifluralin anytime in the spring before planting for 2 years in a row. Use a broadcast rate of 1.6 pints per acre on coarse soils, 2.4 pints on medium soils, 3.2 pints on fine soils, 2.4 pints on coarse soils with 2-5% organic matter; and 3.2 pints on soils with 5-20% organic matter.

Handwritten notes: 2, 5 1/2 lbs rate, Mudge

Fall Application - Apply Gowan Trifluralin between October 15 and December 31 for 2 years in a row at the same rates as a spring application for the control of rhizome johnsongrass.

OR
Split Application - Apply Gowan Trifluralin at the same rate in both the spring and fall for 2 years in a row using the rates in the following table.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴	
	Spring and Fall (pints)	
Coarse	1 1/2	
Medium	2	
Fine	3	
Coarse soils with 2-5% organic matter	1 1/2	
Soils with 5-10% organic matter	2	

Incorporation - Deep incorporation is essential for good rhizome johnsongrass control. Incorporate Gowan Trifluralin thoroughly with a disc set to cut 4 to 6 inches deep and operate at 4 to 6 mph. Two passes are necessary, with the second pass in a different direction from the first.

Cultivation - Some johnsongrass plants will escape. Timely cultivations during the crop season to remove escaped plants are necessary to obtain commercially acceptable control.

Crop Rotation - In the season following a double rate treatment, plant only rice and those crops for which Gowan Trifluralin can be applied as a preplant treatment or injury may result.

SOYBEAN - Rhizome johnsongrass - Gowan Trifluralin/Sencor or Gowan Trifluralin/Lexone tank mix:

Gowan Trifluralin may be used with Sencor or Lexone for rhizome johnsongrass control and for the control of those weeds listed for Gowan Trifluralin alone. For the additional weeds controlled by Sencor or Lexone in tank mix, (see below). Follow procedures for soil preparation, incorporation, and cultivation recommended in the Soybean - Rhizome johnsongrass section.

Apply Gowan Trifluralin/Sencor or Lexone up to two weeks before planting for two consecutive years at the following broadcast rates per acre:

Soil Texture	Gowan Trifluralin ⁴ (pints)	Lexone 50WP/4L or Sencor 50WP/4 (pounds/pints)	
		Lexone (dry flowable) or Sencor (dry flowable)	Lexone (dry flowable) or Sencor (dry flowable)
Coarse**	2	1/2	1/3
Medium	3	3/4	1/2
Fine	4	1	2/3

* Do not use on coarse soils with less than 1% organic matter.

Read and follow all additional precautions listed for the Gowan Trifluralin/Sencor or Lexone tank mix. (see below).

SOYBEAN - Wild cane (shattercane):

Follow recommended soil preparation and application procedures for Gowan Trifluralin.

Wild cane (shattercane) can germinate throughout the growing season and from greater soil depth than most other weed seeds. Commercially acceptable control of wild cane can be obtained with the following increased rates of Gowan Trifluralin. Apply the broadcast rate of 1.6 pints per acre on a coarse soil; 1.6 pints on a medium soil; and 2 pints on a fine textured soil.

Incorporation - Deep incorporation is essential for good wild cane control. Incorporate Gowan Trifluralin thoroughly with a disc set to cut 4 to 6 inches deep and operate at 4 to 6 mph. Two passes are necessary, with the second pass in a different direction from the first.

Cultivation - Cultivations during the crop season will also contribute to control.

SOYBEAN PRECAUTIONS: Soybeans should be planted after early season adverse weather conditions have passed, especially when using higher rate programs. Cool, wet weather early in the growth cycle causes additional stress to the soybean plant. This may result in reduced stands, delayed maturity and reduced yields.

SOYBEAN - TANK MIXES AND OVERLAYS

SOYBEAN - Gowan Trifluralin/Sencor or Gowan Trifluralin/Lexone tank mix:

The Gowan Trifluralin/Sencor or Gowan Trifluralin/Lexone tank mix effectively controls the annual grasses and broadleaf weeds controlled by Gowan Trifluralin plus these additional weeds:

- Jimsonweed
- Mallow, Venice (Flower-of-an-hour)
- Mustard, wild
- Prickly sida
- Ragweed, common
- Sesbania, hemp
- Smartweed, Pennsylvania
- Velvetleaf

Control of cocklebur, morningglory and giant ragweed (horseweed) may be erratic. Control may be improved with timely cultivation. Where cocklebur is a serious problem, an overlay of Sencor or Lexone may be preferred to the Gowan Trifluralin/Sencor or Lexone tank mix.

Follow recommended procedures for soil preparation, incorporation, and cultivation of Gowan Trifluralin. Mix according to instructions under general mixing and application directions. The tank mix can be applied from 2 weeks before planting up to planting.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Lexone 50WP/4L or Sencor 50WP/4 (pounds/pints)	
		Lexone (dry flowable) or Sencor (dry flowable)	Lexone (dry flowable) or Sencor (dry flowable)
Coarse*	1 1/2	1/2	1/3
Medium	2	3/4	1/2
Fine	3	1	2/3

* Do not use Sencor/Lexone on coarse soils with less than 1% organic matter.

Additional Precautions: Do not plant any crop other than soybeans within 4 months after treatment. Overapplication, uneven application, or improper soil incorporation may result in crop injury, herbicide residue, or erratic weed control. Additional stress factors are seedling disease, cold weather, deep planting, excessive moisture, soil pH over 7.5, high salt concentration, or drought. Any of these may weaken crop seedlings and increase possibility of damage from the tank mix. These additional factors may also delay crop development or reduce yields when Sencor or Lexone is applied. Observe all cautions and limitations on the Sencor and Lexone labels. Do not use the foliage from soybeans treated with the tank mix for feed or forage.

SOYBEAN - Gowan Trifluralin preplant followed by Sencor or Lexone as an overlay:

Apply Gowan Trifluralin as a preplant incorporated herbicide. As a separate operation, make a single application of Sencor or Lexone as either a band or broadcast spray during planting or as a separate operation after planting, but before the soybeans emerge. Do not spray Sencor or Lexone over the top of emerged soybeans, or crop injury may result.

Use Directions - Follow directions on the Sencor or Lexone labels for specific instructions regarding each herbicide.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Postplant/Preemergence	
		Lexone 50WP/4L* or Sencor 50WP/4 (pounds/pints)	Lexone (dry flowable) or Sencor (dry flowable) (pounds)
Coarse**	1 1/2	3/4 or 3/4-1	1/2 or 1/2-1/3
Medium	2	3/4-1 or 3/4-1 1/2	1/2-2/3 or 1/2-1
Fine	3	1 or 1-1 3/4	2/3 or 2/3 - 1 1/6

* Lexone rates are given first, followed by Sencor rates.
** Do not apply Lexone to sand or soils with less than 1/2% organic matter. Do not apply Sencor to coarse soils (sandy loam and loamy sand) containing less than 2% organic matter.

Additional Sencor and Lexone precautions: Do not use Lexone or Sencor on Tracy, Semmes, Altona, Vansoy or Coker 102 soybeans. These varieties are sensitive to Lexone or Sencor, and crop injury may result. Seed must be planted at least 1 1/2 inches but not more than 2 inches below the soil surface before a Sencor or Lexone application. Do not apply Sencor or Lexone at these rates more than once per season. Do not replant areas treated with Sencor or Lexone with any crop other than soybeans within 4 months after treatment. Injury to soybeans may occur if you use Lexone or Sencor on soils having a calcareous surface or pH or 7.5 or higher, or if you use them in conjunction with soil-applied organic phosphate pesticides. Do not use the foliage from treated soybeans for feed or forage.

SOYBEAN - Gowan Trifluralin/Lasso Tank Mix Preplant Incorporated or Gowan Trifluralin Preplant Incorporated With Lasso Surface Applied:

Gowan Trifluralin/Lasso tank mix and Gowan Trifluralin preplant incorporated followed by Lasso surface applied control those weeds listed on the Gowan Trifluralin label plus these additional weeds:

Galinsoga	Witchgrass
Nightshade, black*	Fusley, Florida
Nightshade, hairy*	Nutsedge, yellow**
Rice, red**	

Additional weeds partially controlled by this combination include:

Bigflowered, Florida	Side, spiny (teaveed)
Mexweed, common	Smartweed

* or ** Check rate table for additional information.

For Gowan Trifluralin/Lasso tank mix: Follow recommended soil preparation recommendations for Gowan Trifluralin. Apply Gowan Trifluralin/Lasso in a minimum of 15 gallons of water or liquid fertilizer per acre. Set incorporation equipment to work the soil no deeper than 4 inches. Apply the tank mix up to seven days prior to planting.

For Gowan Trifluralin preplant incorporated followed by Lasso surface applied: Apply and incorporate Gowan Trifluralin according to recommended soil preparation application and incorporation procedures. Refer to the Lasso label for additional application directions, cautions, and precautions prior to use.

Broadcast Rates Per Acre

Gowan Trifluralin/Lasso tank mix preplant incorporated:

Soil Texture	Gowan Trifluralin ⁴ (pints)	Lasso (quarts)
Coarse	1	2 1/2
Medium	1 1/2	3 - 3 1/2
Fine	2	3 1/2 - 4

Gowan Trifluralin preplant incorporated followed by Lasso surface applied:

Soil Texture	Gowan Trifluralin ⁴ (pints)	3X O.H. (quarts)	3X O.H. (quarts)
Coarse	1	2	2
Medium	1 1/2	2 1/2	2 1/2 - 3
Fine	2	3	3 - 4

* Use a minimum of two and one-half quarts of Lasso to control these weeds.
 ** Use three to four quarts of Lasso per acre applied alone or, on medium and fine textured soils, in tank mix combination preplant incorporated only for control of these weeds.

SOYBEAN - Gowan Trifluralin/Dual Tank Mix Preplant Incorporated and Gowan Trifluralin Preplant Incorporated With Dual Surface Applied:

Gowan Trifluralin/Dual effectively controls those weeds listed on the label for Gowan Trifluralin plus these additional weeds:

Black nightshade	Southwestern cupgrass
Prairie cupgrass	Yellow nutsedge
Red rice	

Additional weeds partially controlled by this combination include:
 Hairy nightshade
 Volunteer sorghum

Follow recommended soil preparation and incorporation procedures for Gowan Trifluralin.

Apply Gowan Trifluralin/Dual in 10-40 gallons of water per acre with conventional low pressure sprayers and in a minimum of 5 gallons of water per acre by air. Gowan Trifluralin/Dual tank mix can also be applied preplant incorporated and followed by Dual at planting or after planting as a banded or broadcast application.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Dual SE 3X O.H. (pints)	3X O.H. (pints)
Coarse	1 1/2	1 1/2 - 2	2
Medium	2	2 - 2 1/2	2 - 2 1/2
Fine	2	2 - 2 1/2	2 1/2 - 3

Check the Dual label for additional directions for use, cautions, and precautions prior to application.

SOYBEAN - Gowan Trifluralin/Amiben tank mix or overlay:

Tank mix - Amiben may be applied several days prior to planting as a broadcast tank mix with Gowan Trifluralin. Weeds controlled by this tank mix, in addition to those controlled by Gowan Trifluralin alone, are smartweed, velvetleaf and ragweed. The tank mixture should be used as a spring preplant incorporated treatment.

Overlay - Amiben may be applied broadcast or in a band over the soybean row at planting time in fields where Gowan Trifluralin has been preplant incorporated. Weeds controlled by Amiben when surface applied, in addition to those controlled by Gowan Trifluralin alone, are:

Coffeeweed (Sesbania)	Spurge, annual
Mustard, wild	Smartweed, Pennsylvania
Nightshade, black	Stinkgrass
Prickly sida (Teaveed)	Velvetleaf
Ragweed, common	

Apply Gowan Trifluralin as a tank mix with Amiben, or apply and incorporate Gowan Trifluralin alone followed by an overlay application of Amiben at these rates:

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Amiben 2S (quarts)
Coarse	1 1/2	4 - 6*
Medium	2	4 - 6
Fine	2	4 - 6

* Use the higher rate where you expect heavy populations of smartweed, velvetleaf, ragweed, wild mustard or black nightshade. Do not use on such or charcoal soils. Read and observe all directions and cautions on the Amiben label.

SOYBEAN - Gowan Trifluralin/Amiben/Sencor or Lexone tank mix:

The Gowan Trifluralin/Amiben/Sencor or Lexone tank mix effectively controls all weeds listed for Gowan Trifluralin/Amiben and Gowan Trifluralin/Sencor or Lexone tank mixes.

Follow recommended soil preparation, application, and incorporation procedures for Gowan Trifluralin. The tank mix may be applied from several days prior to planting up to planting in 10 to 40 gallons of water per acre. Use screens no finer than 50 mesh.

Apply the tank mix at the following broadcast rate per acre:

Soil Texture	Gowan Trifluralin ⁴ (pints)	Amiben 2S (quarts)	Lexone 50WP/4L or Sencor 50WP/4 (pounds/pints)	Lexone (dry flowable) Sencor (dry flowable) (pounds)
Coarse ^a	1	3 - 4 ^b	1/2	1/3
Medium	1 1/2	3 - 4 ^b	1/2 - 3/4 ^c	1/3 - 1/2 ^c
Fine	2	4 - 5	3/4 ^c	1/2 ^c

^a Do not use Sencor or Lexone on coarse soils with less than 1% organic matter.

^b Use the higher rate of Amiben when velvetleaf or black nightshade is a problem.

^c On Clarion/Webster soils in Minnesota and Iowa or on similar alkaline (calcareous) soils with a pH of 7.5 or above, apply Sencor or Lexone at the rates listed below:

Soil Texture	Lexone 50WP/4L or Sencor 50WP/4 (pounds/pints)	Lexone (dry flowable) or Sencor (dry flowable) (pounds)
Medium	1/2	1/3
Fine	1/2 - 3/4 ^d	1/3 - 1/2 ^d

^d Use the higher rate only where soil pH is less than 7.5 and where weed pressure is heavy.

Additional precautions: The Gowan Trifluralin/Amiben/Sencor or Lexone tank mix will not harm the treated crop when you apply it according to directions and under normal growing conditions. However, overapplication, uneven application or improper soil incorporation of the tank mix can result in erratic weed control or crop injury. Additional stress factors are seedling disease, cold weather, deep planting, excessive moisture, soil pH over 7.5, high salt concentration, or drought. These additional factors may weaken crop seedlings and increase the possibility of damage from the tank mix. These additional factors may also delay crop development or reduce yields. Observe all cautions and limitations of all products used in mixtures. Do not use the foliage from soybeans treated with the Gowan Trifluralin/Amiben/Sencor or Lexone tank mix for feed or forage.

SOYBEAN - Gowan Trifluralin/Vernam tank mix:

The Gowan Trifluralin/Vernam tank mix effectively controls those weeds listed for Gowan Trifluralin alone plus these additional weeds:

Purple nutsedge (nutgrass)	Coffeeweed
Yellow nutsedge (nutgrass)	Velvetleaf
Annual morningglory	

Follow recommended soil preparation procedures for Gowan Trifluralin. You may apply the tank mix up to 10 days prior to planting. Incorporate the tank mix immediately after application. Apply Gowan Trifluralin/Vernam at these rates:

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)	Vernam 7E (pints)
Coarse	1 1/2	1 3/4 - 2 1/3
Medium	2	2 1/3 - 3*
Fine	2	3 - 3 1/2

* For nutsedge, wild rice and velvetleaf control, use the higher rate of 3 pints per acre on medium textured soils.

11 of 16

In areas receiving less than 20" average annual rainfall per year, apply Gowan Trifluralin to established alfalfa stands at a broadcast rate of 1 1/2 pints per acre on coarse soils and 2 pints on medium and fine soils. Use incorporation equipment that will insure thorough soil mixing with minimum damage to the established alfalfa.

ASPARAGUS - ESTABLISHED

Follow recommended soil preparation, application, and incorporation procedures for Gowan Trifluralin. Gowan Trifluralin 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, application before harvest in the late spring or early summer before ferning begins. Gowan Trifluralin will suppress volunteer seedling asparagus and field bindweed if you use the following recommended rates and application schedules.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4		Single Application	
	Split Application Before	Split Application After	Before	After
Coarse	1	1	2	2
Medium	1 1/2	1 1/2	3 or 4	3 or 4
Fine	2	2	4 or 4	4 or 4

*In any single calendar year, the maximum Gowan Trifluralin to apply is 2 pints per acre on coarse soils; 3 pints on medium soils; and 4 pints on fine soils.

FOR THE FOLLOWING CROP GROUPING, USE THE RATE TABLE BELOW

- CARROT
- CASTOR BEAN

CELERY - (Direct seeded and transplant in areas receiving less than 20" average annual rainfall.)

COLE CROPS - TRANSPLANT
Apply and incorporate prior to transplanting only. (Broccoli, Brussel Sprout, Cabbage and Cauliflower) See next section for direct seeded.

OKRA

PEPPER - Transplant
Apply and incorporate prior to transplanting only.

SOUTHERN PEA
Apply and incorporate before planting, at planting, or immediately after planting, unless otherwise indicated.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4	
	Areas receiving < 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

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

COLE CROPS - DIRECT SEEDED (Broccoli, Brussel Sprout, Cabbage and Cauliflower) See above section for transplant. For direct-seeded cole crops, apply and incorporate Gowan Trifluralin before planting at a broadcast rate of 1 pints per acre on coarse and medium soils and 1 1/2 pints on fine soils and soils with 2-5% organic matter. Direct-seeded cole crops have exhibited marginal tolerance to recommended rates of Gowan Trifluralin. Stunting or reduced stands may occur.

CUCURBITS - POSTPLANT EMERGED (Cantaloupe, Cucumber, and Watermelon) Western United States including Texas:
Apply as a directed spray to the soil between the rows and beneath plants which are in the 3 to 4 true leaf stage.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4	
	Areas receiving < 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

*Use 1 1/2 pints on coarse and medium textured soil and 2 pints on fine soils with 2-5% organic matter; use 2 pints on all soils with 5-10% organic matter.

Set incorporation equipment to throw treated soil around plant during incorporation.

DRY BEAN - GOWAN TRIFLURALIN ALONE

Apply and incorporate before planting using the following rates:
Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4	
	Areas receiving < 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

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

DRY BEAN - Gowan Trifluralin/Eptam tank mix:

The Gowan Trifluralin/Eptam tank mix effectively controls all the following weeds in addition to those weeds listed for Gowan Trifluralin:

- Henbit (Spring applications)
- Nightshade, black
- Nightshade, hairy
- Nutsedge
- Oat, wild
- Ragweed, common
- Smartweed, Pennsylvania
- Velvetleaf (Buttonweed)

Follow recommended soil preparation and incorporation procedures for Gowan Trifluralin. The tank mix should be applied from 2 days before planting up to planting. Incorporate immediately after application.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4		EPTAM 7E (pints)
	Areas receiving 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)	
Coarse	1	1	2 1/2 - 3 1/2 **
Medium	1 1/4 - 1 1/2	1 1/2	2 1/2 - 3 1/2
Fine	1 1/2	2	2 1/2 - 3 1/2

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

**Use Eptam 7E at a rate of 2 1/2 pints per acre to control annual grasses; 3 1/2 pints to control nutsedge and additional broadleaf weeds.

Precaution: Read the Eptam label before using. Observe all cautions and limitations of all products used in mixtures. The combination of Gowan Trifluralin and Eptam should not be used on soybeans, black-eyed peas (beans), lima beans and other flatpodded beans, except Romano. Do not use the foliage from a crop treated with this tank mix for feed or for grazing.

DRY BEAN - Fall application for dry bean grown in Idaho, Oregon, and Washington:

Apply and incorporate Gowan Trifluralin any time between October 15 and December 31 at a broadcast rate of 1 pints per acre on coarse soils; 1 1/4 to 1 1/2 pints on medium soils; and 1 1/2 pints on fine soils. Destroy established weeds during seedbed preparation.

FOR THE FOLLOWING CROP GROUPING, USE THE RATE LISTED BELOW

BEANS - (Guar and Mungbean)

GREENS - Turnip greens grown for processing, Collard, Kale and Mustard greens.

MUSTARD - Grown for seed or processing for food in Minnesota, Montana and North Dakota:
Apply and incorporate Gowan Trifluralin before planting at 1 pint per acre on coarse soils and 1 1/2 pints on medium and fine soils.

BEANS - (Lima Bean and Snap Bean):
Apply and incorporate before planting at a broadcast rate of 1 pint per acre on coarse and medium soils and 1 1/2 pints on fine soils.

CORN (Field Corn) and GRAIN SORGHUM (Milo):

Apply Gowan Trifluralin to field corn or grain sorghum (8 inches or taller) as an over-the-top or directed spray to effectively control weeds listed for Gowan Trifluralin.

Soil Preparation - Cultivate before a Gowan Trifluralin application to insure loose, friable soil, to remove established weeds, and to cover the base of plants with soil.

Application Directions - Gowan Trifluralin should be applied and incorporated at the recommended rates for the soil texture when the crop is well established (8 inches or taller). Gowan Trifluralin may be applied either as an over-the-top spray or as a directed spray. Drop nozzles should be used if foliage prevents uniform coverage of soil surface. Soil incorporation may be accomplished with only one pass a sweep-type cultivator or a properly adjusted rolling cultivator. The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at 6 to 8 mph. Set the middle sweeps as to

avoid exposing untreated soil. Adjust the incorporation tools to prevent crop injury.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4 (pints)
Coarse	3/4 - 1
Medium	1 - 1 1/2
Fine	1 1/2 - 2

Use the lower rates when you anticipate light weed pressure and the higher rates when you anticipate heavy weed pressure.

*Corn only: Apply 1 1/2 pints per acre in Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia to control fall panicum and Texas panicum.

CORN/SORGHUM - Gowan Trifluralin for shattercane control and Gowan Trifluralin/Atrazine tank mix for additional weed control:

Gowan Trifluralin applied as an over-the-top spray or as a directed spray in field corn/grain sorghum will control shattercane in addition to those other weeds listed on the label for Gowan Trifluralin. Use rates listed above.

Gowan Trifluralin can be tank mixed with atrazine for additional weed control in field corn/grain sorghum.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4 (pints)	Atrazine 4L (pints)
Coarse (sandy loam only)	3/4 - 1	2.4
Medium	1 - 1 1/2	4.75
Fine	1 1/2 - 2	6.0

*When using AAtrex 4L, use the rates listed above. For other atrazine formulations, use equivalent rates. When using AAtrex NineO 1 pint of 4L = 0.55 pound of NineO. One pint of 4L equals 0.62 pounds of atrazine 80%.

Apply and incorporate the Gowan Trifluralin/atrazine tank mix as directed on the Gowan Trifluralin label for field corn and grain sorghum.

Check the atrazine label for additional directions, cautions, and precautions prior to use.

Precaution: Do not apply Gowan Trifluralin to corn grown for seed. Do not apply to corn or sorghum as a preplant or preemergence treatment, or crop injury may occur.

HOPS

Apply and incorporate Gowan Trifluralin while the crop is dormant. Use a broadcast rate of 1/4 pint per acre on coarse soils; 1/2 to 3/4 pints on medium soils; and 1/2 pints on fine soils and soils with 2-10% organic matter.

MINT - (Established Peppermint and Spearmint):

Apply and at a rate of 1 pint per acre on coarse soils; 1/4 pint on medium soils; and 1/2 pints on fine soils. Use incorporation equipment that will insure thorough soil mixing with minimum damage to the crop.

PEA - (Dry and English)- Gowan Trifluralin Alone:

Apply and incorporate before planting at a rate of 1 pint per acre on coarse and medium soils and 1/2 pints on fine soils.

PEA - Gowan Trifluralin/Far-Go tank mix for peas in Idaho, Oregon, and Washington.

The tank mix combination of Gowan Trifluralin plus Far-Go will provide control of wild oat in addition to other annual grasses and broadleaf weeds controlled by Gowan Trifluralin

Application rates: Broadcast 3/4 pint of Gowan Trifluralin per acre on coarse and medium soils; 1 pint on fine soils. Use 1 1/2 quarts of Far-Go per acre for all soil textures.

Incorporation Directions: Apply and incorporate up to 3 weeks before planting. Follow recommended incorporation procedures for Gowan Trifluralin.

Precaution: Do not apply to lentils. Leaf crinkling and delayed maturity of peas may occur, particularly on early points in the northwest; but this is usually more than offset by a reduction of wild oat. Do not use foliage from treated peas for feed or forage. Refer to the cautions, precautions, and directions on the Far-Go label.

PEA - Fall application to dry peas and English peas in Idaho, Oregon and Washington:

Apply and incorporate any time between October 15 and December 31 at a broadcast rate of 1/4 pint per acre on coarse soils; 1/2 to 3/4 pints on medium soils; and 1/2 pints on fine soils. Destroy established weeds during seedbed preparation. Do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding.

PEANUT - (Spanish Peanut in Texas and Oklahoma):

Apply and incorporate Gowan Trifluralin before planting, at planting or immediately after planting at a broadcast rate of 1/4 pint per acre on coarse soils. When incorporating after planting, take care not to disturb the seed.

PEANUT - Gowan Trifluralin/Vernon tank mix (Spanish Peanut in Texas and Oklahoma):

Gowan Trifluralin/Vernon tank mix effectively controls those weeds listed for Gowan Trifluralin alone plus these additional weeds:

Purple nutsedge (nutgrass)	Coffeedeed
Yellow nutsedge (nutgrass)	Velvetleaf
Annual morningglory	

Follow recommended soil preparation procedures for Gowan Trifluralin. You may apply the tank mix up to 10 days prior to planting. Incorporate the tank mix immediately after application. Apply the tank mix at these rates:

Soil Texture	Gowan Trifluralin 4 (pints)	Vernon 7E (pints)
Coarse	1	2 1/3

POTATO - (All states except Maine):

Apply and incorporate Gowan Trifluralin after planting, before emergence, or immediately following dragoff or after the potato plants have fully emerged.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4	
	Areas receiving < 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

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

Set incorporation equipment so that the bed and furrow will be uniformly covered with a layer of treated soil. If the layer of treated soils is not uniform and the herbicide is concentrated over the bed, potato emergence may be retarded, and stem brittleness can occur. When applying and incorporating Gowan Trifluralin after potato plants have fully emerged, do not completely cover foliage at subsequent cultivations. Be careful that incorporation machinery does not damage potato seed pieces or elongating sprouts.

POTATO - Split application in Idaho, Oregon and Washington:

On all soils, apply and incorporate 3/4 pint of Gowan Trifluralin per acre before planting and 3/4 pint after planting when potato plants have fully emerged. Do not apply to soils containing 2% or more organic matter. Follow incorporation directions listed above for application to potato after planting.

POTATO - Gowan Trifluralin/Eptan tank mix for potatoes grown in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota and Texas:

The Gowan Trifluralin/Eptan tank mix effectively controls the following weeds in addition to those weeds controlled by Gowan Trifluralin:

Henbit (Spring applications)	Oat, wild
Nightshade, black	Ragweed, common
Nightshade, hairy	Smartweed, Pennsylvania
Nutsedge	Velvetleaf (Buttonweed)

Follow recommended soil preparation and application procedures for Gowan Trifluralin. The tank mix may be applied after planting, but prior to crop emergence. In areas where potatoes are normally dragged off, the tank mix should be applied and incorporated up to or immediately following drag off.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin 4		
	Areas receiving 20" average annual rainfall* (pints)	Areas receiving 20" average annual rainfall* (pints)	Eptan 7E (pints)
Coarse	1	1	1 3/4 - 7**
Medium	1 - 1 1/2	1 - 1 1/2	1 3/4 - 7
Fine	1 - 1 1/2	1 - 2	1 3/4 - 7

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

** Use the higher rate of Eptan 7E for nutsedge control.

Precaution: Read the Eptan label before using. Observe cautions and limitations of products used in mixtures. Do not graze or feed forage to livestock from fields treated with Gowan Trifluralin/Eptan tank mix.

POTATO - Gowan Trifluralin/Eptan application before planting in Washington, Idaho and Oregon:

Gowan Trifluralin/Eptan may be applied before planting at a broadcast rate of 3/4 pint of Gowan Trifluralin per acre and 3 1/2 pints of Eptan 7E per acre on all soil textures. Incorporate immediately.

Precaution: Do not use this tank mix both before and after planting in the same season. Read the Eptan label before using. Observe all cautions and limitations on labeling of all products used in mixtures. Do not use foliage from treated crops for feed or forage.

SAFFLOWER

Follow recommended soil preparation, application and incorporation procedures for Gowan Trifluralin. 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 ⁴	
	Areas receiving <20" average annual rainfall* (pints)	Areas receiving >20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

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

SAFFLOWER - Fall application in Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming: Apply and incorporate Gowan Trifluralin 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, covering some of the soil from tops into furrows. Where soil is 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 1 1/2 pints per acre on coarse soils; 2 pints on medium soils; and 2 1/2 pints on fine soils. Do not apply Gowan Trifluralin in the fall to soils which are wet or are subject to periods of flooding.

SUGARBEET

Apply Gowan Trifluralin as a broadcast, overtop spray when plants are between 2 and 6 inches tall at a rate of 1 pint per acre on coarse soils and 1 1/4 to 1 1/2 pints on medium and fine soils. Use the higher rate for medium and fine soils in areas receiving more than 20" average annual rainfall. Set incorporation machinery to throw treated soil toward the plants in the row. Be careful that incorporation machinery does not damage the sugar beet taproot. Precaution: Exposed beet roots should be covered with soil before an application to reduce the possibility of girdling.

SUGAR BEET - Incorporation with a tine-tooth harrow in California, Colorado, Idaho, Montana, Nebraska, Oregon, Texas, Utah, Washington and Wyoming:

A properly operated tine-tooth harrow (Flexline or Melroe) can incorporate Gowan Trifluralin for effective weed control in sugar beet. Operate the tine-tooth harrow 2 times over the field in opposing directions at a speed of 3 to 6 mph. Set the harrow to cut 1 or 2 inches deep. Be careful that the tine-tooth harrow does not damage the sugar beet taproot. Follow recommended application procedures and broadcast rates per acre for sugar beet. (see preceding paragraph).

SUGAR BEET - Gowan Trifluralin/Eptam tank mix applied as an overtop spray and incorporated:

Gowan Trifluralin may be tank mixed with Eptam and used as an overtop spray and incorporated for weed control in sugar beets. Apply the tank mix anytime after the first true leaves have formed until the beets are six inches tall.

Broadcast Rates per Acre

Soil Texture	Gowan Trifluralin		Eptam 7E** (pints)
	(pints)	(pints)	
Coarse	1	1	2 1/4 - 3 1/2
Medium/Fine	1 1/4 - 1 1/2	1 1/2	2 1/4 - 3 1/2

*Use the higher rate of Gowan Trifluralin for medium and fine soils in areas receiving more than 20" average annual rainfall.
**Check the Eptam label for proper rate for your area.

SUGARCANE - (Plant Cane):

Apply and incorporate Gowan Trifluralin twice a year at a broadcast rate of 2 to 4 pints per acre for all soil textures. Make the first application in the fall on firmly packed beds immediately after the seed pieces are planted. Make the second application in the spring before or shortly after the cane emerges. Loosen rain-packed beds 2 to 3 inches deep before the spring application. Take care that incorporation machinery does not damage the seed pieces or emerging shoots.

SUGARCANE - Postplant in Hawaii for control of most annual grasses, including guineagrass:

Surface apply Gowan Trifluralin after planting (for plant cane) or after harvesting (for ratoon cane), before weeds and cane emerge. Use a broadcast rate of 4 to 8 pints per acre for all soil textures. In plant cane, the beds should be formed or rolled before application. In ratoon cane, the crop residue should be removed before application. If large amounts of crop residue are present, Gowan Trifluralin will not be effective. Apply just before anticipated rainfall or sprinkle irrigate immediately after application.

SUGARCANE - Applications up to layby for plant cane or ratoon cane grown in Louisiana or Texas: Apply and incorporate Gowan Trifluralin at a broadcast rate of 2 to 4 pints per acre for all soil textures. Do this in the spring from before or shortly after the cane emerges up to layby. Apply the Gowan Trifluralin after the beds have been shaved or false shaved. Loosen rain-packed beds 2 to 3 inches deep before application. Be careful that incorporation machinery does not damage seed pieces or emerging shoots. You may use a rolling cultivator or bed chopper to incorporate layby applications in sugarcane on all soil textures. Follow normal incorporation directions for the rolling cultivator. Set bed chopper to cut 3 to 4 inches deep and operate at 4 to 6 mph. Two incorporation passes are necessary.

SUGARCANE - Itchgrass (Raoulgrass) control in Louisiana: Apply and incorporate on either plant or ratoon cane at a broadcast rate of 3.2 pints per acre for all soil textures. Follow the directions above for sugarcane layby application in Louisiana and Texas.

SUNFLOWER - GOWAN TRIFLURALIN 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 for Gowan Trifluralin.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴	
	Areas receiving <20" average annual rainfall* (pints)	Areas receiving >20" average annual rainfall* (pints)
Coarse	1	1
Medium	1 1/4 - 1 1/2	1 1/2
Fine	1 1/2	2

*Use 1 1/2 to 2 pints per acre on coarse and medium soils with 2-5% organic matter and 2 pints on all soils with 5-10% organic matter.

SUNFLOWER - Gowan Trifluralin/Amiben tank mix or overlay: Follow recommended soil preparation, application and incorporation procedures for Gowan Trifluralin.

Amiben may be applied in a bank or broadcast over sunflowers at planting in fields where Gowan Trifluralin has been incorporated prior to planting. Or, the tank mix may be incorporated prior to planting. The tank mix improves mustard, smartweed, velvetleaf, and ragweed control in addition to those weeds controlled by Gowan Trifluralin alone.

Apply Gowan Trifluralin/Amiben or Gowan Trifluralin with an Amiben overlay at the following broadcast rates per acre:

Soil Texture	Gowan Trifluralin ⁴	Amiben 25
	(pints)	(quarts)
Coarse	1	4
Medium	1 1/2	4 - 6*
Fine	2	4 - 6*

*For best control of mustard, common ragweed or black nightshade, use the 6 quart rate.

In coarse textured soils, heavy rains on the incorporated Amiben may move it below the weed seed germination zone, and erratic weed control may result. If sufficient rain does not fall within 7 days after a preemergence application of Amiben, but there is enough soil moisture to germinate weeds and grasses, a light cultivation with a rotary hoe or similar tool will uproot these small broadleaf weeds and grasses. The shallow mixing of Amiben in the surface soil will not interfere with the action of Amiben when rains come.

SUNFLOWER - Gowan Trifluralin/Eptam tank mix for weed control in sunflower in the states of Minnesota, North Dakota and South Dakota: Gowan Trifluralin/Eptam (EPTC) may be tank mixed and preplant incorporated for weed control in sunflower.

The tank mix controls the following annual and perennial weeds in addition to those controlled by Gowan Trifluralin alone:

Annual Weeds	Perennial Weeds
Ryegrass (Italian)	Bermudagrass
Bermudagrass (seedling)	Nutsedge, purple and yellow
Rescuegrass	
Volunteer grains (Barley, oats, wheat)	
Wild oats	
Morningglory, annual	
Nightshade, black	
Nightshade, hairy	
Spurry, corn	
Fiddleneck	
Nettleleaf, goosefoot	
Shepherdspurse	
Figweed, tumble	

Follow recommended soil preparation, application and incorporation procedures for Gowan Trifluralin. Apply and immediately incorporate the tank mix prior to planting in the spring. The tank mix may also be applied in the late fall before the ground freezes.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴		Eptam 7E	
	Areas receiving <20" average annual rainfall (pints)	Areas receiving >20" average annual rainfall (pints)	Spring (pints)	Fall (pints)
Coarse	1	1	3 1/2	4 1/2
Medium	1 1/4 - 1 1/2	1 1/2	3 1/2	5 1/4
Fine	1 1/2	2	3 1/2	5 3/4

Refer to the Eptam label for all cautions, precautions, etc., regarding use of the product.

For direct-seeded tomato, apply Gowan Trifluralin as a directed spray to the soil between rows and beneath the plants, and incorporate. For transplant tomato, apply and incorporate before transplanting. Do not apply after transplanting.

Broadcast Rates per Acre

Soil Texture	Gowan Trifluralin ⁴	
	Areas receiving < 20" average annual rainfall* (pints)	Areas receiving > 20" average annual rainfall* (pints)
Coarse	1 1/4 - 1 1/2	1 1/2
Medium	1 1/2	2
Fine	1 1/2	2

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

FRUIT AND NUT CROPS AND VINEYARDS

For areas receiving more than 20" average annual rainfall. For new plantings of vineyards, citrus and pecan trees, apply and incorporate Gowan Trifluralin before planting at a broadcast rate of 1 pint per acre on coarse soils; 1/2 pint on medium soils; 2 pints on fine soils; 1/2 pints on fine soils with 2-5% organic matter; 1/2 pint on soils with 5-10% organic matter. For non-bearing, established plantings of citrus and pecan trees and bearing plantings of grapefruit, lemon, orange, pecan, tangelo and tangerine trees, apply at a broadcast rate of 2 to 4 pints per acre for all soil textures.

For areas receiving less than 20" average annual rainfall. For new plantings of almond, apricot, citrus, nectarine, peach, pecan and walnut trees, apply and incorporate before planting at a broadcast rate of 1 pint per acre on coarse soils; 1/2 to 1 pints on medium soils; 1 1/2 pints on fine soils; 1 1/2 to 2 pints on soils with 2-5% organic matter; and 2 pints on soils with 5-10% organic matter.

For new planting of vineyards, apply and incorporate before planting at a broadcast rate of 1 to 1 1/2 pints per acre on coarse soils; 1 1/2 to 3 pints on medium soils; and 3 to 4 pints on fine soils or soils or soils with 2-10% organic matter. Do not use more than 2 pints per acre on heat-treated grape rootings.

For postplant application on bearing or non-bearing, established plantings of vineyards and almond, apricot, grapefruit, lemon, nectarine, orange, peach, plum, prune, tangelo, tangerine and walnut trees, apply at a broadcast rate of 2 to 4 pints per acre for all soil textures. Do not apply to vineyards within 60 days of harvest.

In established plantings, apply Gowan Trifluralin as a directed spray to the soil and use incorporation methods not injurious to the trees or vines.

FRUIT AND NUT CROPS AND VINEYARDS - Rhizome johnsongrass control: For areas receiving less than 20" average annual rainfall. You can obtain commercially acceptable control of rhizome johnsongrass with postplant applications in bearing and non-bearing established plantings of vineyards and almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine and walnut trees with a Gowan Trifluralin program when applied for 2 years in a row.

Soil Preparation - Work the soil thoroughly to bring the rhizomes nearer the surface.

Application - Apply Gowan Trifluralin at a broadcast rate of 2 quarts per acre on all soil textures each year for 2 years in a row. Do not apply to vineyards and within 60 days of harvest.

Incorporation - Incorporate thoroughly with a disc set to cut 4 to 6 inches deep and operate at 4 to 6 mph. Two incorporation passes are necessary, with the second pass in a different direction from the first.

Cultivation - Some johnsongrass plants will escape. Timely cultivations are necessary to obtain commercially acceptable control. You cannot obtain commercially acceptable control with only 1 year of Gowan Trifluralin use.

Precautions: Do not use the 2 quart rate on new plantings, or crop injury may result. Do not interplant orchards or vineyards with other crops. If the treated vineyards and orchards are diverted to other crop uses, plant only those crops for which Gowan Trifluralin has been registered as a preplant treatment for the next cropping season.

FRUIT AND NUT CROPS AND VINEYARDS - Bindweed control in California: Gowan Trifluralin can be used for the control of field bindweed in vineyards and for almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine and walnut trees. Apply at a broadcast rate of 1/2 pints per acre on all soil textures. Gowan Trifluralin must be applied in the spring with a specially designed spray blade which applies a thin, concentrated layer at a soil depth of 4 to 6 inches. This layer of Gowan Trifluralin prevents bindweed shoots from emerging.

Land Preparation - Destroy all weeds and grasses with soil tillage before applying. This tillage is necessary to prevent trash from interfering with the operation of the spray blade.

Equipment - This operation requires a spray blade capable of running 4 to 6 inches below the surface of the soil. The spray blade should be equipped with nozzles located under the blade and directed so

that the spray will be trapped under the soil which is flowing over the blade as it is pulled through the soil. Use a sufficient number of nozzles with spacing that will uniformly apply the Gowan Trifluralin underground in a thin, horizontal layer.

Application - Apply in 40 to 80 gallons of water per acre. Operate the spray blade at a depth of 4 to 6 inches.

Precaution: Some soils develop cracks as they dry after rainfall or irrigation. Field bindweed may emerge if the cracks extend through the Gowan Trifluralin layer. Prevent or eliminate cracks by shallow discing or other tillage. Avoid deep tillage which disturbs the subsurface layer. Cultivation or tillage also aids the control of germinating seeds.

WHEAT (WINTER) - (Idaho, Montana, Oregon and Washington)

Gowan Trifluralin may be applied for preplant preemergence control of cheatgrass and other annual grasses and broadleaf weeds controlled by Gowan Trifluralin. The growth, development and yield of winter wheat will not be adversely affected, provided the seed is placed below the zone of soil treated with Gowan Trifluralin. Apply any time during a period from 3 weeks up to immediately prior to planting. Broadcast at a rate of 1 1/2 pints per acre on coarse soils and medium soils and 2 pints on fine soils.

Incorporation Directions - Incorporate into the soil with a flexible tine-tooth harrow (Flex-tine, Melroe) set to cut 1 to 2 inches deep and operate at 3 to 6 mph. Incorporate one time within 24 hours after application, followed by a second incorporation in a different direction from the first prior to planting. Do not till the soil with a disc after the Gowan Trifluralin has 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 zone of soil into which Gowan Trifluralin has been incorporated.

Precaution: Wheat planted in direct contact with treated soil may suffer crop injury in the form of delayed emergence and development.

WHEAT (WINTER) - Fallow soil application in Washington and Oregon: Gowan Trifluralin applied and shallowly incorporated into fallow soil up to four months ahead of planting will control cheatgrass and certain annual grasses and broadleaf weeds. The growth, development, or yield will not be adversely affected as long as the seed is placed below the zone of soil treated with Gowan Trifluralin. Use deep or semi-deep furrow drills. Broadcast rates are 1.2 pints per acre on coarse and medium soils and 1.6 pints on fine soils. Apply any time from May to September prior to the fall planting of winter wheat.

Incorporation - Incorporate with a flexible tine-tooth harrow (Flex-tine or Melroe) set to cut 1 to 2 inches deep and operated at 3 to 6 mph. For thorough incorporation, two 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 prior to seeding. Do not till the soil with a disc after Gowan Trifluralin has been applied with a flexible tine harrow.

Precaution: Use only deep furrow or semi-deep furrow drills. Place seed below the zone of soil into which Gowan Trifluralin has been incorporated. Do not plant wheat directly into the zone of soil treated, injury to the crop or delay in its emergence and development may occur.

WHEAT (SPRING), DURUM AND BARLEY - GOWAN TRIFLURALIN ALONE

Gowan Trifluralin is recommended as a postplant incorporated treatment to control foxtail (pigeongrass). Apply at a broadcast rate of 1 pint per acre on coarse and medium soils and 1 1/2 pints on fine soils. Plant 2 to 3 inches deep in a well-tilled seedbed. Apply Gowan Trifluralin after seeding but before the crop emerges. To incorporate use flex-tine or diamond harrows operated two times in different directions, at speeds of at least 5 mph. Incorporate by operating equipment 1 to 1 1/2 inches deep. Application and the first incorporation should be done in the same operation if possible. Both incorporations must be done within 24 hours.

WHEAT (SPRING), DURUM, BARLEY (FALL APPLICATION) - Foxtail/Pigeongrass control:

Gowan Trifluralin may be fall applied for foxtail/pigeongrass control in spring wheat, durum and barley planted the following spring. Gowan Trifluralin may be applied to ground that has a manageable trash level, has been fallowed or pre-tilled. The first incorporation is required within 24 hours after application. A second incorporation is required prior to planting to destroy emerged weeds and to ensure an even distribution of treated soil.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)
Coarse	1
Medium	1
Fine	1.5

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 more shallow depth than the fall incorporation.

1. Chisel plow: May be used for the first pass only. Operate at 4 - 5 inches deep at 4 - 6 mph. A chisel plow is defined as having 3 rows of up to 18-inch sweeps on no greater than 12-inch centers. Stagger sweeps so that no soil is left unturned.
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 to 4 rows of sweeps with "c" or "a" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned.

Planting Directions - Wheat, durum, or barley should be approximately 2 inches deep.
 Precaution - While use of this practice may result in a stand reduction, slight stand reductions do not normally affect yield.

WHEAT (SPRING), DURUM AND BARLEY - Gowan Trifluralin/Far-Go tank mix:
 Gowan Trifluralin/Far-Go applied as a postplant incorporated treatment will control foxtail (piggrass) and wild oat. Plant 2 to 3 inches deep in a well-tilled seedbed. Apply Gowan Trifluralin/Far-Go after seedling but before crop emerges. To incorporate, use flex-tine or diamond harrows two times, operated in different directions, at speeds of at least 5 mph. Incorporate by operating equipment 2 to 3 inches deep. Application and the first incorporation should be done in the same operation if possible. If not, incorporate immediately after application.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴		Far-Go	
	Barley	Durum	Spring Wheat	Barley
Coarse	1	2 1/2	2 1/2	2
Medium	1 1/2	2 1/2	2 1/2	2
Fine	1 1/2	2 1/2	2 1/2	2

Precaution: Overapplication may result in crop injury. Read the Far-Go label carefully before using.

FLAX - FALL APPLICATION

Gowan Trifluralin may be applied and incorporated in the fall for weed control in spring seeded flax. Ground cover from existing weeds or previous crop should be at a manageable level so that there is no interference with incorporation.

Apply as the broadcast rates per acre of 1 pint for coarse soils; 1/2 pints for medium soils; and 2 pints for fine soils.

Incorporation Directions - Incorporate one time within 24 hours after application. The second incorporation should be performed in the spring prior to seeding flax. The incorporation operations should result in a thorough mixing of Gowan Trifluralin with the soil. Otherwise, erratic weed control may result.

Incorporation Equipment - Use machinery that mixes Gowan Trifluralin thoroughly with the soil. Recommended equipment includes:

- Disc - Set to cut 3-4 inches deep and operated in 2 different directions at 4 to 6 mph. A tandem or double-disc operated one time does not provide adequate incorporation.
- Field Cultivator - Set to cut 3-4 inches deep and operated at 5 mph or more. The field cultivator used alone or in combination with the double-disc will provide effective incorporation providing the following instructions are used:

1. Two passes over the field with a field cultivator with second pass running at an angle to the first. Do not set cultivator to cut deeper than 4 inches. Be sure a depth of not greater than 4 inches is maintained on the second pass since untreated soil may be turned up.
2. Field cultivator used for the first pass and the double-disc used for the second pass.
3. Double-disc used for the first pass and the field cultivator used for the second pass.

Note: 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.

Mulch treader and other similar disc-type implements - set to cut 3-4 inches deep and operated at 5 to 8 mph in two different directions.

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 1.5 inches deep.
3. Flax should not be seeded until the seedbed has warmed up.
4. Refer to the special precautions statement on this label regarding stresses that can lead to crop injury or yield reduction.

Note: Do not delay the first incorporation more than 24 hours after application.

ONIONS (Grown for Dry Bulbs Only):

Application Directions - Apply Gowan Trifluralin as a directed spray to the soil between the onion rows. Avoid spraying the onion tops or exposed bulbs.

Preharvest Interval - Do not apply within 60 days of harvest.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)
Coarse	3/4 - 1
Medium	1 - 1 1/4

For band applications, use proportionately less Gowan Trifluralin. Use the lower rates where light weed pressure is anticipated.

Incorporation Directions - Soil incorporation may be accomplished by operating sweep-type or rolling cultivators 2 to 4 inches deep at 6 to 8 mph. Incorporation equipment must mix Gowan Trifluralin uniformly in the soil. Incorporate with two passes. The first pass must be within 24 hours of application or erratic weed control may result. Avoid covering exposed onion bulbs with treated soil during incorporation as injury to the crop may occur. Care should be taken to avoid injury to the roots during incorporation.

Precautions - Applied according to these directions and under normal growing conditions, Gowan Trifluralin will not adversely affect onions. Diseases, improper incorporation depth, excessive moisture, high salt concentration or drought may weaken the crop and increase the possibility of damage from Gowan Trifluralin. Under these conditions, delayed crop development or reduced yields may result.

RAPESEED

Gowan Trifluralin as a broadcast application will control certain annual grasses and broadleaf weeds in rapeseed.

For use in all states except Alaska: Follow recommended procedures for soil preparation and application for Gowan Trifluralin. Gowan Trifluralin may be applied in the fall or early spring prior to seeding. Set incorporation equipment to incorporate to a depth of 3 to 4 inches with equipment specified in this label.

Broadcast Rates Per Acre

Soil Texture	Gowan Trifluralin ⁴ (pints)
Coarse	1
Medium	1 1/2
Fine	2

FERTILIZER USE DIRECTIONS
APPLICATION WITH LIQUID FERTILIZERS

Gowan Trifluralin may be mixed with most liquid fertilizer materials. The combination with solutions and suspension-type fertilizers has provided weed and grass control equal to the same rates of Gowan Trifluralin applied in water. Follow Gowan Trifluralin label recommendations regarding rates per acre, crops, incorporation directions, special instructions, cautions and special precautions. Individual state regulations relating to liquid fertilizer mixing, registration, labeling and applications are the responsibility of the individual and/or company selling the fertilizer and chemical mixture.

Testing for Tank Mix Compatibility in Liquid Fertilizers: Gowan Trifluralin alone or in tank mixture with dry flowables, wettable powders (WP), aqueous suspensions (AS), flowables, (F), liquids (L), or solutions (S) may not combine properly with some liquid fertilizer materials. Small quantities should always be tested before full-scale mixing. This will determine whether a compatibility agent is needed, and which agent does the best job. The seven agents listed below have been thoroughly tested. There are many other surfactants on the market which were not designed for use with liquid fertilizers. Use the following test to select the correct agent for your mixture.

1. Put 1 pint of the liquid fertilizer in a quart jar.
2. Add 1 to 4 teaspoonful(s) of the dry flowable, WP, AS, F, or L formulation (depending on the recommended rate per acre) to the liquid fertilizer. Close jar and agitate until the materials are dispersed evenly in the fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
3. After dispersing the materials (Step 2), add 3 to 4 teaspoonful of Gowan Trifluralin to the jar and shake well. Add solution herbicides to the mixture last and agitate. Observe the jar for about 10 minutes. If the materials rise to the surface and form a thick layer (oily curds) which will not redispense when agitated, a compatibility agent is needed. If the mixture is easily redispersed to its original state with slight agitation, no agent is needed but good agitation must be provided in the fertilizer spray tank.
4. If the need for a compatibility agent is shown in Step 3: Using a clean quart jar, start at Step 1 above, add 1/4 teaspoon of the compatibility agent to the liquid fertilizer, mix well, then repeat Steps 2 and 3.

An effective compatibility agent will cause the mixture to remain uniformly mixed with little or no separating or oil rising to the surface for one half hour or longer. If slight separation does occur, 2 to 3 inversions of the jar should give a uniform remix. If oily curds form which will not redispense, more agent or another agent should be tried. Use a clean jar for each test. The compatible mixture will have a uniform appearance and will be relatively easy to keep mixed with gentle agitation of the jar.

LIQUID FERTILIZER MIXING INSTRUCTIONS

Gowan Trifluralin in liquid fertilizer emulsifiable concentrates, such as Gowan Trifluralin, can be mixed with liquid fertilizers. In all cases, continuous agitation is required to prevent the Gowan Trifluralin from rising to the surface as an oily layer. When necessary, (see Testing for Tank Mix Compatibility in Liquid Fertilizers, above) a compatibility agent can be used to cause the Gowan Trifluralin to emulsify properly (i.e. have a milky appearance rather than an oily layer). The use of compatibility agents is especially important when tank mixing emulsifiable concentrates (EC) with dry flowables, wettable powders (WP), aqueous suspensions (AS), flowables (F), liquids (L), or solutions (S) in liquid fertilizer. If the emulsion is not properly formed and the Gowan Trifluralin rises to the surface of the fertilizer as an oil ("oils out") the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which is difficult to redispense. Any one of the compatibility agents listed below is helpful in causing liquid concentrates to form non-oiling mixtures with liquid fertilizers. These compatibility agents can be used at rates as low as 1/2 to 2 pints per ton of liquid fertilizer and should be mixed well with the fertilizer before adding the liquid concentrate. Read the label on the compatibility agent and follow the directions.

1. Sponto 168D (Mitsco Chemicals Co., Chicago, IL)
2. Compat (Farm Chemicals, Inc., Aberdeen, NC)
3. Unite (Hopkins Ag Chemical, Madison, WI)
4. T-Mulz 734-2 (Thompson-Hayward Chemical Co.)
5. Rigo Compatibility Agent (Rigo Company, Buckner, KY)
6. Amoco Spray Mate™ (Amoco Oil Co., Chicago, IL)
7. Kem-Link (Universal Coop, Minneapolis, MN)

All of the above are phosphate, ester-type surfactants designed to be used with liquid fertilizers. They usually do not work as compatibility agents in tank mixtures in plain water.

APPLICATION - Spread the fertilizer/pesticide mixture with a properly calibrated applicator. Be certain the material is applied uniformly to the soil surface.

INCORPORATION - Follow normal Gowan Trifluralin incorporation procedures.

GOWAN TRIFLURALIN APPLICATION WITH DRY BULK FERTILIZERS

Dry bulk fertilizers may be impregnated or coated with Gowan Trifluralin. Application of dry bulk fertilizers impregnated with Gowan Trifluralin has provided weed and grass control equal to the same rates of Gowan Trifluralin applied in water. All Gowan Trifluralin label recommendations regarding rates per acre, approved crops, incorporation, special instructions, cautions, and special precautions must be followed. Apply a minimum of 200 pounds per acre of dry fertilizer impregnated with Gowan Trifluralin at the recommended rates. Any commonly used dry fertilizers can be used for Gowan Trifluralin impregnation except coated ammonium nitrate and straight limestone. These materials will not absorb the herbicide. Blends containing mixtures of these materials can be impregnated.

Impregnation - Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender. Apply Gowan Trifluralin uniformly to the fertilizer.

Rates - Check specific crop recommendations for the rate of Gowan Trifluralin per acre. See the rate table which follows to determine the amount of Gowan Trifluralin to be impregnated into a ton of dry bulk fertilizer based on the amount of fertilizer which will be applied per acre. (see rate chart below)

Application - Spread the fertilizer/chemical mixture with a properly calibrated applicator. Be certain the material is applied uniformly to the soil surface.

Incorporation - Follow Gowan Trifluralin incorporation procedures.

RATE CHART FOR IMPREGNATING FERTILIZER WITH GOWAN TRIFLURALIN
(Gowan Trifluralin Added to a TON of Fertilizer)

Fertilizer Rate Per Acre	Gowan Trifluralin					Rate Per Acre
	1 pint	1 1/2 pints	2 pints	3 pints	4 pints	
200 pounds	5 qts per ton	7 1/2 qts per ton	10 qts per ton	15 qts per ton	20 qts per ton	
250 pounds	4 qts per ton	6 qts per ton	8 qts per ton	12 qts per ton	16 qts per ton	
300 pounds	3 1/2 qts per ton	5 qts per ton	6 3/4 qts per ton	10 qts per ton	13 1/2 qts per ton	
350 pounds	2 3/4 qts per ton	4 1/4 qts per ton	5 1/2 qts per ton	8 1/2 qts per ton	11 1/2 qts per ton	
400 pounds	2 1/2 qts per ton	3 3/4 qts per ton	5 qts per ton	7 1/2 qts per ton	10 qts per ton	
450 pounds	2 1/4 qts per ton	3 1/2 qts per ton	4 1/2 qts per ton	6 3/4 qts per ton	9 qts per ton	

For rates other than those listed above, use the following formula to calculate the amount of Gowan Trifluralin to be impregnated on a ton of dry bulk fertilizer:

$$\frac{\text{Pints Gowan Trifluralin}}{\text{per acre}} \times \frac{1000}{\text{lbs. fertilizer per acre}} = \frac{\text{QUARTS GOWAN TRIFLURALIN PER TON OF FERTILIZER}}{\text{per acre}}$$

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the fertilizer and chemical mixture.

SPECIAL PRECAUTIONS

Applied according to directions and under normal growing conditions, Gowan Trifluralin will not harm the treated crop. Overapplication may result in crop injury or a soil residue. Uneven application or improper soil incorporation of Gowan Trifluralin 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 from Gowan Trifluralin. Under these conditions, delayed crop development or reduced yields may result.

In Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, sugarbeets, 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.

In those portions of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota and Texas where at least 20 inches of irrigation rainfall (total) was used to produce the crop, sorghum or oats should not be planted for 12 months after an application.

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" rainfall/year: Holdboard plow before planting sugar beets where a spring application of Gowan Trifluralin was made the previous season. Also note planting restrictions listed in the section on control of rhizome johnsongrass and other higher rate programs.

Vegetable Growing Areas:

Vegetable crops other than those listed on this label should not be planted within 3 months following the application of Gowan Trifluralin