

## **SMALL GRAINS (SPRING SEEDED DURUM OR SPRING WHEAT) - FALL APPLIED PREPLANT INCORPORATED - COARSE AND MEDIUM**

### General Information

### Product Information

Treflan TR-10 granular herbicide is a selective preemergence herbicide for control of many annual grasses and broadleaf weeds in alfalfa, almond, apricot, asparagus, barley, beans - all dry and fresh beans/peas, broccoli, brussels sprouts, cabbage, carrot, castor oil plant, cauliflower, celery, chicory, collard greens, corn, cotton, crambe, cucurbits, dry peas, durum, english peas, flax, flaxseed, grain sorghum, grapes, grapefruit, guar, hops, kale, kenaf, lemon, lima bean, mungbean, mustard greens, nectarine, niger seed, oil radish, okra, onions, orange, peach, peanuts, pecan, pepper, plum, potatoes, prune, radish, rapeseed, safflower, snap bean, southern peas, soybeans, sugar beets, sugarcane, sunflowers, tangelo, tangerine, tomatoes, turnip greens, walnut, and wheat

Treflan TR-10 should be incorporated into the soil within 24 hours after application to effectively control weeds. Treflan TR-10 controls susceptible weeds as they germinate. Treflan TR-10 does not control established weeds.

### Use Precautions

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

Do not apply Treflan TR-10 to soils that are wet or are subject to prolonged periods of flooding as poor weed control may result.

Do not use Treflan TR-10 on any crop grown in Pecos county or Reeves county, Texas.

In Montana, uses of Treflan TR-10 are limited to those described in supplemental labeling. Refer to supplemental labeling for crops and specific use directions.

#### Rotation Crop Restrictions

##### Sugar Beets, Red Beets and Spinach

In Arizona, Colorado, California, Idaho, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming: Do not plant sugar beets, red beets or spinach for 12 months after a spring application or 14 months after a fall application of Treflan TR-10. If land has not been irrigated, do not plant these crops for 18 months after a spring application or 20 months after a fall application of Treflan TR-10. Moldboard plowing to a depth of 12 inches prior to planting these crops will reduce the possibility of crop injury.

In all other areas: Do not plant sugar beets, red beets, and spinach for 12 months after a spring application or 14 months after a fall application. Before planting sugar beets, moldboard plow to a depth of 12 inches to reduce the possibility of crop injury.

##### Proso Millet, Corn, Sorghum (Milo), Oats and Annual or Perennial Grass Crops or Grass Mixtures

In Arizona, Colorado, California, Idaho, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming: Delay planting proso millet, corn, sorghum (milo), oats and annual or perennial grass crops or grass mixtures for 12 months after a spring application or 14 months after a fall application of Treflan TR-10 to avoid the possibility of crop injury. If land has not been irrigated, delay planting these crops for 18 months after a spring application or 20 months after a fall application. Moldboard plowing to a depth of 12 inches before planting these crops will reduce the possibility of crop injury.

In Minnesota, North Dakota and South Dakota: Delay planting proso millet, sorghum (milo), oats and annual or perennial grass crops or grass mixtures for 18 months after a spring application or 21 months after a fall application of Treflan TR-10.

In those portions of Kansas, Nebraska, Oklahoma and Texas that receive less than 20 inches of rainfall and irrigation to produce a crop: Delay planting proso millet, sorghum (milo), oats and annual or perennial grass crops or grass mixtures for 18 months after an application of Treflan TR-10. In sorghum, cool wet weather conditions during early growth stages may increase the possibility of crop injury.

All other areas receiving more than 20 inches of rainfall and irrigation: Delay planting proso millet, sorghum (milo), oats and annual or perennial grass crops or grass mixtures for 12 months after a spring application or 14 months after a fall application of Treflan TR-10.

Rotation Crops Other Than Those Specifically Addressed Above For all other crops, with the exception of those to which Treflan TR-10 may be applied as a preplant soil incorporated treatment, delay planting for 5 months after an application of Treflan TR-10.

## Application Directions

### Soil Preparation

Treflan TR-10 may be applied to standing stubble or soil that has been pre-tilled. Existing weeds and crop residues should be reduced to a manageable level using tillage so that Treflan TR-10 can be uniformly incorporated into the top 2 to 3 inches of the final seedbed. Soil surface conditions should allow Treflan TR-10 to be thoroughly and uniformly mixed into the top 2 to 3 inches of soil. If this is not possible the soil should be tilled prior to application.

### Soil Conditions

The soil surface should be smooth enough to allow for uniform application and efficient incorporation of Treflan TR-10. Apply when soil moisture is sufficient to allow breakup of large clods and uniform mixing during the incorporation process. Soil compaction and/or nonuniform incorporation may occur when soil is excessively moist.

### Application

Treflan TR-10 may be applied with ground or aerial broadcast application equipment. Apply only with equipment capable of accurate calibration and uniform

application of herbicide granules. Apply at the specified rate for soil texture class to be treated. Follow calibration directions provided by the equipment manufacturer. Avoid releasing granules in narrow bands on the soil surface as this may cause crop injury.

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

Freezing will not adversely affect this product. If product is frozen at the time of application, manipulate bags or thaw to restore product to free-flowing state.

### Soil Texture Guide for Application Rates

Rates listed for Treflan TR-10 for incorporated treatments are based on soil texture class (coarse, medium or fine) and soil organic matter content. A fine textured soil (e.g., clay loam) will require a higher application rate than a coarse textured soil (e.g., loamy sand). Choose the proper rate for each application based on the soil texture class and specific crop Directions for Use. Do not exceed the listed maximum use rates.

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 predominantly sand or silt, they are usually classified as medium textured soils. If they are predominantly clay, they are usually classified as fine textured soils.

### Application Rate Ranges

Where a rate range is shown, use the lower rate for coarser textured soils or soils with low organic matter content. Use the higher rate in the rate range for finer textured soils and on soils containing more than 5% organic matter. Where soil texture is variable within the same field, use the lower listed rate of Treflan TR-10.

### Application Timing

#### Spring Application

Apply Treflan TR-10 any time after January 1 when soil can be worked and is in

condition suitable for good incorporation. See Labeled Crops section for information on specific crops.

## Fall Application

**Application Timing:** In California, Minnesota, North Dakota and South Dakota, apply Treflan TR-10 any time between September 1 and December 31. In all other states, fall apply Treflan TR-10 any time between October 15 and December 31.

**Application Rates for Fall Application:** Refer to the Labeled Crops section of this label for specific rates. Increased rates for fall application are recommended for certain crops grown in certain geographic areas. For crops for which there are no specific fall application instructions, and for which Treflan TR-10 is listed as a preplant incorporated treatment, use the rates listed for spring applications. In areas receiving greater than 20 inches total average annual rainfall and irrigation, use the higher rate in the listed rate range. Do not fall apply Treflan TR-10 prior to planting sugar beets, potatoes and direct seeded tomatoes the following spring.

Ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired height before planting, moving some treated soil from beds into furrows. Where soil is left flat over winter, be careful not to turn up untreated soil during spring bedding operations. Destroy established weeds during seedbed preparation.

Prior to planting, destroy any weeds which have become established in furrows due to uncovering of untreated soil. Do not apply Treflan TR-10 in the fall to soils that are wet or subject to prolonged periods of flooding, or where rice was grown the previous year.

## Incorporation Directions

Treflan TR-10 granular herbicide requires two incorporation passes unless otherwise specified in use directions for a specific crop. The first should occur within 24 hours after application. For best weed control results, the second incorporation should be delayed a minimum of 5 days after the first and be completed prior to planting. The second incorporation pass should occur in a different direction than the first. Use incorporation equipment capable of thoroughly and uniformly mixing Treflan TR-10 into the top 2 to 3 inches of the final seedbed. Erratic weed control may result if untreated soil is moved to the surface during the second incorporation pass. To

avoid this problem, set equipment so that the second incorporation pass is not deeper than the first. Incorporation in Established Crops

Treflan TR-10 may be applied and incorporated in certain established crops. Refer to the Labeled Crops section of this label for specific incorporation directions.

#### Incorporation in Bedded Culture

For optimum weed control, Treflan TR-10 should be incorporated into the top 2 to 3 inches of the final seedbed.

#### Application Prior to Bedding

Apply and make first incorporation with recommended equipment. The bedding operation serves as the second incorporation. Do not expose untreated soil during post-bedding operations.<sup>1</sup>

#### Application After Bedding

Knock off beds to planting height before applying. Apply Treflan TR-10 and incorporate with recommended equipment that will conform to the bed shape. Do not leave untreated soil exposed.<sup>1</sup>

<sup>1</sup> Avoid removal of treated soil from the seedbed before or during the planting operation. Exposure of untreated soil will allow weeds to germinate in the drill row.

#### Cultivation After Planting

Treated crops may be shallowly cultivated without loss of weed control activity. Avoid deep cultivation that could bring untreated soil to the soil surface and result in loss of weed control.

#### Preferred Incorporation Equipment

Any of the listed incorporation implement may be used alone or in combination with any other listed implement. Two incorporation passes are necessary unless otherwise specified in use directions for a specific crop. The second incorporation should not be deeper than the first.

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

Field Cultivator: Set equipment to cut 3 to 4 inches deep and operate at a minimum

of 5 mph. A field cultivator is defined as an implement with 3 to 4 rows of sweeps, spaced at intervals of 7 inches or less, with sweeps on successive rows staggered so that no soil is left unturned. Chisel points should not be used. Best results are obtained when the field cultivator is equipped with harrow, reel or basket attachments. The second incorporation may be accomplished with an air seeder (field cultivator setup).

**Chisel Plow (for Use in Northern Great Plains):** The chisel plow may be used for the first incorporation pass only. Any other recommended incorporation implement may be used for the second pass for row crops. The chisel plow may be used for any tillage or incorporation pass in the summer fallow program. Operate chisel plow 4 to 5 inches deep at 4 to 6 mph. A chisel plow is defined as having 3 rows of 14- to 18-inch sweeps spaced no more than 12 inches apart. Sweeps should be staggered so that no soil is left unturned. Chisel points should not be used.

**Combination Implements:** These implements are defined as two or more tillage devices combined to operate as a single tillage unit. For example, 2 to 3 rows of field cultivator C- or S-shaped shanks with successive rows of sweeps staggered so that no soil is left unturned, followed by a spike-tooth or flextine harrow, followed by ground driven reel, basket or incorporation wheels. Combination implements should be set to cut 3 to 4 inches deep and operated at a minimum of 6 mph. Combination tools can also be composed of 2 rows of wide crown sweeps that overlap so that the roots of all weeds and plants are severed. This should be followed by 2 gangs of rotating spoked wheels that thoroughly mix Treflan TR-10 into the top 2 to 3 inches of the final seedbed.

**Rolling Cultivator:** Set to cut 2 to 4 inches deep and operate at 6 to 8 mph.

**Mulch Treader (Other Similar Disc-Type Implements):** Set to cut 3 to 4 inches deep and operate at 5 to 8 mph.

**P.T.O. Driven Equipment (Tillers, Cultivators, Hoes):** Adjust to incorporate Treflan TR-10 into the top 2 to 3 inches of the seedbed with rotors spaced to provide a clean sweep of the soil. Only one incorporation is necessary. P.T.O. driven equipment should not be operated at a speed greater than 4 mph.

**Other Equipment:** Other implements including a flexible tine-tooth harrow (Flextine or Melroe), Gates harrow, sweep-type cultivator, V-blade undercutter, or rolling cultivator are recommended, but only for certain uses defined in the Labeled Crops

section of this label.

**Conservation Tillage Practices:** In reduced or minimum tillage situations, fall or spring application and incorporation of Treflan TR-10 may be combined with tillage operations. The first incorporation may utilize equipment such as a tandem disc, combination implement or bedding equipment that provides good soil mixing, but leaves a maximum amount of crop residue on the soil surface. The second incorporation may be accomplished with tillage equipment that provides uniform soil mixing used in conjunction with no-till planters (see specific recommendations for reduced or conservation tillage situations for cotton and soybeans in the Labeled Crops section).

### Limitations, Restrictions, and Exceptions

#### Small Grains - Barley, Durum and Wheat

#### Special Precautions for Use of Treflan TR-10 on Small Grains

Carefully follow directions for use of Treflan TR-10 granular herbicide on small grains to minimize potential crop stress. Under certain conditions, delayed crop emergence and/or stand reduction may occur when Treflan TR-10 is applied to barley, durum or wheat. The combined effect of certain cultural practices and unfavorable soil or environmental conditions may cause excessive crop seedling stress resulting in retarded crop growth, stand reduction and possibly reduced yield. For best results, observe the following cultural practices or precautions:

Use tillage methods that provide a uniformly firm seedbed and time tillage operations to conserve moisture.

Irrigate prior to planting or after germination and emergence. Moisture received between planting and emergence may cause crusting, especially on loose seedbeds.

Do not exceed recommended application rates for Treflan TR-10. This is particularly important on coarse textured or low organic matter soils.

Carefully follow incorporation directions. When applying preplant incorporated treatments, operate equipment at recommended depth and speed to place Treflan TR-10 into the upper 1 to 1.5 inches of soil. If applied after planting, set equipment so as to avoid disturbance of planted seed.



Set drills to place seed at the depth specified in use directions. A planting depth greater than 2.5 inches for spring wheat or durum will result in increased seedling stress and decreased emergence.

Use only high quality seed where Treflan TR-10 is to be applied (avoid use of small seed with low starch reserves).

If seed treatments are used, apply at the correct rate and uniformly across all seeds. Misapplication may result in reduced germination and/or seedling vigor.

Avoid use of seed varieties known to have poor seedling (emergence) vigor.

Soil characteristics and environmental conditions which may contribute to crop seedling stress that may be accentuated by use of Treflan TR-10 include:

Soil related: High salinity, eroded knolls/hilltops, loose dry soils and compaction.

Weather related: Cold and/or wet soils, excessively hot soils, excessive moisture, drought, and soil crusting from heavy rainfall.

Restriction: Do not apply Treflan TR-10 on small grains where a dinitroaniline herbicide such as Treflan (trifluralin) or Sonalan herbicide (ethalfluralin) was applied at a rate greater than 0.5 lb active ingredient per acre the previous growing season.

#### Incorporation Directions and Equipment for Small Grains

Use incorporation equipment in the manner described below unless otherwise specified in use directions. Any of the following implements listed below may be used for the first incorporation of Treflan TR-10. Use only the disc or field cultivator for the second incorporation pass and incorporate in a different direction. Poor weed control may result if untreated soil is moved to the surface during the second incorporation pass. To avoid this problem, the second incorporation should not be deeper than the first.

Chisel Plow: May be used for the first incorporation pass only.

Operate at 4 to 5 inches deep and at 4 to 6 mph. A chisel plow is defined as having 3 rows of 14- to 18- inch sweeps on no greater than 12-inch centers. Stagger sweeps so that no soil is left unturned. Use of chisel points may result in inadequate soil mixing.

Tandem Disc: Operate at 3 to 4 inches deep and at 4 to 6 mph.

Field Cultivator: Operate at 3 to 4 inches deep and at 5 mph or more. A field cultivator is defined as having 3 to 4 rows of sweeps with "C" or "S" shaped shanks on no greater than 7-inch centers. Stagger sweeps so that no soil is left unturned.

#### Application Directions for Small Grains

Spring Seeded Durum or Spring Wheat - Fall Applied Preplant Incorporated for Suppression of Foxtail (Pigeongrass) (for Use in North Dakota West of the Red River Valley and in South Dakota)

Apply Treflan TR-10 in the fall as a preplant incorporated treatment for suppression of green and yellow foxtail (pigeongrass) in spring seeded wheat.

Use the lower rate in the rate range where light weed pressure is anticipated.

#### Incorporation Directions

The first incorporation should occur within 24 hours after application. Incorporate a second time before planting to destroy existing weeds and insure uniform distribution of Treflan TR-10 in treated soil. Delay the second incorporation a minimum of 5 days after the first. To avoid bringing untreated soil to the surface, the second incorporation should not be deeper than the first. A chisel plow with sweeps may be used for the first incorporation pass only.

Note: See information on incorporation and incorporation equipment at the beginning of the Small Grains section.

Planting Directions: Set equipment to place seed approximately 1 .5 inches deep.

Note: Do not apply Treflan TR-10 in the fall as a preplant incorporated treatment to be followed by spring wheat where a dinitroaniline herbicide such as Treflan (trifluralin) was applied at rates greater than 0.5 lb active ingredient per acre during the previous growing season.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

#### Rates

[field\\_rates 0](#)

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#### Restricted Entry Interval

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.

#### Soils

[Coarse](#)

[Loamy Sand](#)

[Sandy Loam](#)

[Medium](#)

[Loam](#)

[Silt Loam](#)

[Silt](#)

[Silty Clay Loam](#)

[Sandy Clay Loam](#)

[Sand](#)

#### Timings

[Preplant Incorporated](#)

[fall](#)