



# TRIFLURALIN HF

**A selective herbicide for the pre-emergence control of annual grasses and broadleaf weeds.**

**ACTIVE INGREDIENT:**

Trifluralin ( <i>a,a,a</i> -trifluoro-2,6-dinitro-N,N-dipropyl- <i>p</i> -toluidine) .....	43.0%
<b>INERT INGREDIENTS*:</b> .....	<b>57.0%</b>
<b>TOTAL</b>	<b>100.0%</b>

Contains 4 pounds active ingredient per gallon.

\*Contains Petroleum Distillates

## KEEP OUT OF REACH OF CHILDREN CAUTION

See Below For Additional Precautions And Directions For Use.

EPA REG. NO. 34704-792

EPA EST. NO. 34704-MS-001

NET CONTENTS 2½ GALS. (9.46 L)

IHT

080609 V3D-11Y10

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Causes moderate eye injury. Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes, skin or clothing.

#### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have a person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

Call a poison control center or doctor immediately for treatment advice.  
**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:  
1-866-944-8565.**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

#### Personal Protective Equipment:

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

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate or viton, shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### Engineering controls statements:

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

#### USER SAFETY RECOMMENDATIONS

Users should:

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

#### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwater or rinsate.

#### PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat and open flame.

#### SPECIAL PRECAUTIONS

Applied according to directions and under normal growing conditions, TRIFLURALIN HF will not harm the treated crop. Over application may result in crop injury or a soil residue.

Uneven application or improper soil incorporation can result in erratic weed control or crop injury. Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration or drought may weaken crop seedlings and increase the possibility of damage. Under these conditions, delayed crop development or reduced yields may result.

To avoid crop injury, do not plant vegetable crops other than those listed on the label within 5 months following the application of TRIFLURALIN HF.

***In the Western United States—Arizona, Colorado, California, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, and sugar beet growing areas of Minnesota and North Dakota:***

To avoid crop injury in arid areas, do not plant sugar beets, red beets or spinach for 12 months after a TRIFLURALIN HF spring application or for 14 months after a TRIFLURALIN HF fall application. Plow the land to a depth of 12 inches prior to planting sugar beets to prevent the possibility of crop injury. To avoid crop injury do not plant sorghum (milo), corn or oats for 14 months after a spring application or for 16 months after a fall application. 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 the Western United States—Those portions of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota and Texas where at least 25 inches of irrigation and/or rainfall (total) was used to produce the crop:***

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Do not plant sorghum or oats for 12 months after a TRIFLURALIN HF application. If less than 25 inches of total water was used to produce the crop, do not plant sorghum or oats for 18 months after application. Cool wet weather conditions during the early stage of growth may increase the possibility of injury to sorghum.

### In the Eastern United States:

Moldboard plow before planting sugar beets where a TRIFLURALIN HF spring application was made the previous season. Also note planting restrictions listed in the section on control of rhizome johnsongrass.

### In North Dakota Only:

**Green Foxtail resistance to Trifluralin and related herbicides in the spring cereal grain production areas:** Certain populations of green foxtail (Pigeongrass) in North Dakota have been identified as resistant to dinitroaniline type herbicides such as trifluralin. Because TRIFLURALIN HF will not control these resistant green foxtail, alternative types of herbicides that are not dinitroanilines should be used. **The grower assumes all risk of nonperformance due to dinitroaniline resistance if TRIFLURALIN HF is used to control green foxtail in affected spring cereal grain crops.**

### In Texas Only:

Do not use in Pecos or Reeves Counties

### WEEDS AND GRASSES CONTROLLED TRIFLURALIN HF will not control established weeds.

#### GRASSES CONTROLLED

Annual bluegrass	( <i>Poa annua</i> )
Barnyardgrass (Watergrass)	( <i>Echinochloa</i> sp.)
Brachiaria (Signalgrass)	( <i>Brachiaria</i> sp.)
Bromegrass (Cheatgrass) (Downy brome)	( <i>Bromus tectorum</i> )
Cheat (Chess)	( <i>Bromus secalinus</i> )
Crabgrass (Large crabgrass) (Smooth crabgrass)	( <i>Digitaria</i> sp.)
Fall panicum (Spreading panicgrass) (See Corn, Cotton and Soybean sections for special instructions.)	( <i>Panicum dichotomiflorum</i> )
Foxtails (Bottlegrass) (Bristlegrass) (Giant foxtail) (Green foxtail)* (Pigeongrass) (Robust foxtail) (Yellow foxtail)	( <i>Setaria</i> sp.)
Goosegrass* (Silver crabgrass) (Silvergrass) (Wiregrass) (Yardgrass)	( <i>Eleusine indica</i> )
Guineagrass (See Sugarcane section for special instructions.)	( <i>Panicum maximum</i> )
Johnsongrass (Seedling and rhizome) (See Soybean section for special instructions on rhizome control.)	( <i>Sorghum halepense</i> )
Junglerice	( <i>Echinochloa colonum</i> )
Raoulgrass (Itchgrass) (See Sugarcane section for special instructions.)	( <i>Rottboellia exaltata</i> )
Sandbur (Burggrass)	( <i>Cenchrus incertus</i> )
Sprangletop	( <i>Leptochloa filiformis</i> )
Stinkgrass (Lovegrass)	( <i>Eragrostis cilianensis</i> )
Texas panicum (Buffalograss) (Coloradograss) (See Corn, Cotton, and Soybean sections for special instructions.)	( <i>Panicum texanum</i> )
Wild Cane (Shattercane) (See Soybean section for special instructions.)	( <i>Sorghum bicolor</i> )

\*May be locally resistant.

#### BROADLEAF WEEDS CONTROLLED

Carpetweed	( <i>Mollugo verticillata</i> )
Chickweed	( <i>Stellaria media</i> )
Field Bindweed (See Trees and Vineyard section for special instructions.)	( <i>Convolvulus arvensis</i> )

Florida pusley (Florida purslane) (Mexican clover) (Pusley)	( <i>Richardia scabra</i> )
Goosefoot	( <i>Chenopodium hybridum</i> )
Henbit (Fall application only.)	( <i>Lamium amplexicaule</i> )
Knotweed	( <i>Polygonum aviculare</i> )
Lambsquarters (Carelessweed)	( <i>Chenopodium album</i> )
Pigweeds (Prostrate pigweed) (Redroot) (Rough pigweed) (Spiny pigweed)	( <i>Amaranthus</i> sp.)
Puncturevine (Western U.S. only) (Caltrop)	( <i>Tribulus terrestris</i> )
Purslane	( <i>Portulaca oleracea</i> )
Stinging nettle (Nettle)	( <i>Urtica dioica</i> )

TRIFLURALIN HF will not control certain resistant weeds such as cocklebur, jimsonweed, kochia, nutsedge (nutgrass), ragweed, Russian thistle, velvetleaf or Venice mallow.

Weeds controlled in soybeans by the TRIFLURALIN HF/Sencor® or TRIFLURALIN HF/Metribuzin 75 tank-mix in addition to those controlled by TRIFLURALIN HF alone.

(See Soybean section for special instructions.)

Jimsonweed	( <i>Datura stramonium</i> )
Mallow, Venice (Flower-of-an-hour)	( <i>Hibiscus trionum</i> )
Mustard, wild (Charlock) (Field mustard)	( <i>Brassica kaber</i> )
Ragweed, common	( <i>Ambrosia artemisiifolia</i> )
Sesbania, hemp (Coffeebean) (Indigo)	( <i>Sesbania exaltata</i> )
Smartweed, Annual (Pennsylvania smartweed) (Smartweed)	( <i>Polygonum pennsylvanicum</i> )
Prickly sida (Teaweed) (Spiny sida)	( <i>Sida spinosa</i> )
Velvetleaf (Butterprint) (Buttonweed) (Cottonweed) (Elephant's Ear) (Indian mallow) (Piemarket)	( <i>Abutilon theophrasti</i> )

Cocklebur, morningglory and giant ragweed: Control of cocklebur, morningglory and giant ragweed (horseweed) may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation. Where cocklebur is a serious problem, an overlay of Sencor or Metribuzin 75 may be preferable to a tank mix.

Weeds controlled in dry beans and potatoes by the TRIFLURALIN HF/Eptam®/EPTC tank-mix in addition to those controlled by TRIFLURALIN HF alone. (See Dry bean, Potato section for special instructions.)

Henbit (Spring applications)	( <i>Lamium amplexicaule</i> )
Nightshade, black	( <i>Solanum nigrum</i> )
Nightshade, hairy	( <i>Solanum sarachoides</i> )
Nutsedge (Nutgrass) (Purple nutsedge) (Yellow nutsedge)	( <i>Cyperus</i> sp.)
Oat, wild	( <i>Avena fatua</i> )

Weeds controlled in cotton by the TRIFLURALIN HF/Caparo® tank mix in addition to those controlled by TRIFLURALIN HF alone. (See Cotton section for special instructions.)

Smartweed	Groundcherry (Annual)
Prickly sida (Teaweed)	Mustard
Annual morningglory	Malva
Ragweed	Wild oat
The tank mix also controls shallow-germinating seedlings of:	
Cocklebur	Coffeeweed

Weeds controlled in cotton by the TRIFLURALIN HF/Cotoran® tank mix or Cotoran overlaid post plant pre-emergence in addition to those controlled by TRIFLURALIN HF alone, where TRIFLURALIN HF has been applied as a preplant soil incorporated herbicide in cotton. (See Cotton section for special instructions.)

Ryegrass	Prickly sida (Teaweed)
Buttonweed	Ragweed
Cocklebur	Sesbania
Goathead	Sicklepod
Groundcherry, Wright	Smartweed
Jimsonweed	Tumbleweed
Morningglory	

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Weeds controlled in cotton by an overlay treatment of Diuron 80 post plant pre-emergence in fields where TRIFLURALIN HF has been applied as a preplant soil incorporated herbicide in addition to those controlled by TRIFLURALIN HF alone. (See Cotton section for special instructions.)

Ragweed	Shepherdspurse
Groundcherry (Annual)	Velvetgrass
Dogfennel	Wild lettuce
Pennycress	Wild mustard

Morningglory, Annual  
The tank mix of TRIFLURALIN HF plus Far-Go® will control wild oat in peas grown in Idaho, Oregon, and Washington in addition to the weeds controlled by TRIFLURALIN HF alone. (See Pea section for special instructions.)

### DIRECTIONS FOR USE

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

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

### AGRICULTURAL USE REQUIREMENTS

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

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

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

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

Coveralls, chemical-resistant gloves, such as barrier laminate or viton, and shoes plus socks.

TRIFLURALIN HF is a pre-emergence herbicide which is mixed (incorporated) into the soil to provide long-lasting control of a wide range of annual grasses and broadleaf weeds. TRIFLURALIN HF controls weeds as they germinate but will not control established weeds.

### SOIL TEXTURE

One key to getting good results with TRIFLURALIN HF is to know your soil texture so that you can apply the correct rate. The amount you apply to your soil will vary with the soil texture. A fine-textured soil requires more TRIFLURALIN HF than a coarse-textured soil.

#### Soil Texture Guide:

Refer to the following guide to determine your soil texture.

#### Coarse\*\* Soils

Sand  
Loamy sand  
Sandy loam

#### Medium Soils

Loam  
Silty clay loam\*  
Silt loam  
Silt

#### Fine\*\* Soils

Sandy clay loam\*  
Clay  
Clay loam  
Silty clay loam\*  
Silty clay  
Sandy clay  
Sandy clay loam\*

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

\*\*Soil classification nomenclature for light and heavy-textured soils have been changed to coarse and fine-textured soils at the direction of the Environmental Protection Agency. Throughout this label all previous references to light-textured soils have been changed to coarse-textured soils. All previous references to heavy-textured soils have been changed to fine textured soils. These new descriptions relate more closely to the size of the soil particles in a given classification.

### SOIL PREPARATION

Destroy existing weeds before TRIFLURALIN HF application. Chop and thoroughly mix crop residues into the soil to a depth of at least 4 to 6 inches by deep plowing or discing before application. Use machinery that breaks up large clods before application. Crop residue and soil surface must allow for uniform incorporation into the top 2 to 3 inches of soil.

### Spray Drift Precautions

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory Information**.

### INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzle instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they spray drift.

### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### TEMPERATURE INVERSIONS

Application should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be

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indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### APPLICATION

Add the recommended amount of TRIFLURALIN HF to clean water in the spray tank during the filling operation. Agitate before spraying. Apply in from 5 to 40 gallons of water per acre (broadcast basis), using any properly calibrated low-pressure herbicide sprayer that will apply the spray uniformly. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Apply TRIFLURALIN HF to the soil surface and incorporate in the same operation, if possible. Do not apply to soils which are wet or in poor condition. Do not apply to soils which are subject to prolonged periods of flooding.

### AERIAL APPLICATION

For best results from aerial application of TRIFLURALIN HF, apply to a dry soil surface at a spray volume of from 4 to 10 gallons per acre. Adjust pump pressure, nozzle arrangements, flying speed and flying height to provide a uniform application to the soil surface. Use markers to assure proper application spray widths. Do not apply TRIFLURALIN HF by aircraft when the wind is blowing at a velocity of 5 mph or greater. This will cause drift of spray particles and result in non-uniform application.

### GENERAL CHEMIGATION

Use TRIFLURALIN HF at rates and stages of growth recommended on the label, except as noted below. Apply in ½ to 1 acre inch of irrigation water. Mechanical incorporation is not necessary when TRIFLURALIN HF is applied through the irrigation system but, except for established alfalfa, soil preparation must be done according to label instructions.

### Treat Only The Following Crops At Stage Named:

**ALFALFA:** Apply during dormancy, semi-dormancy or immediately following a cutting. Destroy existing weeds before application.

**ASPARAGUS:** Apply in the winter or early spring after ferns are removed but before spears emerge.

**POTATOES: (Columbia River Basin of Washington and Oregon only):** Apply after potato plants have fully emerged on coarse and medium soils.

**BEANS: (All types named on label):** Preplant except no fall application.

**SOYBEANS:** Preplant except no fall application.

**SUGAR BEETS:** Apply when plants are between 2 and 6 inches tall.

**CARROTS:** Apply before planting. If application of TRIFLURALIN HF is by chemigation you may apply immediately after planting and before weed germination.

**FIELD CORN:** Two-leaf to 30 inches.

### General Chemigation cont'd.:

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s). Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS** *Note: Loveland Products Inc. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.*

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in

the water supply line upstream from the point of pesticide introduction.

As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

### SPRINKLER CHEMIGATION

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment. Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use.

Follow precautionary statements and directions for all tank-mix products.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow recommended label rates, application timing, and other directions and precautions for crop being treated.

Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

### INCORPORATION DIRECTIONS

#### Incorporation Before Planting

For best results TRIFLURALIN HF should be incorporated as soon as possible after application. TRIFLURALIN HF must be incorporated one time within 24 hours after application. A second incorporation is required with most equipment (see Incorporation Equipment section for specific instructions). If TRIFLURALIN HF is applied to a wet, warm soil surface or if the wind velocity is 10 mph or higher variable weed control may result from delaying the first incorporation beyond 24 hours.

Incorporation should place the TRIFLURALIN HF into the top 2 to 3 inches of the final seedbed. Generally, incorporation equipment will place the chemical approximately half as deep as the equipment is run. For example, a disc running 4 inches deep will incorporate TRIFLURALIN HF approximately 2 inches deep.

#### Incorporation After Planting

(Check crop list for those crops approved for incorporation after planting.)

When incorporating TRIFLURALIN HF after planting or on established row crops use P.T.O.-driven equipment or rolling cultivators. Adjust equipment to till the soil over the seed or throw treated soil toward the crop. Avoid disturbing the seed or mechanically damaging the crop.

#### Incorporation In Bedded Culture

For effective weed control, TRIFLURALIN HF should be incorporated into the top 2 to 3 inches of the final seedbed.

Knock off beds to planting height before application and incorporation on bedded ground. If TRIFLURALIN HF is applied and incorporated before bedding, do not furrow out deeper than the depth to which TRIFLURALIN HF was incorporated. Furrowing too deep will expose untreated soil and allow weeds to germinate in the bottom of the furrow.

Avoid removal of treated soil from the seedbed before or during the planting operation. This will expose untreated soil and allow weeds to germinate in the drill row.

#### Incorporation Equipment

Use machinery that mixes TRIFLURALIN HF thoroughly with the soil. Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Use of incorporation equipment not listed upon the label may result in poor or erratic weed control and/or crop injury. Except as recommended in the individual crop directions, recommended equipment includes:

*Disc* set to cut 4 to 6 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 to 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:

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1. Two passes over the field with a field cultivator with the second pass running at an angle to the first. Do not set cultivator to cut deeper than 4 inches, particularly 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.

*Rolling cultivator* set to cut 2 to 4 inches deep and operated 2 times 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 operated one time at 4 to 6 mph. Bed conditioners are adequate for use on coarse and medium-textured soils only. In bedded culture, one pass is adequate.

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

*P.T.O.-driven equipment (tillers, cultivators, hoes)* set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil and operated one time. P.T.O.-driven equipment should not be operated at a speed greater than 4 mph.

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

### CULTIVATION AFTER PLANTING

Soil treated with TRIFLURALIN HF may be shallow-cultivated, rotary-hoed or hand-hoed without reducing the weed control activity of TRIFLURALIN HF. Do not cultivate deeper than the TRIFLURALIN HF treated layer of soil since this may bring untreated soil to the surface and poor weed control may result.

### REGIONAL USE MAP



All crop recommendations on this label are given on a regional basis. The dividing line between the Eastern and Western United States is that point where the average rainfall per year is a minimum of 20 to 25 inches. Because the map is based on average conditions, it should be used as a guideline only. Consult your local Agricultural Extension Service and local weather service for information on specific use recommendations and conditions in your area. Note: Sugar beet growing areas of Minnesota and North Dakota are sometimes grouped with Western U.S. on this label.

### CROP RECOMMENDATIONS

Important: The following crop recommendations are based on average rainfall conditions. When the annual rainfall amount in your area is radically different than normal, the use recommendations on this label may not be appropriate. For example, below normal rainfall in the Eastern U.S. may result in abnormally long TRIFLURALIN HF carryover. Planting of susceptible rotational crops may then result in crop loss or injury. In the Western U.S., abnormally high rainfall may reduce the period of effective weed control. For all areas, use rates and rotational crops should be determined based on both local factors and crop recommendations on this label. Read the NOTICE OF WARRANTY for manufacturer's disclaimer of liability. If its conditions are not acceptable, do not use this product.

#### Eastern United States

##### GENERAL

These recommendations are given as the broadcast (overall) rates of TRIFLURALIN HF per acre. For band applications, use proportionately less. Apply TRIFLURALIN HF any time after January 1 when the soil can be worked. Also see general and specific fall application directions. TRIFLURALIN HF is not recommended on muck soils. Where a rate range is shown, use the lighter rate for more coarse soils or soils with lower organic matter.

#### Western United States

##### GENERAL

These recommendations are given as the broadcast (overall) rates of TRIFLURALIN HF per acre. For band application, use proportionately less. TRIFLURALIN HF is not recommended for peat soils exceeding 20% organic matter or on any muck soils. Do not exceed recommended rates at any time. Where a rate range is shown, use the lighter rate for more coarse soils or soils with lower organic matter.

### TRIFLURALIN HF APPLIED ALONE AND IN TANK MIXES WITH FLUID FERTILIZERS

#### GENERAL

TRIFLURALIN HF alone and TRIFLURALIN HF tank mixes may be mixed with most fluid (liquid) fertilizer materials. TRIFLURALIN HF alone and TRIFLURALIN

HF combinations with solution and suspension-type fertilizers has provided weed and grass control as claimed on the respective labels.

All recommendations for TRIFLURALIN HF alone or TRIFLURALIN HF tank-mix combinations regarding rates per acre, approved crops, incorporation, special instructions, warnings and special precautions must be followed.

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

### COMPATIBILITY TEST

TRIFLURALIN HF alone and TRIFLURALIN HF combinations and some fluid fertilizer materials may not combine properly. Small quantities should always be tested before full-scale mixing.

1. Put 1 pint of fertilizer mixture in a quart jar.
2. Add 2 teaspoonfuls of TRIFLURALIN HF and proportional amount of other tank mix products.
3. Close jar and shake well.
4. Watch mixture for several seconds, check again 30 minutes later.
5. If the mix does not separate, or if agitation is only needed to resuspend the mix, the combination may be used. If the mixture separates, gets very thick or syrupy, DO NOT combine for field application.
6. Mixing ability may be improved by adding a compatibility agent. Follow the procedure outlined above and add 0.1 teaspoonful of the compatibility agent in Step 2. Complete the other steps to determine if the compatibility agent solves the problem.

If one is needed use a compatibility agent cleared for use on growing crops.

### MIXING

If a compatibility agent is needed, add it to the fluid fertilizer before adding the TRIFLURALIN HF alone or TRIFLURALIN HF combination. If compatibility is a problem, mix 2 quarts of water with 1 quart of TRIFLURALIN HF alone before pouring into the fertilizer.

Usually, TRIFLURALIN HF alone may be poured directly into the fluid fertilizer and mixed thoroughly. Wettable powders, dry flowables, liquid flowables or aqueous suspensions should be mixed with the liquid fertilizer before adding TRIFLURALIN HF. Add solution formulations last. Continued agitation is needed until application is complete.

### APPLICATION

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

### INCORPORATION

Follow normal TRIFLURALIN HF incorporation procedures.

### TRIFLURALIN HF APPLICATION WITH DRY BULK FERTILIZERS

#### GENERAL

Dry bulk fertilizers may be impregnated or coated with TRIFLURALIN HF. Application of dry bulk fertilizers impregnated with TRIFLURALIN HF has provided weed and grass control equal to the same rates of TRIFLURALIN HF applied in water.

All TRIFLURALIN HF label recommendations regarding rates per acre, approved crops, incorporation, special instructions, cautions and special precautions must be followed.

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.

### LIMITATIONS

Apply a minimum of 200 pounds per acre of dry fertilizer impregnated with TRIFLURALIN HF at the recommended rates. Any commonly used dry fertilizers can be used for TRIFLURALIN HF impregnation except straight 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. The nozzle or nozzles used to spray the TRIFLURALIN HF on to the fertilizer should be placed to provide uniform spray coverage.

### RATES

Check the crop section to determine the rate of TRIFLURALIN HF per acre. See the rate table which follows to determine the amount of TRIFLURALIN HF to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be applied per acre. (See rate chart.)

### APPLICATION

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

### INCORPORATION

Follow normal TRIFLURALIN HF incorporation procedures.

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### RATE CHART FOR IMPREGNATING FERTILIZER WITH TRIFLURALIN HF TRIFLURALIN HF added to a TON of fertilizer.

Fertilizer Rate Per Acre	TRIFLURALIN HF Rate Per Acre	
200 pounds	1 pint	1½
	10 pts. or 5 qts. per ton	15 pts. or 7½ qts. per ton
250 pounds	8 pts. or 4 qts. per ton	6 qts. or 1½ gal. per ton
300 pounds	6¾ pts. or 3½ qts. per ton	10 pts. or 5 qts. per ton
350 pounds	5¾ pts. or 2¾ qts. per ton	9 pts. or 1½ gal. per ton
400 pounds	5 pts. or 2½ qts. per ton	7½ pts. or 1 gal. per ton
450 pounds	4½ pts. or 2¼ qts. per ton	3¾ qts. or ¾ gal. per ton

Fertilizer Rate Per Acre	TRIFLURALIN HF Rate Per Acre		
200 pounds	2 pints	3 pints	4 pints
	10 qts. or 2½ gal. per ton	15 qts. or 3¾ gal. per ton	20 qts. or 5 gal. per ton
250 pounds	8 qts. or 2 gal. per ton	12 qts. or 3 gal. per ton	16 qts. or 4 gal. per ton
300 pounds	14 pts. or 1¾ gal. per ton	20 pts. or 2½ gal. per ton	27 pts. or 13¼ qt. per ton
350 pounds	12 pts. or 1½ gal. per ton	17 pts. or 2¼ gal. per ton	23 pts. or 2½ gal. per ton
400 pounds	5 qts. or 1¼ gal. per ton	15 pts. or 1½ gal. per ton	10 qts. or 2½ gal. per ton
450 pounds	4½ qts. or 1½ gal. per ton	13½ pts. or 1¾ gal. per ton	9 qts. or 2¼ gal. per ton

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

$$\frac{\text{Pints TRIFLURALIN HF}}{\text{Per Acre}} \times \frac{1000}{\text{lbs. Fertilizer Per Acre}} = \frac{\text{Quarts TRIFLURALIN HF}}{\text{per Ton of Fertilizer}}$$

**FALL APPLICATION—General—For areas receiving more than 20 inches average annual rainfall:** See directions for specific crops. For any crop on the TRIFLURALIN HF label for which there is no specific directions for fall application and for which preemergence application is recommended, use the rate shown for spring application.

**Exceptions:** Do not fall apply TRIFLURALIN HF on sugarbeets, potatoes and direct-seeded tomatoes. Do not make fall applications to soils that are wet, prone to prolonged periods of flooding, or where rice was grown the previous season.

**Soil Preparation:** Ground may be left flat or bedded-up over winter. For bedded ground, knock beds down to desired height before planting, moving some treated soil from beds into furrows. If soil is left over winter, exercise care to not turn up untreated soil during spring bedding operations. Remove established weeds during seedbed preparations as they will not be controlled by TRIFLURALIN HF. If weeds become established in furrows due to uncovering of untreated soil during bedding, destroy such weeds before planting.

**Timing:** In most states, apply and incorporate TRIFLURALIN HF any time between October 15 and December 31. In the states of MN, MT, ND and SD, apply and incorporate TRIFLURALIN HF between September 1 and December 31.

**ALFALFA—Established Alfalfa Only: (Western U.S. Only)**  
Apply to established alfalfa stands at a broadcast rate per acre of 1½ pints on coarse soils and 2 pints on medium and fine soils. Use incorporation equipment that will insure thorough soil mixing with a minimum of damage to the established alfalfa. Apply no more than 4 pints of product or 2.0 lbs. a.i. per application. Do not apply within 21 days before harvest of forage, or 20 days before harvest of hay. Do not apply more than 8 pints of product or 4.0 lbs. a.i. per year.

**ASPARAGUS—Established—Single or split application for preemergent weed control:** Follow recommended procedures for soil preparation application and incorporation found near the beginning of the TRIFLURALIN HF label. Volunteer seedling asparagus and field bindweed will be suppressed (reduced in stand and vigor) in addition to weeds otherwise controlled by this product.

**Single application—**Apply in the winter or early spring after ferns are removed but before spears emerge. Alternatively, apply after harvest in the late spring or early summer before ferning begins.

**Split application—**Apply at both times described in "Single Application" (before harvest and after harvest), but at reduced rate.

SOIL TEXTURE	BROADCAST TRIFLURALIN HF RATE	
	Split Application	
	Before Harvest	After Harvest
Coarse soils	1 pt. + 1 pt.	
Medium Soils	1½ pts. + 1½ pts.	
Fine soils	2 pts. + 2 pts.	
	Single Application	
	Before Harvest OR After Harvest	
Coarse soils	2 pts. OR 2 pts.	
Medium Soils	3 pts. OR 3 pts.	
Fine soils	4 pts. OR 4 pts.	

The maximum application per calendar year is 2 pts. per acre on coarse soils, 3 pts. per acre on medium soils and 4 pts. per acre on fine soils.

### BEANS

**Castor Beans:** Apply and incorporate TRIFLURALIN HF before planting.

Eastern U.S.	Western U.S.
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Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pts.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.
Soils with 2 to 5% organic matter	.....1½-2 pts.	.....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts.	.....2 pts.

**Dry Beans (Kidney, Navy, Pinto, Etc.):** Apply and incorporate TRIFLURALIN HF before planting.

Eastern U.S.	Western U.S.
Coarse soils	.....1 pt. ....1 pt.
Medium soils	.....1½ pts. ....1¼-1½ pts.
Fine soils	.....2 pts. ....1½ pts.
Soils with 2 to 5% organic matter	.....1½-2 pts. ....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts. ....2 pts.

**TRIFLURALIN HF/Eptam/EPTC Tank-Mix for Dry Beans:** The TRIFLURALIN HF/Eptam/EPTC tank-mix effectively controls henbit, black nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the TRIFLURALIN HF label. Follow normal procedures for soil preparation. The TRIFLURALIN HF/Eptam/EPTC tank-mix should be applied from 2 days before planting (up to planting in the Eastern U.S.).

Apply at a broadcast rate of 1 pint of TRIFLURALIN HF and 2½ to 3½ pints of Eptam/EPTC 7E per acre or up to the label recommended rate for each herbicide depending on soil texture and weed problem. Use the higher rate of Eptam/EPTC for nutsedge control. TRIFLURALIN HF at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal TRIFLURALIN HF procedures for cultivation.

**Caution:** Read the Eptam/EPTC label before using. Observe all cautions and limitations on labeling of all products used in mixtures. The combination of TRIFLURALIN HF and Eptam/EPTC 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 the TRIFLURALIN HF/Eptam tank-mix for feed or for grazing.

**Dry Beans Grown in Idaho, Oregon and Washington Only:** For dry beans grown in Idaho, Oregon and Washington: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1 pint on coarse soils; ¼ to 1½ pints on medium soils; and 1½ pints on fine soils.

**Guar Beans and Mungbeans:** Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse soils and 1½ pints on medium and fine soils.

**Lima Beans and Snap Beans:** Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

### CARROTS:

Apply and incorporate TRIFLURALIN HF before planting. If application of TRIFLURALIN HF is by chemigation you may apply immediately after planting and before weed germination.

Eastern U.S.	Western U.S.
Coarse soils	.....1 pt. ....1 pt.
Medium soils	.....1½ pts. ....1¼-1½ pts.
Fine soils	.....2 pts. ....1½ pts.
Soils with 2 to 5% organic matter	.....1½-2 pts. ....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts. ....2 pts.

### CELERY—Both Direct-seeded and Transplant: (Western U.S. Only)

Apply and incorporate TRIFLURALIN HF before planting or transplanting at a broadcast rate per acre of 1 pint on coarse soils; ¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

### COLE CROPS—Broccoli, Brussels Sprouts, Cabbage and Cauliflower:

For Direct-Seeded cole crops apply and incorporate before planting. (Eastern U.S. Direct-seeded cole crops have exhibited marginal tolerance to recommended rates of TRIFLURALIN HF. Stunting or reduced stands may occur.)

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	Eastern U.S.	Western U.S.
Coarse soils	1 pt.	1 pt.
Medium soils	1 pt.	1 pt.
Fine soils	1½ pts.	1 pt.
Soils with 2 to 5% organic matter	1½ pts.	—
Soils with 2 to 10% organic matter	—	1½ pts.

For *Transplant* cole crops apply and incorporate TRIFLURALIN HF before transplanting. Do not apply TRIFLURALIN HF after transplanting.

	Eastern U.S.	Western U.S.
Coarse soils	1 pt.	1 pt.
Medium soils	1½ pts.	1¼ to 1½ pts.
Fine soils	2 pts.	1½ pts.
Soils with 2 to 5% organic matter	1½ pts.	1½ to 2 pts.
Soils with 5.1 to 10% organic matter	2 pts.	2 pts.

**CORN (FIELD), GRAIN SORGHUM (MILO)—Over-the-top or directed spray for preemergent weed control:** (see "WEEDS AND GRASSES CONTROLLED" section of label).

**Field Preparation**—Field should be cultivated prior to application of TRIFLURALIN HF to provide loose tilth, remove established weeds and deposit a soil cover at the base of crop plants.

**Application**—Make application when the crop is well established (minimum 8 inch height). Apply the recommended rate either as an over-the-top spray or as a directed spray. Cover soil surface uniformly with spray using drop nozzles if required. Use the lower rates when light weed pressure is expected and higher rates when heavy weed pressure is expected.

Apply and incorporate the following rates per acre:

Coarse soils	¾ to 1 pt.*
Medium soils	1 to 1½ pts.
Fine soils	1½ to 2 pts.

\*In corn only, apply 1 to 1½ pts. to control fall panicum and Texas panicum in the states of AL, FL, GA, NC, SC and VA.

**Incorporation**—A correctly adjusted rolling cultivator or sweep-type cultivator can accomplish incorporation in one pass. Carefully adjust incorporation implement to avoid direct injury to crop. A sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at 6 to 8 mph. Adjust sweeps so as to avoid exposing untreated soil.

**Important:** Do not use TRIFLURALIN HF on corn grown for seed. Do not make preplant or crop preemergence applications to corn or sorghum as crop injury or loss may occur.

### COTTON

**Restrictions and Precautions:** Plant cotton after early season adverse, wet-weather conditions have passed. Crop injury in the form of reduced stands and delayed growth will occur under adverse cool, wet-weather conditions early in the season and may result in delayed maturity and reduced yields when TRIFLURALIN HF is used according to these recommendations. High quality seed accompanied by a good fungicide program to control seedling diseases in addition to other recommended cultural and chemical practices should be used to minimize crop injury from TRIFLURALIN HF. Do not apply within 90 days of harvest. Do not apply more than 4 pints product per application. Do not apply more than 4 pints product per year (either fall application through lay-by application or pre-plant plus post-plant through lay-by.)

In the season following either the 1 or 2-year treatments, plant only those crops for which TRIFLURALIN HF has been registered as a preplant treatment or injury may result.

**Pre-emergence applications:** Apply and incorporate TRIFLURALIN HF before planting, at planting or immediately after planting using the following broadcast rates per acre:

	Eastern U.S.	Western U.S.
Coarse soils	1 pt.	1 pt.
Medium soils	1½ pts.	1¼ to 1½ pts.
Fine soils	2 pts.	1½ pts.
Soils with 2 to 5% organic matter	1½ pts.	1½ to 2 pts.
Soils with 5.1 to 10% organic matter	2-2½ pts.	2 pts.

When incorporating after planting (post-plant), care must be taken not to disturb the seed.

Seedling disease may weaken cotton plants and increase the possibility of damage from TRIFLURALIN HF. To control seedling disease, use a good fungicide program.

**Post-emergence applications:** Apply TRIFLURALIN HF any time up to layby, but not less than 90 days before harvest. Direct layby applications to the soil between the

rows and beneath emerged cotton plants. Use the same rates as for a pre-emergence application.

**Fall Application:** For cotton grown in *Alabama, Arkansas, northern Florida, Georgia, Louisiana, Mississippi, southeastern Missouri, North Carolina, New Mexico, Oklahoma, South Carolina, Tennessee and Texas:* Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 2 pints on coarse and medium soils and 2½ pints on fine soils. For cotton grown in *Arizona, California and Nevada:* Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1½ pints on coarse soils; 2 pints on medium soils and 2½ pints on fine soils. For cotton grown in states other than those listed above: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1 pint on coarse soils; 1½ pints on medium soils; 2 pints on fine soils; 1½ pints on coarse soils with 2 to 5% organic matter; and 2 to 2½ pints on soils with 5.1 to 10% organic matter.

**Fall panicum and Texas panicum control:** For the control of fall panicum and Texas panicum in the states of *Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia,* apply and incorporate TRIFLURALIN HF at the broadcast rate of 2 pints per acre on both coarse and medium soils.

Plant cotton after early season adverse weather conditions have passed. Do not plant cotton deeper than 1 inch. Crop injury in the form of delayed growth or reduced yields may occur under adverse cool, wet weather conditions when TRIFLURALIN HF is used according to these special recommendations.

**Rhizome Johnsongrass control:** All Cotton Producing States except *Arizona and California.* Commercially acceptable control of rhizome Johnsongrass can be obtained with a double-rate TRIFLURALIN HF program when applied for 2 years in a row.

**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 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 TRIFLURALIN HF any time in the spring before planting for 2 years in a row at a broadcast rate per acre of 2 pints on coarse soils; 3 pints on medium soils and 4 pints on fine soils, OR

**Fall Application**—Apply TRIFLURALIN HF 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 to good rhizome Johnsongrass control. Incorporate TRIFLURALIN HF thoroughly with a disc set to cut 4 to 6 inches deep and operate in 2 different directions at 4 to 6 mph.

**Cultivation**—Some Johnsongrass plants will escape. Timely cultivations during the crop season are necessary to obtain commercially acceptable control. Commercially acceptable control will not be obtained with only 1 year of double-rate TRIFLURALIN HF use.

**More Complete Control of Pigweed and Seedling Johnsongrass in Cotton Grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Southeastern Missouri, North Carolina, South Carolina, Tennessee and southern Virginia:**

For more complete control of pigweed and seedling johnsongrass, TRIFLURALIN HF may be applied preplant at a broadcast rate per acre of from 1 to 1½ pints on coarse soils, from 1½ to 2 pints on medium soils and 2 pints on fine soils except in the state of Louisiana where 3 pints per acre are recommended on fine soils.

**Precaution:** Plant cotton after early season adverse weather conditions have passed. Do not plant cotton deeper than 1½ inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when TRIFLURALIN HF is used according to these recommendations.

**More Complete Weed and Grass Control in Certain Counties Along the Texas Gulf Coast:** For more complete control of those weeds and grasses listed in the TRIFLURALIN HF label in the Texas Gulf Coast Counties of *Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller and Wharton,* TRIFLURALIN HF may be applied up to 2 weeks before planting at a broadcast rate of 1½ pints on coarse soils, 2 pints on medium soils and 3 pints on fine soils.

**Precaution:** Plant cotton after early season adverse weather conditions have passed. Do not plant cotton deeper than 1½ inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when TRIFLURALIN HF is used according to these recommendations.

**TRIFLURALIN HF/Caparol® tank mix for cotton grown in California, Arizona, New Mexico, and Texas:** The TRIFLURALIN HF/Caparol combination will control certain grasses and broadleaf weeds listed on the TRIFLURALIN HF label. This combination will also control shallow-germinating seedlings of cocklebur and coffeeweed. NOTE: This combination will not control sunflower, rhizome johnsongrass, deep-germinating seedlings of cocklebur and sandbur or established perennials such as Bermudagrass. Follow normal TRIFLURALIN HF procedures for soil preparation and incorporation. Apply the tank mix combination to the flat soil surface before discing.

# TRIFLURALIN HF

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### Broadcast Rates Per Acre:

	TRIFLURALIN HF	Caparol 80W	Caparol 4L
Coarse soils* . . . . .1 pt. . . . .	. . . . .1½-2 pounds	. . . . .2.4-3.2 pts.	
Medium soils . . . . .1½ pts. . . . .	. . . . .2½ pounds	. . . . .4 pts.	
Fine soils . . . . .2 pts. . . . .	. . . . .2½ pounds	. . . . .4 pts.	

\*Do not use on sands and loamy sands. For band applications use proportionately less. TRIFLURALIN HF is not recommended for use on muck soils. Use less than 2 lbs. Caparol 80W or 3.2 pts. Caparol 4L only in AZ and CA.

**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 or follow the mixing procedure on the Caparol 4L label for adding it to a partially filled tank of water. After the Caparol is thoroughly mixed with the partially filled tank of water, add the TRIFLURALIN HF and continue filling. Agitate during the filling and spraying operation.

Avoid leaving the spray mixture in the tank without constant agitation. If by-pass agitation is used, it should terminate at the bottom of the tank to minimize foaming.

**Incorporation Directions**—The first incorporation of TRIFLURALIN HF/Caparol should be immediately following application. A second incorporation is required with most equipment. (See incorporation equipment section for further instructions.)

**Precautions:** Do not apply more than the recommended rate for your soil texture. The combination of TRIFLURALIN HF/Caparol should not be used under the following conditions because crop injury may result: in the cut areas of newly leveled fields, in areas of excess salt, and where flooding over the beds is likely to happen.

Do not plant cotton in tractor wheel depressions or crop injury may result.

On mulch-planted cotton, water back only after cotton seedlings get well established.

**Crop Rotations**—Cabbage, okra, onions and peas may be planted in the fall after a spring application of TRIFLURALIN HF plus Caparol.

Winter barley, 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 Caparol label for directions, cautions and precautions.

### TRIFLURALIN HF/Cotoran tank mix except in Arizona and California:

The TRIFLURALIN HF/Cotoran tank mix effectively controls all the annual grasses and broadleaf weeds listed on the TRIFLURALIN HF label plus many additional annual grasses and broadleaf weeds (see Weeds Controlled section). Follow normal TRIFLURALIN HF procedures for soil preparation. Apply TRIFLURALIN HF/Cotoran tank mix in 15 to 40 gallons of clean water per acre using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly.

### Broadcast Rates Per Acre:

	TRIFLURALIN HF	Cotoran 80W
Coarse soils . . . . .1 pt. . . . .	. . . . .1¼ pounds	
Medium soils . . . . .1½ pts. . . . .	. . . . .2 pounds	
Fine soils . . . . .2 pts. . . . .	. . . . .2½ pounds	

**Mixing Directions**—Carefully follow the procedures on the Cotoran 80W 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 TRIFLURALIN HF and continue filling. Agitate continuously throughout the filling and application operations. Follow normal TRIFLURALIN HF incorporation procedures. Do not leave spray mixture in tank without constant agitation. If by-pass agitation is used, it should terminate at the bottom of the tank to minimize foaming.

**Precautions:** Do not use the tank mix in Arizona and California. Do not plant crops other than cotton on the treated land within 6 months after the application of TRIFLURALIN HF plus Cotoran or injury may occur.

**West Texas Only:** Do not use the tank mix of TRIFLURALIN HF 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 TRIFLURALIN HF on sandy loam soils low in organic matter.

**New Mexico:** Cotton can be planted the next spring. Do not plant treated areas to crops other than cotton on treated land until 1 year after last application. Do not use on sandy or coarse textured soil of less than 1% organic matter.

Do not feed foliage from treated cotton plants or gin trash to livestock.

The tank mix of TRIFLURALIN HF plus Cotoran is not recommended to be applied in liquid fertilizer.

Refer to the Cotoran label for cautions, precautions, and instructions.

**Cotoran overlay:** Refer to the Cotoran label for cautions, precautions and instructions.

**Preplant incorporated TRIFLURALIN HF and surface applied, preemergence Diuron 80 for weed control in cotton grown east of the Mississippi River plus Arkansas, Southeastern Missouri, Louisiana, and Eastern Texas:**  
Preplant soil incorporated applications of TRIFLURALIN HF (see above for rates)

may be followed by a surface applied, post-plant, pre-emergence application of Diuron 80. This combination effectively controls all the weeds controlled by TRIFLURALIN HF plus many additional weeds (see weeds controlled section). Apply Diuron 80 at 0.6 to 1.5 pounds per broadcast acre to the soil surface after planting but prior to crop emergence. The higher rates are used on heavier soil types. Do not use Diuron 80 on light (sandy or low organic) soils. Do not use on heavy clay soils above 10 percent organic matter. Consult the Diuron 80 label for additional instructions, cautions and precautions.

### CUCURBITS—Cantaloupes, Cucumbers and Watermelons Post-Plant:

Apply TRIFLURALIN HF as a directed spray to the soil between the rows and beneath plants which are in the 3 to 4 true-leaf stage. Set incorporation machinery to throw treated soil toward plants in the row. Care should be taken that incorporation machinery does not damage the plants.

	Eastern U.S.	Western U.S.
Coarse soils . . . . .1 pt. . . . .	. . . . .1 pt.	
Medium soils . . . . .1¼-1½ pts. . . . .	. . . . .1¼ to 1½ pts.	
Fine soils . . . . .1½ pts. . . . .	. . . . .1½ pts.	
Soils with 2 to 5% organic matter . . . . .1½-2 pts. . . . .	. . . . .1½-2 pts.	
Soils with 5.1 to 10% organic matter . . . . .2 pts. . . . .	. . . . .2 pts.	

### FLAX (Fall Application Only)

TRIFLURALIN HF should be applied and incorporated in the fall for weed control in spring seeded flax. Incorporate once within 24 hours after application. The second incorporation may be completed in the spring prior to planting.

### Instructions for Flax:

Incorporation operations or other tillage practices performed in the spring prior to seeding should be relatively shallow to maintain a firm seedbed. The seedbed should be packed prior to seeding. Seeding should be done with a press drill or hoe drill. Seed into moist seedbed and plant no more than 1½ inches deep. Seeding should not be completed until soil is sufficiently warm. Refer to the "Special Precautions" section of this label for information on growing conditions that can lead to crop injury or yield reduction.

### Broadcast Application Rate/Acre:

Coarse Soils . . . . .	. . . . .1 pt.
Medium Soils . . . . .	. . . . .1½ pts.
Fine Soils . . . . .	. . . . .2 pts.

### GREENS—Turnip Greens Grown for Processing and All Collard, Kale and Mustard Greens:

Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

### MUSTARD—Grown For Seed in Idaho, Minnesota, North Dakota, Oregon and Washington Only:

Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

### HOPS: (Western U.S. Only)

Apply and incorporate TRIFLURALIN HF while the crop is dormant at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils and 1½ pints on fine soils and soils with 2 to 10% organic matter.

### OKRA:

Apply and incorporate TRIFLURALIN HF before planting.

	Eastern U.S.	Western U.S.
Coarse soils . . . . .1 pt. . . . .	. . . . .1 pt.	
Medium soils . . . . .1½ pts. . . . .	. . . . .1¼-1½ pts.	
Fine soils . . . . .2 pts. . . . .	. . . . .1½ pts.	

Soils with 2 to 5% organic matter . . . . .1½-2 pts. . . . .	. . . . .1½-2 pts.
Soils with 5.1 to 10% organic matter . . . . .2 pts. . . . .	. . . . .2 pts.

### ONIONS (Dry Bulbs Only)

Direct spray TRIFLURALIN HF between established onion rows and apply as a soil incorporated treatment. Use spray shields to avoid injury to foliage or exposed bulbs. Do not apply within 60 days of harvest.

### Broadcast Application Rate/Acre:

Coarse soils . . . . .	. . . . .¾-1 pt.
Medium soils . . . . .	. . . . .1-1¼ pts.

Use the lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation or where light weed pressure is anticipated.

### Incorporation

Incorporate with 1 pass of a sweep-type or rolling cultivator 2 to 4 inches deep and operate at 6 to 8 mph. To avoid crop injury, do not cover exposed onion bulbs with treated soil during incorporation. Be careful not to injure crop roots during incorporation.

**Precautions:** This product will not adversely affect onions when applied according to directions under normal growing condition. The crop may weaken from diseases, improper incorporation depth, excessive moisture, high salt concentration, or drought which may increase the chance of damage from this product.



# TRIFLURALIN HF

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### PEANUTS—(Grown in Texas, Oklahoma and New Mexico Only):

Apply and incorporate TRIFLURALIN HF before planting, at planting or immediately after planting at a broadcast rate per acre of 1 pint on coarse soils or 1½ pints on medium soils. When incorporating after planting, care must be taken not to disturb the seed.

### PEAS

*Dry (Western U.S. Only):* Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

*English:* Apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

*Fall Application in Dry Peas and English Peas Grown in Idaho, Oregon and Washington Only:* For dry peas grown in Idaho, Oregon and Washington: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; and 1½ pints on fine soils.

*Southern Peas:* Apply and incorporate TRIFLURALIN HF before planting.

	Eastern U.S.	Western U.S.
Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pts.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.
Soils with 2 to 5% organic matter	.....1½-2 pts.	.....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts.	.....2 pts.

*TRIFLURALIN HF and Far-Go tank mix for weed control in peas grown in Idaho, Oregon, and Washington:* The tank mix combination of TRIFLURALIN HF plus Far-Go will provide control of wild oats in addition to other annual grasses and broadleaf weeds controlled by TRIFLURALIN HF.

*Application Rates—*Broadcast ¾ pint of TRIFLURALIN HF on coarser textured soils, 1 pint of TRIFLURALIN HF on fine soils. Use 1¼ quarts of Far-Go for all soil textures.

*Incorporation Directions—*Apply the TRIFLURALIN HF plus Far-Go tank mix and incorporate from 3 weeks before seeding up to immediately before seeding. TRIFLURALIN HF and Far-Go must be thoroughly incorporated into the top 2 inches of the soil by 2 incorporations. The first incorporation should be made as soon as possible on the day of application. The second incorporation should be made as soon as possible but before seeding. Incorporate with a disc-type implement set to cut 4 inches deep and operate in 2 different directions at 4 to 6 mph or with a field cultivator set to cut 3 to 4 inches deep and operate at 5 mph or more. Shallow incorporation with implements set to cut less than 2 inches may result in erratic weed control.

NOTE: Do not apply to lentils.

Leaf crinkling and delayed maturity of peas may occur, particularly on clay points in the northwest; but this is usually more than offset by a reduction of wild oats. Do not graze livestock on treated crops. Refer to the cautions, precautions and directions on the Far-Go label.

### PEPPERS—Transplants only:

Apply and incorporate TRIFLURALIN HF before transplanting. Do not apply after transplanting.

	Eastern U.S.	Western U.S.
Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pts.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.
Soils with 2 to 5% organic matter	.....1½ pts.	.....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts.	.....2 pts.

### POTATOES

*Not recommended for use in the state of Maine:* Apply TRIFLURALIN HF after planting, up to or immediately following dragoff in the Eastern U.S. or after planting, before emergence on all soil textures, or after the potato plants have fully emerged on coarse and medium soils in the Western U.S. TRIFLURALIN HF is not recommended on muck soils.

Set incorporation equipment so that the bed and furrow will be uniformly covered with a layer of TRIFLURALIN HF. If the layer of TRIFLURALIN HF treated soil is not uniform and the herbicide is concentrated over the bed, potato emergence may be retarded and stem brittleness can occur. Care should be taken so that incorporation machinery does not damage potato seed pieces or elongating sprouts. Cultivation prior to emergence may result in mechanical injury to the elongated potato sprouts.

When applying and incorporating TRIFLURALIN HF after potato plants have fully emerged, do not completely cover the foliage with treated soil. Likewise do not completely cover foliage at subsequent cultivations.

	Eastern U.S.	Western U.S.
Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pt.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.
Soils with 2 to 5% organic matter	.....1½ pts.	.....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts.	.....2 pts.

*Split Application in Idaho, Oregon and Washington Only:* On all soils apply and incorporate ¾ pint of TRIFLURALIN HF before planting and ¾ 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 potatoes after planting.

*TRIFLURALIN HF/Eptam/EPTC Tank-Mix for Potatoes Grown in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota and Texas only: (Eastern U.S. Only):* The TRIFLURALIN HF/Eptam/EPTC tank-mix effectively controls henbit, black nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the TRIFLURALIN HF label. Follow normal TRIFLURALIN HF procedures for soil preparation. The TRIFLURALIN HF/Eptam/EPTC tank-mix may be applied after planting but prior to crop emergence. In areas where potatoes are normally dragged-off, the TRIFLURALIN HF/Eptam/EPTC tank-mix should be applied and incorporated up to or immediately following dragoff at a broadcast rate per acre of 1 pint of TRIFLURALIN HF and 1¼ pints of Eptam/EPTC 7E on all soil textures or up to the label recommended rate for each herbicide depending on soil texture and weed problem. See details on Eptam/EPTC label. TRIFLURALIN HF at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal TRIFLURALIN HF procedures for cultivation.

**Caution:** Read the Eptam/EPTC label before using. Observe all cautions and limitations on labeling of all products used in mixtures. Do not graze or feed forage to livestock from fields treated with the TRIFLURALIN HF/Eptam/EPTC tank-mix.

*TRIFLURALIN HF/Eptam/EPTC Tank-mix: (Western U.S. Only): Application After Planting—*The TRIFLURALIN HF/Eptam/EPTC tank-mix effectively controls henbit, nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the TRIFLURALIN HF label. Follow normal procedures for soil preparation. The TRIFLURALIN HF/Eptam/EPTC tank-mix may be applied after planting, up to or immediately following dragoff at a broadcast rate per acre of 1 pint of TRIFLURALIN HF and 1¼ pints of Eptam/EPTC 7E on all soil textures or up to the label recommended rate for each herbicide depending on soil texture and weed problem. See details on Eptam/EPTC label. TRIFLURALIN HF at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal TRIFLURALIN HF procedures for cultivation.

*Application Before Planting in Washington, Idaho, and Oregon Only—*TRIFLURALIN HF/Eptam/EPTC may be also applied before planting at a broadcast rate of ¾ pint of TRIFLURALIN HF and 3 ½ pints of Eptam/EPTC 7E on all soil textures and incorporated immediately.

**Caution:** Do not use this tank-mix both before and after planting in the same season. Read the Eptam/EPTC label before using. Observe all cautions and limitations on labeling of all products used in mixtures. Do not graze or feed forage to livestock from fields treated with the TRIFLURALIN HF/Eptam/EPTC tank-mix.

### RADISH

TRIFLURALIN 4 HF should be applied as a preplant soil incorporated treatment.

Broadcast Application Rate/Acre:

Coarse soils	.....1 pt.
Medium soils	.....1½ pts.
Fine soils	.....1½ pts.

### RAPESEED (CANOLA)

TRIFLURALIN HF may be applied and incorporated in the spring before planting or in fall. See "Soil Preparation" in the "Fall Application" section of this label.

Broadcast Application Rate/Acre:

Coarse soils	.....1 pt.
Medium soils	.....1½ pts.
Fine soils	.....2 pts.

Precautions: Do not apply this product to rapeseed (canola) grown in the state of Alaska.

### SAFFLOWER:

Apply and incorporate TRIFLURALIN HF before planting.

	Eastern U.S.	Western U.S.
Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pts.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.
Soils with 2 to 5% organic matter	.....1½-2 pts.	.....1½-2 pts.
Soils with 5.1 to 10% organic matter	.....2 pts.	.....2 pts.
Soils with 10.1 to 20% organic matter	.....2-3 pts.	.....2-3 pts.

### FALL APPLICATION:

For safflower grown in Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1½ pints on coarse soils; 2 pints on medium soils; and 2½ pints on fine soils.

# TRIFLURALIN HF

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### SOYBEANS

*Preplant incorporated:* Apply and incorporate TRIFLURALIN HF before planting. Do not plant soybeans deeper than 2 inches. Follow recommended soil preparation, application and incorporation procedures.

	Eastern U.S.	Western U.S.
Coarse soils	.1 pt.	.1 pt.
Medium soils	.1½ pts.	.1¼-1½ pts.
Fine soils	.2 pts.	.1½ pts.
Soils with 2 to 5% organic matter	.1½ pts.	.1½-2 pts.
Soils with 5.1 to 10% organic matter	.2-2½ pts.*	.2 pts.

\* Except charcoal soils in Arkansas, Louisiana and Mississippi. See below.

*Soils Containing Charcoal in Arkansas, Louisiana and Mississippi:* Newly cleared land often contains high organic matter (4 to 10%) and charcoal which result from burning debris. This charcoal and/or organic matter tends to tie up TRIFLURALIN HF and reduce its weed control activity. Higher rates of TRIFLURALIN HF are therefore necessary for satisfactory weed control. Increased rates can cause crop injury if charcoal or a high percentage of organic matter is not present to tie up some of the TRIFLURALIN HF. In the actual windrow or burn row, where a high level of charcoal is present, poor weed control may result even with an increased rate of TRIFLURALIN HF.

Apply and incorporate at the following broadcast rates per acre:

Coarse soils	.1½ pts.
Medium soils	.2½ pts.
Fine soils	.3 pts.

*Fall application:* For soybeans grown in Alabama, Arkansas, northern Florida, Georgia, Louisiana, Mississippi, southeastern Missouri, North Carolina, Oklahoma, South Carolina, Tennessee and Texas: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 2 pints on coarse and medium soils and 2½ pints on fine soils. For soybeans grown in the Eastern United States other than those states listed above: Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 1 pint on coarse soils; 1½ pints on medium soils; 2 pints on fine soils; 1½ pints on coarse soils with 2 to 5% organic matter; and 2 to 2½ pints on soils with 5.1 to 10% organic matter.

*Fall panicum and Texas panicum control:* For the control of fall panicum and Texas panicum in the states of Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia, apply TRIFLURALIN HF at the broadcast rate of 2 pints per acre on both coarse and medium soils. Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth or reduced yields may occur under adverse cool, wet weather conditions when TRIFLURALIN HF is used according to these special recommendations.

*More Complete Control of Pigweed and Seedling Johnsongrass in Soybeans Grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, southeastern Missouri, North Carolina, South Carolina, Tennessee and southern Virginia:* For more complete control of pigweed and seedling johnsongrass, TRIFLURALIN HF may be applied at a broadcast rate per acre of from 1 to 1½ pints on coarse soils, from 1½ to 2 pints on medium soils and 2 pints on fine soils except in the state of Louisiana where 3 pints per acre are recommended on fine soils.

**Precaution:** Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when used according to these recommendations.

*More Complete Weed and Grass Control in Certain Counties Along the Texas Gulf Coast:* For more complete control of those weeds and grasses listed in the TRIFLURALIN HF label in the Texas Gulf Coast Counties of Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller and Wharton, TRIFLURALIN HF may be applied up to 2 weeks before planting at a broadcast rate of 1½ pints on coarse soils, 2 pints on medium soils and 3 pints on fine soils.

**Precaution:** Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when used according to these recommendations.

**RED RICE CONTROL—Arkansas, Louisiana, Mississippi and Texas only:** Suppression or partial control of red rice in soybeans can be obtained when TRIFLURALIN HF is applied as directed at double the normal rate the first year (not to exceed 4 pints per acre) and at the normal rate the second year. Follow normal TRIFLURALIN HF directions for soil preparation and soil incorporation.

### Application: Year 1

Apply and incorporate TRIFLURALIN HF the first year any time in the spring before planting at the following broadcast rates per acre:

Coarse soils	.2 pts.
Medium soils	.3 pts.
Fine soils	.4 pts.
Coarse soils with 2 to 5% organic matter	.3 pts.
Soils with 5.1 to 10% organic matter	.4 pts.

### Application: Year 2

Apply TRIFLURALIN HF the second year at the following normal label broadcast rates per acre:

Coarse soils	.1 pt.
Medium soils	.1½ pts.
Fine soils	.2 pts.
Coarse soils with 2 to 5% organic matter	.1½ pts.
Soils with 5.1 to 10% organic matter	.2-2½ pts.

If a combination of high organic matter (4 to 10%) and charcoal are present in the soil, apply TRIFLURALIN HF the second year at the following rates labeled for charcoal soils in Arkansas, Louisiana and Mississippi:\*

Coarse soils	.1½ pts. per acre
Medium soils	.2½ pts.
Fine soils	.3 pts.

\*Newly cleared land often contains high organic matter (4 to 10%) and charcoal which result from burning debris. This charcoal and/or organic matter tends to tie up TRIFLURALIN HF and reduce its weed control activity. Higher rates are therefore necessary for satisfactory weed control. Increased rates can cause crop injury if charcoal or a high percentage of organic matter is not present to tie up some of the TRIFLURALIN HF. In the actual windrow or burn row, where a high level of charcoal is present, poor weed control may result even with an increased rate.

### Crop Rotation

The program for red rice control in soybeans is a 2-year program. Use the rates listed for first year application and plant soybeans. The second year use the normal TRIFLURALIN HF rates listed for your soil type and charcoal level and plant only those crops for which TRIFLURALIN HF has been registered as a preplant treatment or injury may result. Do not plant rice the second year. Rice may be planted the third year.

### Precautions

Plant soybeans after early adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury may occur under adverse cool, wet weather conditions early in the season when TRIFLURALIN HF is used according to these double-rate recommendations.

*Rhizome Johnsongrass Control: (Eastern United States and the State of Texas):*

Commercially acceptable control of rhizome Johnsongrass can be obtained with a double-rate TRIFLURALIN HF program when applied for 2 years in a row.

*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 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 TRIFLURALIN HF any time in the spring before planting for 2 years in a row at a broadcast rate per acre of 2 pints on coarse soils; 3 pints on medium soils; 4 pints on fine soils; 3 pints on coarse soils with 2 to 5% organic matter; and 4 pints on soils with 5.1 to 10% organic matter, OR

*Fall Application—*Apply TRIFLURALIN HF 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 as directed under both spring and fall applications for 2 years in a row using the following broadcast rates per acre:

	Spring	and	Fall
Coarse soils	.1 pt.	.1 pt.	.1 pt.
Medium soils	.1½ pts.	.1½ pts.	.1½ pts.
Fine soils	.2 pts.	.2 pts.	.2 pts.
Coarse soils with 2 to 5% organic matter	.1½ pts.	.1½ pts.	.1½ pts.
Soils with 5.1 to 10% organic matter	.2 pts.	.2 pts.	.2 pts.

*Incorporation—*Deep incorporation is essential to good rhizome Johnsongrass control. Incorporate TRIFLURALIN HF thoroughly with a disc set to cut 4 to 6 inches deep and operate in 2 different directions at 4 to 6 mph.

*Cultivation—*Some Johnsongrass plants will escape. Timely cultivations during the crop season are necessary to obtain commercially acceptable control. Commercially acceptable control will not be obtained with only 1 year of double-rate TRIFLURALIN HF use.

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**Precautions:** Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when used according to these recommendations. In the season following either the 1 or 2-year treatments, plant only those crops for which TRIFLURALIN HF has been registered as a preplant treatment or injury may result.

**Wild Cane Control:** Wild Cane (Shattercane) can germinate from greater soil depth than most other weed seeds. Several "flushes" or germinating times are common in one season. Commercially acceptable control of wild cane can be obtained with increased rates of TRIFLURALIN HF.

**Land Preparation—**Work your land to destroy existing grasses and weeds. Thoroughly mix crop residues into the soil to a depth of 4 to 6 inches.

**Application—**Apply TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse soils; 2 pints on medium soils; and 2½ pints on fine soils.

**Incorporation—**Deep incorporation is essential to good wild cane control. Incorporate (mix) TRIFLURALIN HF thoroughly with a disc only set to cut 4 to 6 inches deep and operate in 2 different directions at 4 to 6 mph.

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

**Precaution:** Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when used according to these recommendations.

**TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 Tank-Mix Preplant incorporated:** The TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix effectively controls additional weeds than would be controlled by TRIFLURALIN HF alone (see Weeds Controlled section). Follow normal procedures for soil preparation. The TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix should be applied from 2 weeks before planting up to planting in 10 to 40 gallons of water with any low-pressure herbicide sprayer equipped with herbicide tips and screens no finer than 50 mesh in nozzle and in-line strainers.

Broadcast Rates Per acre:

	TRIFLURALIN HF	Metribuzin 75
Coarse soils . . . . .	.1 pt.	½ pound
Medium soils . . . . .	1½ pts.	½ pound
Fine soils . . . . .	2 pts.	¾ pound

	TRIFLURALIN HF	Sencor 4L
Coarse soils . . . . .	.1 pt.	½ pt.
Medium soils . . . . .	1½ pts.	¾ pt.
Fine soils . . . . .	2 pts.	1 pt.

**Important:** Refer to Sencor and Metribuzin 75 labels for soil type/rate details. Do not plant any crop other than soybeans within 4 months after treatment. Follow normal TRIFLURALIN HF procedures for incorporation and cultivation.

**NOTE:** In those areas of the Mid-South where cocklebur is a serious problem, an overlay of Sencor or Metribuzin 75 may be preferred to the TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix.

**Special Precaution:** Applied according to directions and under normal growing conditions, the TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix will not harm the treated crop. Over-application may result in crop injury or soil residue. Uneven application or improper soil incorporation of the TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix can result in erratic weed control or crop injury. Seeding disease, cold weather, deep planting, excessive moisture, soil pH over 7.5, high salt concentration, or drought may weaken crop seedlings and increase possibility of damage from the TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix. Under these conditions, delayed crop development or reduced yields may result. **Warning:** Observe all warnings and limitations on labeling of all products used in mixtures. Sencor may be harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing of dust or spray mist. Wash clothing thoroughly with soap and hot water before reuse. Do not contaminate feed or food. Keep out of reach of children.

Do not use the foliage from soybeans treated with the TRIFLURALIN HF/Sencor or TRIFLURALIN HF/Metribuzin 75 tank-mix for feed or forage. Do not contaminate any body of water nor apply to any area not specified on this label. Do not allow sprays to drift onto adjacent desirable plants.

**TRIFLURALIN HF pre-plant followed by Sencor or Metribuzin 75 as an overlay treatment for weed control in soybeans:** TRIFLURALIN HF effectively controls certain annual grasses and broadleaf weeds. See Sencor or Metribuzin 75 label for additional weeds controlled. Apply TRIFLURALIN HF as a preplant incorporated herbicide. As a separate operation, make a single application of Sencor or Metribuzin 75 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 Metribuzin 75 over the top of emerged soybeans or injury may result.

**Use Directions—**Follow directions on the TRIFLURALIN HF, Sencor or Metribuzin 75 labels for specific instructions regarding each chemical.

**Special Precautions—**Do not use Metribuzin 75 or Sencor on Tracy, Semmes, Altona, Vansoy or Coker 102 soybeans as these varieties are sensitive to Metribuzin 75 or Sencor and injury to the crop may result. See current Metribuzin 75 or Sencor label for complete information on sensitive varieties.

Do not use treated vines for feed or forage.

Seed must be planted at least 1½ inches below the soil surface but not more than 2 inches before a Sencor or Metribuzin 75 application.

Do not replant areas treated with Sencor or Metribuzin 75 to any crop other than soybeans within 4 months after treatment.

Injury to soybeans may occur if Metribuzin 75 or Sencor is used on soils having a calcareous surface or pH of 7.5 or higher, or if used in conjunction with soil applied organic phosphate pesticides.

**Important:** Read the TRIFLURALIN HF, Sencor or Metribuzin 75 labels carefully before using. Note all warnings, precautions and special precautions.

Broadcast Rates Per Acre*	TRIFLURALIN HF—Preplant	Metribuzin 75 or Sencor 4L—Postplant/Preemergence	
		Metribuzin 75	Sencor 4L
Soil Texture			
Coarse	1 pt.	½-¾ lb.	¾-1 pt.
Medium	1½ pts.	½-1 lb.	¾-1 ½ pts.
Fine	2 pts.	¾-1 ½ lbs.	1-1 ¾ pts.
Mississippi Delta Only	Rate according to soil texture	1-1 ½ lbs.	1½-2 pts.

\*See Metribuzin 75 or Sencor use label for complete directions and limitations, including exact rates according to soil organic matter and other factors.

### SUGAR BEETS:

Apply TRIFLURALIN HF as a broadcast, overtop spray when plants are between 2 and 6 inches tall. Exposed beet roots should be covered with soil before application to reduce the possibility of girdling. Set incorporation machinery to throw treated soil toward the plants in the row. Care should be taken that incorporation machinery does not damage the sugar beet taproot.

	Eastern U.S.	Western U.S.
Coarse soils . . . . .	.1 pt.	.1 pt.
Medium soils . . . . .	1½ pts.	1¼-1½ pts.
Fine soils . . . . .	1½ pts.	1½ pts.

**Incorporation with a Tine-Tooth Harrow in the States of California, Colorado, Idaho, Kansas, Montana, Nebraska, Oregon, Texas, Utah, Washington and Wyoming Only:** A properly operated tine-tooth harrow (Flextine or Melroe) can provide adequate incorporation of TRIFLURALIN HF for effective weed control in sugar beets. Operate the tine-tooth harrow 2 times over the field in opposite directions at a speed of 3 to 6 mph and set the harrow to cut 1 to 2 inches deep. Care should be taken to insure that the tine-tooth harrow does not damage the sugar beet taproot.

### SUGARCANE

**Plant Cane Only:** Apply and incorporate TRIFLURALIN HF twice a year at a broadcast rate per acre of 2 to 4 pints 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. Care should be taken so that incorporation machinery does not damage the seed pieces or emerging shoots.

**Applications up to Layby for Plant Cane or Ratoon Cane Grown in Louisiana or Texas only:** Apply and incorporate TRIFLURALIN HF at a broadcast rate per acre of 2 to 4 pints for all soil textures. Make the TRIFLURALIN HF application in the spring from before or shortly after the cane emerges up to layby. Make the TRIFLURALIN HF application after the beds have been shaved or false shaved. Loosen rain-packed beds 2 to 3 inches deep before application. Care should be taken so that incorporation machinery does not damage seed pieces or emerging shoots. A rolling cultivator or bed chopper may be used to incorporate TRIFLURALIN HF 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 2 times at 4 to 6 mph.

**Raoulgrass Control in Louisiana only:** Apply and incorporate TRIFLURALIN HF on either plant or ratoon cane at a broadcast rate per acre of 4 pints for all soil textures. Make the TRIFLURALIN HF application in the spring from before or shortly after the cane emerges up to layby. Make the TRIFLURALIN HF application after the beds have been shaved or false shaved. Loosen rain-packed beds 2 to 3 inches deep before application. Care should be taken so that incorporation machinery does not damage seed pieces or emerging shoots. A rolling cultivator or bed chopper may be used to incorporate TRIFLURALIN HF 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 2 times at 4 to 6 mph.

**For control of most annual grasses, including guineagrass (Post-Plant in Hawaii Only):** Surface apply TRIFLURALIN HF after planting (for plant cane) or after harvesting (for ratoon cane), at a broadcast rate per acre of 6 to 8 pints for all soil textures. Apply TRIFLURALIN HF from shortly before or after cane emergence until layby. In ratoon cane, excess crop residue should be removed before application. If

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large amounts of crop residues are present, TRIFLURALIN HF will not be effective. Apply just before anticipated rainfall or irrigate immediately after application.

### SUNFLOWER:

Apply and incorporate TRIFLURALIN HF before planting.

	Eastern U.S.	Western U.S.
Coarse soils	.....1 pt.	.....1 pt.
Medium soils	.....1½ pts.	.....1¼-1½ pts.
Fine soils	.....2 pts.	.....1½ pts.

Soils with 2 to 5% organic matter .1½-2 pts. ....1½-2 pts.

Soils with 5.1 to 10% organic matter .2 pts. ....2 pts.

### TOMATOES:

Apply TRIFLURALIN HF to direct-seeded tomato as a directed spray between rows and beneath plants and incorporate at the time of blocking or thinning. For transplant tomatoes, apply and incorporate before transplanting or apply post-plant as a directed spray to the soil between the rows and beneath plants and incorporate.

### Broadcast Application Rates/Acre:

Soil Texture	TRIFLURALIN HF (pints)
Coarse	1.0
Medium	1.25 - 1.5
Fine	1.5 - 2.0

- Coarse and medium soils with 2% to 5% organic matter - 1.5 pints
- Fine soils with 2% to 5% organic matter - 2.0 pints
- Soils with 5% to 10% organic matter - 2.0 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### TREES AND VINEYARDS

*Eastern U.S. only:* For New Plantings of Vineyards, Citrus and Pecan Trees apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse soils; 1½ pints on medium soils; 2 pints on fine soils; 1½ pints on fine soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

For Non-Bearing Established Plantings of Citrus and Pecan Trees and Bearing Plantings of Grapefruit, Lemon, Orange, Pecan, Tangelo, Tangerine Trees apply TRIFLURALIN HF at a broadcast rate per acre of 2 to 4 pints for all soil textures. In these established plantings, apply as a directed spray to the soil around the trees and use incorporation methods not injurious to the trees.

NOTE: If crops are planted between the trees, label directions for those specific crops apply to the area which is interplanted. For continued weed control in citrus trees, apply TRIFLURALIN HF 2 times a year at an interval of approximately 4 to 6 months.

*Western U.S. only:* For New Plantings of Almond, Apricot, Citrus, Nectarine, Peach, Pecan and Walnut trees apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

For New Plantings of Vineyards apply and incorporate TRIFLURALIN HF before planting at a broadcast rate per acre of 1 to 1½ pints on coarse soils; 1½ to 3 pints on medium soils and 3 to 4 pints on fine soils or soils with 2 to 10% organic matter. Do not use more than 2 pints per acre on heat-treated vines.

For Post-Plant Applications on Bearing or Non-Bearing Established Plantings of Vineyards, Almond, Apricot, Grapefruit, Lemon, Nectarine, Orange, Peach, Pecan, Plum, Prune, Tangelo, Tangerine and Walnut Trees apply TRIFLURALIN HF at a broadcast rate per acre of 2 to 4 pints for all soil textures. In these established plantings, apply as a directed spray to the soil around the trees or vines and use incorporation methods not injurious to the trees or vines. Do not apply to vineyards within 60 days of harvest.

NOTE: If crops are planted between the trees or vines, label directions for those specific crops apply to the area which is interplanted. For continued weed control in citrus trees, apply TRIFLURALIN HF 2 times a year at an interval of approximately 4 to 6 months.

*Rhizome Johnsongrass Control: (Western U.S. Only):* Commercially acceptable control of rhizome Johnsongrass can be obtained with post-plant applications in Bearing and Non-Bearing established plantings of Vineyards, Almond, Apricot, Grapefruit, Lemon, Nectarine, Orange, Peach, Pecan, Tangelo, Tangerines and Walnut trees with a TRIFLURALIN HF program when applied for 2 years in a row.

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

*Application*—Apply TRIFLURALIN HF at a broadcast rate per acre of 4 pints on all soil textures each year for 2 years in a row. Do not apply to vineyards within 60 days of harvest.

*Incorporation*—Incorporate TRIFLURALIN HF thoroughly with a disc set to cut 4 to 6 inches deep and operate 2 times at 4 to 6 mph.

*Cultivation*—Some Johnsongrass plants will escape. Timely cultivations are necessary to obtain commercially acceptable control. Commercially acceptable control will not be obtained with only 1 year of TRIFLURALIN HF use.

**Precautions:** Do not use the 2-quart rate on new plantings as injury may result. Do not interplant orchards or vineyards with other crops. If TRIFLURALIN HF-treated vineyards and orchards are diverted to other crop uses, plant only those crops for which TRIFLURALIN HF has been registered as a pre-plant treatment.

*Field Bindweed Control in Vineyards, Almond, Apricot, Grapefruit, Lemon, Nectarine, Orange, Peach, Pecan, Tangelo, Tangerine and Walnut Trees in California only:* For the control of field bindweed in the state of California, apply TRIFLURALIN HF at a broadcast rate of 4 pints per acre on all soil textures. TRIFLURALIN HF 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. The layer of TRIFLURALIN HF prevents bindweed shoots from emerging.

*Land Preparation*—Destroy all weeds and grasses with soil tillage before applying TRIFLURALIN HF. 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 TRIFLURALIN HF 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 to completely and uniformly apply TRIFLURALIN HF underground in a thin horizontal layer.

*Application*—Apply TRIFLURALIN HF 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 TRIFLURALIN HF 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 AND BARLEY

*SPRING WHEAT, DURHAM AND BARLEY Postplant incorporated application for control of foxtail (pigeongrass):* Plant 2 to 3 inches deep in a seedbed of good tilth. Make TRIFLURALIN HF application after seeding but before crop emergence. Incorporate 1 to 1½ inches deep by use of flex-tine or diamond harrows operated twice in different directions at a minimum speed of 5 mph. Combine herbicide application and first incorporation when possible. Both incorporations must be completed in 24 hours following application.

Apply and incorporate at the following broadcast rates per acre:

Coarse soils	.....1 pint
Medium soils	.....1 pint
Fine Soils	.....1½ pints

*FALL APPLICATION—Preplant incorporated application for control of foxtail (pigeongrass):* This fall application of TRIFLURALIN HF is for crops to be planted the following spring. Fields should not have excessive trash and may have been fallowed or pre-tilled according to local cropping practices. Initial incorporation must be made within 24 hours of application. A second incorporation must be made prior to planting to uniformly distribute treated soil and eliminate emerged weeds.

Apply and incorporate at the following broadcast rates per acre:

Coarse soils	.....1 pint
Medium soils	.....1 pint
Fine soils	.....1½ pints

*Fall Incorporation Pass*—Use any of the following implements:

1. Chisel plow (3 rows of up to 18-inch sweeps on 12-inch centers or less): Sweeps must be staggered so as to turn all soil. Operate at depth of 4 to 5 inches and speed of 4 to 6 mph.
2. Tandem disc: Operate at depth of 3 to 4 inches and speed of 4 to 6 mph.
3. Field cultivator (3 or 4 rows of sweeps with C- or S-shaped shanks spaced 7 inches or less apart): Sweeps must be staggered so as to turn all soil. Operate at depth of 3 to 4 inches and speed of 5 mph minimum.

*Spring Incorporation Pass*—The disc or field cultivator may be used, but the chisel plow is not recommended. The spring pass implement must operate at a more shallow depth than the fall pass implement.

*Planting Depth*—Seed should be placed at approximately 2 inches deep.

**Note:** The application described may result in a reduction of stand, however, a slight stand reduction usually does not affect yield.

*BARLEY, SPRING SEED-SPRING APPLICATION PREPLANT INCORPORATED FOR FOXTAIL (PIGEONGRASS) CONTROL (For use in Minnesota, North Dakota and South Dakota):* Apply TRIFLURALIN HF as a preplant incorporated treatment prior to planting spring seeded barley. This product may be applied to ground that has a manageable level of crop residue or has been fallowed or pre-tilled. The first incorporation is required within 24 hours after application. The second incorporation required prior to planting to destroy emerged weeds and to insure even distribution of this product in the soil surface.

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Broadcast Application Rate/Acre: Apply at a rate of 1.0 pint per acre for all textures regardless of organic matter content.

Incorporation: Recommended incorporation tools include the chisel plow (first incorporation pass only), tandem disc and field cultivator. Refer to "Incorporation Directions" section of this label for details on operation of incorporation equipment. Planting Directions: Barley should be seeded approximately 2 inches deep.

Precautions:

- Carefully read and follow precautionary information before applying TRIFLURALIN HF.
- While use of this weed control practice may result in stand reduction, slight stand reductions do not normally affect yield.

**SPRING WHEAT, DURHAM AND BARLEY—TRIFLURALIN HF/FAR-GO TANK MIX**—Postplant incorporated application for control of foxtail (pigeongrass) and wild oat:

Plant 2 to 3 inches deep in a seedbed of good tilth. Make herbicide application after seeding, but prior to crop emergence. Incorporate 1 to 1½ inches deep by use of flex-tine or diamond harrows operated twice in different directions at a minimum speed of 5 mph. Combine herbicide application and first incorporation when possible. If not possible, incorporate immediately after application. Apply and incorporate at the following broadcast rates per acre:

SOIL TEXTURE	TRIFLURALIN HF	Far-Go	
	Barley, Durham, Spring Wheat	Durham, Spring Wheat	Barley
Coarse soils	1 pt.	2½ pts.	2 pts.
Medium soils	1 pt.	2½ pts.	2 pts.
Fine soils	1½ pts.	2½ pts.	2 pts.

**Important:** Do not over apply as crop injury may result. Read Far-Go label carefully before using.

**WINTER WHEAT—TRIFLURALIN HF** for preplant pre-emergence control of cheatgrass and other weeds in winter wheat grown in Washington, Oregon, Idaho, and Montana:

When applied as directed, TRIFLURALIN HF will provide effective pre-emergence control of cheatgrass and a number of other annual grasses and broadleaf weeds controlled by TRIFLURALIN HF in winter wheat grown in Washington, Oregon, Idaho, and Montana. 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 TRIFLURALIN HF.

Broadcast Rates Per Acre:

Apply TRIFLURALIN HF any time during a period from 3 weeks up to immediately prior to planting. Broadcast TRIFLURALIN HF at the following rates per acre according to soil texture.

Soil Texture	TRIFLURALIN HF
Coarse	1½ pts.
Medium	1½ pts.
Fine	.2 pts.

**Incorporation Directions**—Shallowly incorporate TRIFLURALIN HF into the soil with a flexible tine-tooth harrow (Flexline, Melroe®) set to cut 1 to 2 inches deep. Operate the equipment in 2 different directions at a speed 3 to 6 miles per hour. The first incorporation must be within 24 hours after application. The second incorporation may be done at any time but before planting. Do not till the soil with a disc after the TRIFLURALIN HF has been applied and incorporated with a flexible tine harrow.

**Seeding Directions**—Use only a deep furrow or semi-deep furrow drill that will be sure to place the seed below the zone of soil into which TRIFLURALIN HF has been incorporated.

Wheat planted in direct contact with TRIFLURALIN HF treated soil may suffer crop injury in the form of delay in emergence and development.

**WINTER WHEAT—Fallow-soil application of TRIFLURALIN HF** for weed control in winter wheat grown in Washington and Oregon: Uniformly applied TRIFLURALIN HF at the recommended rate and shallowly incorporated into fallow soil as much as four months ahead of planting time, will effectively control cheatgrass and certain annual grasses and broadleaf weeds in winter wheat grown in Washington and Oregon. The growth development, or yield of winter wheat will not be adversely affected, provided the seed is placed below the zone of soil treated with TRIFLURALIN HF with deep or semi-deep furrow-drill.

Broadcast directions and application rates per acre:

Soil Texture	TRIFLURALIN HF
Coarse	1½ pts.
Medium	1½ pts.
Fine	.2 pts.

Apply any time from May to September prior to the fall planting of winter wheat.

**Incorporation**—Shallowly incorporate TRIFLURALIN HF into the soil with a flexible tine-tooth harrow (also called Flexline or Melroe) set to cut 1 to 2 inches deep and

operated at 3 to 6 mph. Thorough incorporation requires two passes of the equipment in different directions over the field. The first pass must be made within 24 hours after application. The second pass may be delayed for several weeks but should be made before seeding. Do not till the soil with a disc after TRIFLURALIN HF 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 TRIFLURALIN HF has been incorporated. Do not plant wheat directly into the zone of soil treated with TRIFLURALIN HF as injury to the crop or a delay in its emergence and development may occur.

**WINTER WHEAT—Partial Control or Suppression of Annual Brome Species (Cheatgrass, Downey Brome, Japanese Brome, Hairy Chess) and Jointed Goatgrass in Colorado, Kansas, Nebraska and Wyoming:** Apply TRIFLURALIN HF as a preplant incorporated treatment anytime from three (3) weeks before planting up to immediately prior to planting.

Broadcast rates per acre:

Soil Texture	TRIFLURALIN HF
Coarse	1-1½ pts.
Medium	1-1½ pts.
Fine	1½ pts.

Use higher rate range where heavy weed populations are anticipated or where medium to high crop residues are present.

### Incorporation and Planting Directions

Incorporate with tillage equipment (flexible tine-tooth harrow or springtooth harrow such as Flex-Tyne or Crustbuster®) that mixes the soil no more than 1-2 inches deep.

The grain drill (double disc drill or hoe drill) can serve as the incorporation method. Do not use discs, under cutters or heavy field cultivators for incorporating. Incorporate once within 24 hours after application. Use a drill that will place the seed below soil which has been incorporated with TRIFLURALIN HF.

One pass incorporation is adequate. Where the grain drill is used as the incorporation tool, mounting a springtooth harrow in front of the drill to aid incorporation can enhance performance. **THE WHEAT MUST BE SEEDED BELOW THE TRIFLURALIN HF TREATED SOIL OR CROP INJURY MAY RESULT.** The wheat seed should be placed at least 1½-2 inches deep.

### Precautions:

- Crop injury in the form of delayed emergence and development result from planting wheat in direct contact with treated soil.
- Do not use under cutters, field cultivators, chisel plows or disc as incorporation tools. Any implement that incorporates TRIFLURALIN HF deeper than the seeded wheat will contribute to crop injury.
- Use of seeding equipment that does not place the seed below the treated soil layer will result in crop injury.
- Use of TRIFLURALIN in accordance with this label may result in some crop stand reduction but does not normally adversely affect yield.
- Heavy rainfall prior to wheat emergence can cause soil compaction and soil crusting resulting in delayed emergence, stand reduction, stunting and yield loss.

## CONTAINER GROWN ORNAMENTALS, LANDSCAPE ORNAMENTALS, NURSERY STOCK, GROUND COVERS, ESTABLISHED FLOWERS, ORNAMENTAL BULBS, NON-BEARING FRUIT AND NUT TREES AND NON-BEARING VINEYARDS, CHRISTMAS TREE PLANTATIONS AND UNDER PAVED SURFACES.

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

TRIFLURALIN HF does not control established weeds. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings and trash should be removed or thoroughly mixed into soil prior to treatment. Soil should be in good condition and free of clods at the time of application. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation, is required to activate TRIFLURALIN HF. Optimum weed control is obtained when TRIFLURALIN HF is activated within 3 days of application. If rainfall or irrigation has not occurred within 3 days of application and tillage is possible, TRIFLURALIN HF may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil. Failure to activate TRIFLURALIN HF within 3 days of application may result in erratic weed control. Do not apply when wind conditions favor drift of TRIFLURALIN HF granules from the target area. Optimum weed control will be obtained when followed by overhead irrigation or rainfall within a few hours after surface application.

**Special Use Precautions:** To avoid possible injury, do not apply TRIFLURALIN HF to: Nursery forest or Christmas Tree seedling beds, cutting beds, or transplant beds • Unrooted liners or cuttings that have been planted in pots for the first time

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- Pots less than four inches wide
- Ground covers until they are established and well rooted

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

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

Do not apply TRIFLURALIN HF in greenhouse or other enclosed structures.

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

TRIFLURALIN HF may be used as a preemergence herbicide to control annual grasses and broadleaf weeds in ornamental ground covers, trees, shrubs, roses, flowers, and nursery stock. Do not apply TRIFLURALIN HF through any type of irrigation system for use on ornamentals.

TRIFLURALIN HF is to be mixed with water and applied as a spray before, or in the same operation as soil incorporation. Apply in 5 to 40 gallons of water per acre (broadcast basis) using any properly calibrated low-pressure boom-type herbicide sprayer that will uniformly apply the spray. Pour the recommended amount of TRIFLURALIN HF for your soil type into the spray tank during the filling operation and mix thoroughly before spraying. Do not apply more than the recommended amount.

### Application Directions

TRIFLURALIN HF is to be mixed with water and applied as a spray before, or in the same operation as soil incorporation. Apply in 5 to 40 gallons of water per acre (broadcast basis) using any properly calibrated low-pressure boom-type herbicide sprayer that will uniformly apply the spray. Pour the recommended amount of TRIFLURALIN HF for your soil type into the spray tank during the filling operation and mix thoroughly before spraying. Do not apply more than the recommended amount.

Broadcast Application Rates for Soil Incorporation Only	
Coarse Soils	Sand and Sandy Loam 1 pint per acre (½ pound a.i.)
Medium Soils	Loam, Silt Loam and Silt 1 ½ pints per acre (¾ pounds a.i.)
Fine Soils	Clay Loam, Silty Clay and Clay 2 pints per acre (1 pound a.i.)

TRIFLURALIN HF is not recommended for muck soils.

For band applications, use the following formula to figure the proportionate amount.

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{recommended broadcast rate} = \text{amount to apply per acre on band}$$

### INCORPORATION DIRECTIONS

TRIFLURALIN HF must be incorporated into the soil after application to prevent loss of its activity. Spraying and incorporation should be done in the same operation, if possible. Incorporation may be delayed up to 4 hours after application. Variable weed control may result from delayed incorporation if TRIFLURALIN HF is applied to a wet, warm soil surface or if the wind velocity is 10 mph or higher.

The machinery used for incorporation should break up large clods and mix TRIFLURALIN HF thoroughly with the soil. The more thoroughly the TRIFLURALIN HF is mixed with the soil, the more consistent the weed control will be.

Apply and incorporate TRIFLURALIN HF prior to planting new nursery stock liners, ornamentals, trees and woody shrubs, and gladioli. (Gladioli corms less than 1 inch in diameter may be injured by preplant applications of TRIFLURALIN HF.) TRIFLURALIN HF may also be applied to established plantings by using a directed spray to the soil between the rows and beneath the plants.

### Incorporation before planting (preplant):

Thorough incorporation may be achieved with the following: **PTO-driven equipment** (tillers, cultivators, hoes) set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil; **double disc** (or double disc with spiketooth harrow in tandem) set to cut 3 to 4 inches deep and operated in two different directions (cross disced) at 4 to 6 mph; **mulch treader** and other similar disc-type implements set to cut 3 to 4 inches deep and operated twice at 5 to 8 mph; **rolling cultivators** set to cut 2 to 4 inches deep and operated twice at 6 to 8 mph; or a **bed conditioner** (Do-All) set to cut 2 to 4 inches deep and operated at 4 to 6 mph.

**Incorporation after planting (post-plant):** Incorporation may be achieved around established plants by using: **PTO-driven equipment** (tillers, cultivators, hoes) set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil, or **rolling cultivators** set to cut 2 to 4 inches deep and operated twice at 6 to 8 mph. When incorporating TRIFLURALIN HF in transplants, new liners, or established plants, the implement should be adjusted so that treated soil is thrown toward and around the plants in the row.

Clean cultivated area to be treated before application since TRIFLURALIN HF will not control established weeds.

Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Do not use spiketooth or springtooth harrows alone for incorporation.

### Surface Application and Water Incorporation to Ornamental Ground Cover Plantings:

Add TRIFLURALIN HF to clean water in the spray tank during the filling operation. Agitate thoroughly prior to spraying. Apply in 5 to 40 gallons of water per acre using any properly calibrated low pressure herbicide sprayer that will uniformly apply the spray mixture. A one-half-inch rain or its equivalent in sprinkler irrigation must be received within 24 hours or poor weed control will result.

### Application Rates-Ground Cover Only

Apply 1 gallon of TRIFLURALIN HF per acre or 3 ounces per 1,000 sq. ft. of ground cover area.

### TREES

#### Scientific Name

*Abies balsamea*  
*Abies concolor*  
*Abutium hybridum*

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

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

*Chamaecyparis pisifera*

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

*Cornus kousa*  
*Crataegus viridis*  
*Cupaniopsis anacardioides*  
*Cupressus glabra*  
*Elaeagnus angustifolia*  
*Eucalyptus camaldulensis*  
*Eucalyptus cinerea*

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

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

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

#### Common Name

Balsam fir  
White fir  
Albus-flowering maple  
Luteus-flowering maple  
Roseus-flowering maple  
Tangerine-flowering maple  
Vesuvius red-flowering maple  
Flame maple  
Norway maple  
Red maple  
Red sunset maple  
Silver maple  
Sugar maple  
Queen palm  
River birch  
Paper birch  
European white birch  
Bottle tree  
Black olive  
Chinese chestnut  
Carob  
Redbud  
Fillicoides-fernspray cypress  
Gracilis-slender Hinoki cypress  
Swara false cypress  
Squarrosa-moss cypress  
Palm  
Palm  
Parlor Palm  
Cloud nine dogwood  
Flowering dogwood  
Dogwood, kousa  
Green hawthorn  
Carrot wood  
Arizona cypress  
Russian olive  
Redgum eucalyptus  
Mealy eucalyptus  
Silver dollar eucalyptus  
Coolibah tree  
Red ironbark eucalyptus  
Ficus  
Mini ficus  
White ash  
Shamel ash  
Ginkgo-maidenhair tree  
Honey locust  
Shademaster honey locust  
Toyon  
Florida anise-tree  
Eastern red cedar  
Japanese larch  
American sweet gum  
Tuliptree  
Southern magnolia  
Crabapple  
White mulberry  
Banana  
Blackgum  
Sourwood  
Norway spruce  
Pendula-weeping Norway spruce  
Repens-spreading Norway spruce

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**Trees cont'd.:**

**Scientific Name**

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

*Pinus aristata*  
*Pinus canariensis*  
*Pinus contorta*  
*Pinus eldarica*  
*Pinus leucodermis*  
*Pinus mugo*

*Pinus nigra*  
*Pinus radiata*  
*Pinus resinosa*  
*Pinus taeda*  
*Pinus strobus*  
*Pinus sylvestris*

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

**ORNAMENTAL SHRUBS**

**Scientific name**

*Abelia grandiflora*

*Acacia abyssinica*  
*Acacia redolens*  
*Acacia stenophylla*  
*Acalypha wilkesiana*  
*Acer ginnala*  
*Acer palmatum*

*Agave americana*  
*Astilbe chinensis*  
*Athyrium nipponicum*  
*Baccharis pilularis*  
*Berberis gladywomensii*  
*Berberis mentorensis*  
*Berberis thunbergii*

*Bougainvillea spp.*

*Buxus microphylla japonica*  
*Buxus microphylla Koreana*  
*Buxus sempervirens*  
*Callistemon citrinus*  
*Callistemon viminalis*  
*Calluna vulgaris*  
*Camellia sasanqua*  
*Camellia japonica*  
*Cassia artemisioides*  
*Ceanothus spp.*  
*Cephalotaxus drupacea*  
*Cerastium tomentosum*

**Common Name**

Dwarf Alberta spruce  
White spruce  
Dwarf globe blue spruce  
*Glauca*-Colorado blue spruce  
*Hoopsii*-Hoop blue spruce  
Koster-Koster blue spruce  
Bristlecone pine  
Canary Island pine  
Shore pine, beach pine  
Eldarica pine  
Bosnian pine  
Pumilio-shrubby swiss mountain pine  
Austrian black pine  
Monterey pine  
Red pine  
Loblolly pine  
White pine  
Columnar Scotch pine  
Scotch pine  
Japanese black pine  
London planetree  
American sycamore  
California sycamore  
Podocarpus  
Cottonwood  
Chilian mesquite  
Yoshino flowering cherry  
Douglas fir  
Scarlet oak  
Bear oak  
Pin oak  
Willow oak  
Red oak  
Live oak  
Black locust  
Willow  
Giant sequoia  
Mahogany  
Yellow tab  
Bald cypress  
Eastern hemlock  
Chinese elm  
Mexican fan palm

**Common Name**

Edward Goucher abelia  
Glossy *abelia*  
*Abyssinica* acacia  
Prostrate acacia  
Shoestring acacia  
Copper leaf  
Amur maple  
Coral bark Japanese maple  
Dwarf Japanese maple  
Century plant  
False spiraea  
Japanese painted fern  
Coyotebush  
William Penn barberry  
Mentor barberry  
*Atropurea*-redleaf Japanese barberry  
Aurea-golden Japanese barberry  
Crimson pygmy barberry  
Rose glow barberry  
Barbara Karst  
California gold  
Pink pixie  
Scarlet O'Hara  
Temple fire  
Texas dawn  
Japanese boxwood  
Korean boxwood  
Common boxwood  
Lemon bottlebrush  
Weeping bottlebrush  
Spring torch scotch heather  
*Sasanqua camellia*  
Japanese camellia  
Feathery cassia  
Wild lilac  
Plum yew  
Snow-in-summer

**Ornamental Shrubs cont'd.:**

**Scientific name**

*Chamaecyparis obtusa* spp.

*Chamaecyparis pisifera*  
*Chrysalidocarpus lutescens*  
*Clethra alnifolia*  
*Cleyera japonica*  
*Cornus alba*  
*Cornus stolonifera*

*Cotinus coggygria*  
*Cotinus dammeri*

*Cotoneaster adpressus*  
*Cotoneaster apiculatus*  
*Cotoneaster congestus*  
*Cotoneaster dammeri*  
*Cotoneaster himalayan*  
*Cotoneaster horizontalis*  
*Cotoneaster zabelii*  
*Cycas revoluta*  
*Cytisus praecox*  
*Cytisus scoparius*  
*Daphne odora*  
*Deutzia* spp.  
*Dodonea viscosa*  
*Elaeagnus pungens*  
*Erica cinerea*  
*Erica x darleyensis*  
*Erica vagans*  
*Euonymus alatus*  
*Euonymus fortunei*

*Euonymus japonica*

*Euonymus kiautschovica*  
*Feijoa sellowiana*  
*Forsythia* spp.  
*Gradenia jasminoides*

*Gaultheria shallon*  
*Gelsemium sempervirens*  
*Genista pilosa*  
*Hibiscus rosa-sinensis*  
*Hibiscus syriacus*

*Ilex* spp.  
*Illicium annisatum*  
*Itea ilicifolia*  
*Ixora collinea*  
*Juniperus* spp.  
*Kalmia latifolia*  
*Lagerstroemia indica*  
*Lantana* spp.  
*Leucothoe axillaris*  
*Leucothoe fontainesiana*  
*Ligustrum* spp.  
*Livistona chinensis*  
*Lonicera periclymenum*

*Lonicera sempervirens*  
*Mahonia bealei*  
*Mahonia repens*  
*Myrica cerifera*  
*Nandina domestica*

*Nerium oleander*

*Osmanthus fortunei*  
*Philadelphus* spp.  
*Phoenix roeloenii*  
*Photinia fraseri*  
*Pieris japonica*

*Pieris japonica x forestii*  
*Pinus mugo*

**Common Name**

Kosteri cypress  
Nana-dwarf Hinoki cypress  
Torulosa cypress  
Filifera-thread cypress  
Areca palm  
Summersweet  
Japanese cleyera  
*Sibirica*-Siberian dogwood  
Baileyi red osier dogwood  
Flaviraqmea-yellow twig dogwood  
Royal purple smoke tree  
Coral beauty smoke tree  
Eichholz smoke tree  
Praecox-early cotoneaster  
Cranberry cotoneaster  
Pyrenees cotoneaster  
Bearberry cotoneaster  
Himalayan cotoneaster  
Rock cotoneaster  
Zabel cotoneaster  
Saga palm  
Hollandia-warminster broom  
Lena-Scotch broom  
Fragrant daphne  
Deutzia  
Hopseed bush  
Fruitland silver berry  
Purple bell heather  
Mediterranean pink heather  
Cornish heather  
Winged *euonymus*  
Candale gold *euonymus*  
Emerald'n gold *euonymus*  
Sunspot *euonymus*  
Wintercreeper *euonymus*  
Silver king-*euonymus*  
Variegated evergreen *euonymus*  
Spreading *euonymus*  
Pineapple guava  
Forsythia  
August beauty gardenia  
Gardenia  
Radican gardenia  
Salal/lemon leaf  
Carolina jessamine  
Woadwaxen  
Ross Estey-hibiscus  
Rose of Sharon-heart  
Rose of Sharon-red bird  
Rose of Sharon-woodbridge  
Holly  
Mystery gardenia  
Henry Garnet holly leaf sweetspire  
Ixora  
Juniper  
Mountain laurel  
Crape myrtle  
Lantana  
Coast *leucothoe*  
Drooping *leucothoe*  
Privet  
Chinese fountain palm  
Flowering woodbine  
Serotina woodbine  
Trumpet honeysuckle  
Leather leaf *mahonia*  
Creeping *mahonia*  
Wax myrtle  
Compacta-dwarf heavenly bamboo  
Harbour dwarf-heavenly bamboo  
Heavenly bamboo  
Nana compacta-heavenly bamboo  
Nana *purpurea*-heavenly bamboo  
Woods dwarf heavenly bamboo  
Hardy red oleander  
Oleander  
Ruby lace oleander  
Fortunes osmanthus  
Mockorange  
Pigmy date palm  
Fraser's photinia  
Japanese andromeda  
Mountain fire lily-of-the-valley  
Snowdrift lily-of-the-valley  
Templebells lily-of-the-valley  
Valley rose lily-of-the-valley  
Valley valentine lily-of-the-valley  
Forest flame lily-of-the-valley  
*Mugo*-mugho pine

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**Ornamental Shrubs cont'd.:**

**Scientific name**

*Pittosporum tibira*

*Plumbago ariculata*  
*Plumbago capensis*  
*Podocarpus macrophyllus*  
*Polystichum polyblepharum*  
*Potentilla* spp.  
*Prunus caroliniana*  
*Prunus gladiosa*  
*Pyracantha* spp.  
*Rhaphiolepis indica*

*Rhaphiolepis ovata*  
*Rhododendron* spp.  
*Rhus lancea*  
*Rosa rugosa*  
*Rosmarinus officinalis*  
*Skimmia japonica*  
*Skimmia revesiana*  
*Spiraea japonica*

*Spiraea vanhouttii*  
*Syringa rothomangensis*  
*Syringa vulgaris*  
*Taxus cuspidata*  
*Taxus media*  
*Tecomaria capensis*  
*Temstroemia gymnanthera*  
*Thuja occidentalis*

*Thuja orientalis*

*Veitchia merrilli*  
*Viburnum* spp.  
*Weigela* spp.  
*Xylosma congestum*  
*Yucca filamentosa*

**GROUND COVERS**

**Scientific Name**

*Achillea tomentosa*  
*Agapanthus* spp.  
*Ammophila breviligulata*  
*Arctotheca calendula*  
*Armeria maritima*  
*Asparagus densiflorus*  
*Campanula* spp.  
*Carex* spp.  
*Carpobrotus edulis*  
*Ceratostigma plumbaginoides*  
*Cistus* spp.  
*Coreopsis* spp.  
*Coronilla vana*  
*Cortaderia selloana*  
*Cotoneaster* spp.  
*Delosperma alba*  
*Descampsia caespitosa*  
*Drosanthemum floribundum*  
*Drosanthemum hispidum*  
*Festuca ovina glauca*  
*Fragaria chiloensis*  
*Gazania* spp.  
*Hakonechloa marcroaureola*  
*Hedera canariensis*  
*Hedera helix*  
*Hemerocallis* spp.  
*Herniaria glabra*  
*Hosta lancifolia*  
*Hypericum* spp.

*Jasminum nitidum*  
*Lampranthus spectabilis*  
*Liriope gigantea*

**Common Name**

Green *pittosporum*

Japanese *pittosporum*  
 Wheeler's dwarf *pittosporum*  
 Blue cape *plumbago*  
*Plumbago*  
 Yewpine  
 Tallen fern  
 Cinquefoil  
 Carolina laurel cherry  
 Dwarf pink flowering almond  
*Pyracantha*  
 Charisma-Monruce *rhaphiolepis*  
 Enchantress-Moness *rhaphiolepis*  
 India hawthorn  
 Springtime-Monme *rhaphiolepis*  
 Roundleaf *rhaphiolepis*  
 Azalea/rhododendron  
 Africa sumac  
 Ramanas rose  
 Rosemary  
 Japanese *skimmia*  
 Reeve's *skimmia*  
 Dolchia *spiraea*  
 Japanese alpine *spiraea*  
 Shirobana *spiraea*  
 Bridal wreath  
 Chinese lilac  
 Common lilac  
 Upright Japanese yew  
 Anglojap yew  
 Cape honeysuckle

American arborvitae  
 Emerald arborvitae  
 Globosa-globe arborvitae  
 Little giant-dwarf arborvitae  
 Nigra-dark American arborvitae  
 Pyramidalis-pyramid arborvitae  
 Rheingold arborvitae  
 Techny arborvitae  
 Aureus nana-dwarf golden arborvitae  
 Minima glauca-dwarf arborvitae  
 Christmas palm  
*Viburnum*  
*Weigela*  
*Xylosma*  
*Yucca*

**Common Name**

Wooly yarrow  
 Lily-of-the-nile  
 Beechgrass  
 Cape weed  
 Thrift  
 Asparagus fern  
 Bellflower  
 Variegated carex  
 Largeleaf iceplant  
 Dwarf plumbago  
 Rockrose  
*Coreopsis*  
 Crown vetch  
 Pampas grass  
*Cotoneaster*  
 White iceplant  
*Descampsia*  
 Trailing rosea iceplant  
 Iceplant  
 Blue fescue  
 Strawberry beach  
 Gazania  
 Golden *hakonechloa*  
 Algerian ivy  
 English ivy  
 Daylily  
 Rupturewort  
 Albo-marginata hosta  
 Aaronsbeard  
 St. Johnswort  
 Angelwing jasmine  
 Trailing iceplant  
 White lily turf

**Ground Covers cont'd.:**

**Scientific Name**

*Liriope muscari*

*Liriope spicata*  
*Miscanthus sinensis*  
*Muehlenbeckia axillaris*  
*Myoporum laetum*  
*Ophiopogon japonicus*

*Osteospermum fruticosum*  
*Pachysandra terminalis*  
*Pennisetum alopecuroides*  
*Phalaris arundinacea picta*  
*Sedum* spp.  
*Teucrium chamaedrys*  
*Trachelospermum asiaticum*  
*Verbena* spp.  
*Veronica* spp.  
*Vinca* spp.

**ESTABLISHED FLOWERS**

**Scientific Name**

*Achillea* spp.  
*Ageratum houstonianum*  
*Alyssum* spp.  
*Antirrhinum majus*  
*Arctotis* spp.  
*Artemisia stellerana*  
*Aster* spp.  
*Calendula Officinalis*  
*Centaurea cyanus*  
*Centaurea gymnocarpa*  
*Centaurea moschata*  
*Chrysanthemum* spp.  
*Convolvulus* spp.  
*Coreopsis* spp.  
*Cosmos* spp.  
*Dahlia* spp.  
*Dianthus* spp.  
*Dimorphotheca* spp.  
*Euphorbia marginata*  
*Geum* spp.  
*Gaillardia* spp.  
*Gladiolus* spp.  
*Gypsophila paniculata*  
*Helianthus* spp.  
*Impatiens balsamina*  
*Impatiens* spp.  
*Ixora* spp.  
*Lathyrus odoratus*  
*Limonium* spp.  
*Lobelia* spp.  
*Lobularia maritima*  
*Lupinus* spp.  
*Matthiola* spp.  
*Mirabilis jalapa*  
*Myosotis* spp.  
*Nicotiana* spp.  
*Papver* spp.  
*Petunia hybrida*  
*Phlox* spp.  
*Portulaca grandiflora*  
*Rosa* spp.  
*Rudbeckia hirta*  
*Rudbeckia laciniata*  
*Salvia* spp.  
*Scabiosa* spp.  
*Stachys* spp.  
*Stokesia laevis*  
*Tagetes* spp.  
*Tropaeolum* spp.  
*Vinca* spp.  
*Zinnea* spp.

**ORNAMENTAL BULBS**

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

**CHRISTMAS TREE PLANTATIONS**

Apply TRIFLURALIN HF to established plantings of field grown Christmas tree species listed on this label. Do not apply to seedbeds or seedling transplant beds. Apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time

**Common Name**

Big blue lily turf  
 Lilac beauty lily turf  
 Magestic lily turf  
 Silvery sunproof lily turf  
 Variegated liriope lily turf  
 Green/creeping lily turf  
 Eulalia grass  
 Creeping wirevine  
*Myoporum*  
 Dwarf Mondo grass  
 Mondo grass  
 Trailing African daisy  
 Japanese spurge  
 Fountain grass  
 Ribbon grass  
 Stonecrop (sedum)  
 Germander  
 Asian jasmine  
 Verbena  
 Speedwell  
 Periwinkle

**Common Name**

Yarrow  
 Floss flower  
 Alyssum  
 Snapdragon  
 African daisy  
 Dusty miller  
 Aster (perennial)  
*Calendula*  
 Cornflower  
 Velvet centaurea  
 Sweet sultan  
*Chrysanthemum*  
 Morningglory  
 Coreopsis  
 Cosmos  
 Dahlia  
*Dianthus*  
 Marigold, cape  
 Snow-on-the-mountain  
 Geum  
*Gaillardia*  
 Gladiolus  
 Baby's breath  
 Sunflower  
 Balsam  
 Impatiens  
 Ixora  
 Sweet pea  
 Statice  
 Lobelia  
 Sweet alyssum  
 Lupine  
 Stock  
 Four o'clock  
 Forget-me-not  
 Nicotiana  
 Poppy, California  
 Petunia  
 Phlox  
 Portulaca  
 Rose  
 Blackeyed susan  
 Golden glow  
 Salvia  
 Pincushion flower  
 Lamb's ears  
 Stokesia laevis  
 Marigold  
 Nasturtium  
 Vinca  
 Zinnia



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to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

### TREE AND VINE CROPS-CITRUS, FRUIT AND NUT TREES, AND VINEYARDS New Plantings of Citrus, Fruit and Nut Trees

For new plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine and walnut trees, apply and incorporate TRIFLURALIN HF before transplanting.

#### Broadcast Rates Per Acre:

Soil Texture	TRIFLURALIN HF
Coarse .....	16 oz.
Medium .....	20 oz. - 24 oz.
Fine .....	24 oz.

- All soils with 2-5% organic matter - 24 oz. - 32 oz.
- All soils with 5-10% organic matter - 52 oz.
- Use lower rate in range in areas receiving less than 20 inches total annual rain fall and irrigation.

#### New Plantings of Vineyards

Apply and incorporate TRIFLURALIN HF before planting.

#### Broadcast Rates Per Acre:

Soil Texture	TRIFLURALIN HF
Coarse .....	16 oz. - 22 oz.
Medium .....	24 oz. - 48 oz.
Fine .....	48 oz. - 64 oz.

- All soils with 2-10% organic matter - 48 oz. - 64 oz.
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

**Note:** Do not use more than 32 oz./A on mist propagated grape rootings.

#### Established Non-bearing and Bearing Citrus, Fruit and Nut Trees, and Vineyards

TRIFLURALIN HF may be applied in established non-bearing and bearing vineyards and plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine, and walnut trees. In established plantings, apply TRIFLURALIN HF to the soils surface and incorporate using methods not injurious to the crop. Do not apply to vineyards within 60 days of harvest.

#### Broadcast Rates Per Acre:

Soil Texture	TRIFLURALIN HF
All soils .....	32 oz. - 64 oz.

- Use the higher rate in the rate range for longer term weed control.

#### COTTONWOOD/POPLAR TREES GROWN FOR PULP\*

For new plantings, apply and incorporate TRIFLURALIN HF before planting at the rate of 2-4 quarts per acre by ground application in 10 to 20 gallons of water. For established plantings, apply 2 to 4 quarts per acre in 10 to 20 gallons of water as a directed spray to the soil and use incorporation methods not injurious to the crop.

\*Not registered for use in California

#### Under Paved Surfaces

Directions for Use and Site Preparation: Apply 3 to 4 gallons of TRIFLURALIN HF per acre or 9 to 12 fl. oz. per 1,000 sq. ft. TRIFLURALIN HF should be used only where the area to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with a grader blade to a depth sufficient to insure their complete removal.

Applications should be made only when final grade is established or after additions of base rock. Do not remove soils following TRIFLURALIN HF application and do not apply this herbicide to areas where asphalt is to be laid directly on top of soil.

Paving should follow TRIFLURALIN HF as soon as possible.

Applications Directions (Large Areas): Apply TRIFLURALIN HF in sufficient water to insure thorough wetting of the soil surface or penetration of the spray solution through the base rock layer. A minimum of 150 gallons per acre is recommended. Apply with any sprayer that will apply the spray uniformly. Add the recommended amount of herbicide to clean water in the spray tank during the filling operation. Agitate before spraying.

Small Areas: For treating small areas, a tank type hand sprayer or sprinkling can may be used. Before application determine the amount of water and TRIFLURALIN HF necessary to uniformly cover the area to be treated. Shake or stir the spray solution prior to application.

## STORAGE AND DISPOSAL

**PROHIBITIONS**—Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. Do not store under conditions which might adversely affect the container or its ability to function properly.

**PESTICIDE STORAGE**—Avoid freezing. Do not store below temperature of (40°F). If frozen, poor weed control may result. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.

**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 HANDLING:

**Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons or 50 lbs: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For square bottom caged totes greater than 55 gals.: Triple rinse or pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container about 1/4 full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

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