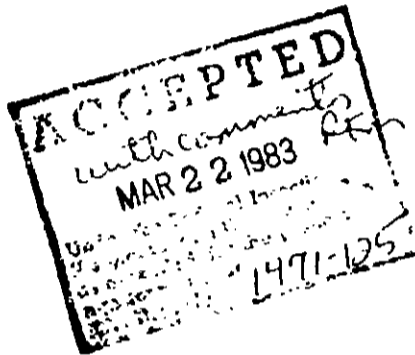


ELANCO ID 5024

TREFLAN® 5GL HERBICIDE



Complete Directions For Use  
Use Cautions, Precautions and Special Precautions  
Crop Recommendations

Registered For Use In:

Idaho	Oregon
Minnesota	South Dakota
Montana	Washington
North Dakota	Wyoming

ELANCO PRODUCTS COMPANY  
A Division of Eli Lilly and Company  
740 South Alabama Street  
Indianapolis, Indiana 46285, U.S.A.

TREFLAN® - the registered trademark for Elanco  
Products trifluralin

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DIRECTIONS FOR USE

TREFLAN 5GL is registered for use in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming.

TREFLAN is a preemergence herbicide which is incorporated into the soil to provide long-lasting control of many annual grasses and broadleaf weeds. TREFLAN controls weeds as they germinate. TREFLAN will not control established weeds.

WEEDS AND GRASSES CONTROLLED BY TREFLAN

GRASSES

Annual bluegrass	( <i>Poa annua</i> )
Barnyardgrass	( <i>Echinochloa</i> sp.)
(Watergrass)	
Brachiaria	( <i>Brachiaria</i> sp.)
(Signalgrass)	
Bromegrass	( <i>Bromus tectorum</i> )
(Cheatgrass)	
(Downy brome)	
Cheat	( <i>Bromus secalinus</i> )
(Chess)	
Crabgrass	( <i>Digitaria</i> spp.)
(Large crabgrass)	
(Smooth crabgrass)	
Foxtail	( <i>Setaria</i> spp.)
(Bottlegrass)	
(Bristlegrass)	
(Giant foxtail)	
(Green foxtail)	
(Foxtail millet)	
(Pigeongrass)	
(Robust foxtail)	
(Yellow foxtail)	
Goosegrass	( <i>Eleusine indica</i> )
(Silver crabgrass)	
(Silvergrass)	
(Wiregrass)	
(Yardgrass)	
Johnsongrass (from seed)	( <i>Sorghum halepense</i> )
Junglerice	( <i>Echinochloa colonum</i> )
Sandbur	( <i>Cenchrus incertus</i> )
(Burgrass)	
Sprangletop	( <i>Leptochloa filiformis</i> )
Stinkgrass	( <i>Eragrostis cilianensis</i> )
(Lovegrass)	
Wild Cane	( <i>Sorghum bicolor</i> )
(Shattercane)	

Wild Oat<sup>1</sup> (Avena fatua)  
Woolly Cupgrass (Eriochloa villosa)

<sup>1</sup>TREFLAN applied as a preplant incorporated (PPI) treatment will control those wild oats that germinate in the treated zone. This claim is for all PPI uses except fall applications for spring seeded cereals.

#### BROADLEAF WEEDS

Carpetweed	(Mollugo verticillata)
Chickweed	(Stellaria media)
Florida pusley	(Richardia scabra)
(Florida purslane)	
(Mexican clover)	
(Pusley)	
Goosefoot	(Chenopodium hybridum)
Henbit (fall application only)	(Lamium amplexicaule)
Knotweed	(Polygonum aviculare)
Kochia	(Kochia scoparia)
(Fireweed)	
(Mexican fireweed)	
Lambsquarters	(Chenopodium album)
Pigweed	(Amaranthus spp.)
(Carelessweed)	
(Prostrate pigweed)	
(Redroot pigweed)	
(Rough pigweed)	
(Spiny pigweed)	
Puncturevine (Western U.S. only)	(Tribulus terrestris)
(Caltrop)	
(Goathead)	
Purslane	(Portulaca oleracea)
Russian thistle	(Salsola kali)
(Tumbleweed)	
Stinging nettle	(Urtica dioica)
(Nettle)	

#### SOIL PREPARATION

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

Roughness: The soil surface should be smooth enough so that application and incorporation equipment can be operated efficiently and at speeds which ensure a uniform application and incorporation of TREFLAN.

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

#### SOIL TEXTURE GUIDE

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

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

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

#### APPLICATION DIRECTIONS

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

#### INCORPORATION DIRECTIONS

##### Incorporation Equipment - General Directions

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

### Incorporation Before Planting

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

### Recommended Equipment

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

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

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

Chisel Plow: May be used for first pass only. Operate at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of up to 18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned.

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

Rolling Cultivator: Set to cut 2 to 4 inches deep and operate at 5 to 8 mph. Rolling cultivators are adequate for use on coarse and medium textured soils only.

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

P.T.O. Driven Equipment (tillers, cultivators, hoes): Adjust to incorporate TREFLAN 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

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

#### CROP RECOMMENDATIONS

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

#### SUNFLOWER

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

#### Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>TREFLAN 5GL</u>	
	<u>Areas receiving less than 20" average annual rainfall* (pounds)</u>	<u>Areas receiving greater than 20" average annual rainfall* (pounds)</u>
Coarse	10	10
Medium	12 1/2 - 15	15
Fine	15	20

\*Use 15 to 20 pounds per acre on coarse and medium soils with 2-5% organic matter and 20 pounds on soils with 5-10% organic matter.

WHEAT (SPRING), DURUM AND BARLEY--SUMMER FALLOW

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

TREFLAN 5GL may be applied to ground that has a manageable trash level, been fallow, pre-tilled, or to soil left with a stubble cover. The first incorporation is required within 24 hours after application. The second incorporation and subsequent tillage may be done whenever necessary to destroy resistant weed growth during the remainder of the fallow year. During the fallow year, susceptible weeds may not be controlled until after the second incorporation.

Broadcast Rates Per Acre

<u>Application Date</u>	<u>TREFLAN 5GL</u>
April 15 to June 30	20
July 1 to August 31	15

Incorporation Directions: Incorporate TREFLAN one (1) time within twenty-four (24) hours after application. Care should be taken to ensure that the second incorporation and subsequent tillages are more shallow than the first. Incorporate and till the TREFLAN treated ground with the following equipment:

1. Chisel plow:

May be used for first pass only. Operate at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of up to 18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned.

2. Tandem disc:

Operate at 3-4 inches deep at 4-6 mph.

3. Field cultivator:

Operate at 3-4 inches deep at 5 mph or more. A field cultivator is defined as having 3 to 4 rows of sweeps with "c" or "s" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned.

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



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

WHEAT (SPRING), DURUM AND BARLEY--FALL APPLICATION

For the control of foxtail (pigeongrass), apply TREFLAN at a broadcast rate of 10 pounds per acre on coarse and medium soils and 15 pounds on fine soils.

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

1. Chisel plow:

May be used for first pass only. Operate at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of up to 18 inch sweeps on no greater than 12 inch center. Stagger sweeps so that no soil is left unturned.

2. Tandem disc:

Operate at 3-4 inches deep at 4-6 mph.

3. Field cultivator:

Operate at 3-4 inches deep at 5 mph or more. A field cultivator is defined as having 3 to 4 rows of sweeps with "c" or "s" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned.

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

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

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

TREFLAN may be applied for preplant preemergence control of cheatgrass and other annual grasses and broadleaf weeds controlled by TREFLAN.

Apply TREFLAN any time up to three (3) weeks prior to planting. Broadcast TREFLAN at a rate of 15 pounds per acre on coarse and medium soils and 20 pounds on fine soils.

Incorporation Directions: Incorporate TREFLAN into the soil with a flexible tine-tooth harrow (Flextine, Melroe) set to cut one (1) to two (2) inches deep and operate at 3 to 6 mph. Incorporate one time within 24 hours after application, followed by a second incorporation at least five (5) days after the first pass in a different direction prior to planting. Do not till the soil with a disc after the TREFLAN has been incorporated with a flexible tine harrow.

Seeding Directions--Use only a deep furrow or semi-deep furrow drill that will place the seed below the zone of soil into which TREFLAN has been incorporated.

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

WHEAT (WINTER)--Fallow soil application (Washington, Oregon, Idaho and Montana)

TREFLAN applied and shallowly incorporated into fallow soil up to four (4) months ahead of planting will control cheatgrass and certain annual grasses and broadleaf weeds.

Broadcast rates are 15 pounds per acre on coarse and medium soils and 20 pounds on fine soils. Apply TREFLAN any time from May to September prior to the fall planting of winter wheat.

Incorporation Directions: Incorporate TREFLAN with a flexible tine-tooth harrow (Flextine or Melroe) set to cut one (1) to two (2) inches deep and operated at three (3) to six (6) mph. For thorough incorporation, two (2) passes of the equipment in different directions over the field are necessary. Incorporate one (1) time within 24 hours after application followed by a second incorporation at least five (5) days after the first prior to seeding. Do not till the soil with a disc after TREFLAN has been applied with a flexible tine harrow.

Seeding Directions: Use only a deep furrow or semi-deep furrow drill that will place the seed below the zone of soil into which TREFLAN has been incorporated.

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

BEAN (DRY)

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

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>TREFLAN 5GL</u>	
	<u>Areas receiving less than 20" average annual rainfall* (pounds)</u>	<u>Areas receiving greater than 20" average annual rainfall* (pounds)</u>
Coarse	10	10
Medium	12 1/2 - 15	15
Fine	15	20

\*Use 15 pounds per acre on coarse and medium textured soils and 20 pounds on fine soils with 2-5% organic matter; use 20 to 25 pounds on all soils with 5-10% organic matter.

FLAX

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

Broadcast Rate Per Acre

<u>Soil Texture</u>	<u>TREFLAN 5GL (pounds)</u>
Coarse	10
Medium	15
Fine	20

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

Apply and incorporate TREFLAN in the spring before planting or in the fall after September 1 at 10 pounds per acre on coarse soils and 15 pounds on medium and fine soils.

RAPSEED

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

Broadcast Rates Per Acre:

<u>Soil Texture</u>	<u>TREFLAN 5GL</u> (pounds)
Coarse	10
Medium	15
Fine	20

SAFFLOWER

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

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>TREFLAN 5GL</u>	
	<u>Areas receiving</u> <u>less than 20"</u> <u>average annual</u> <u>rainfall*</u> (pounds)	<u>Areas receiving</u> <u>greater than 20"</u> <u>average annual</u> <u>rainfall*</u> (pounds)
Coarse	10	10
Medium	12 1/2 - 15	15
Fine	15	20

\*Use 15 pounds per acre on coarse and medium textured soils and 20 pounds on fine soils with 2-5% organic matter; use 20 to 25 pounds on all soils with 5-10% organic matter.

SOYBEAN

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

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>TREFLAN 5GL*</u> (pounds)
Coarse	10
Medium	15
Fine	20

\*Use 15 pounds per acre on coarse and medium textured soils and 20 pounds on fine soils with 2-5% organic matter; use 20-25 pounds on all soils with 5-10% organic matter.

Soybean Precautions: Soybeans should be planted after early season adverse weather conditions have passed. Cool, wet weather early in the growth cycle causes additional stress to the soybean plant. This may result in reduced stands, delayed maturity and reduced yields.

STORAGE AND DISPOSAL

For best results, store in areas not exposed to high temperatures or prolonged, direct sunlight. Also, do not let product remain in standing applicators under these conditions.

Do not contaminate water, food, feed, other pesticides, fertilizer or seeds.

Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of bags in a sanitary landfill or by incineration if allowed by State and local authorities.

SPECIAL PRECAUTIONS

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

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

To avoid crop injury in arid areas, do not plant sugar beets, red beets or spinach for 12 months after a TREFLAN spring application or for 14 months after a TREFLAN fall application. Plow the land to a depth of 12 inches before 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 TREFLAN spring application or for 16 months after a TREFLAN fall application.

If land has not been irrigated, do not plant any of these crops for 18 months after a TREFLAN spring application or 20 months after a fall application.

Those portions of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota and Texas where at least 20 inches of irrigation and/or rainfall (total) was used to produce the crop:

Do not plant sorghum or oats for 12 months after a TREFLAN application. If less than 20 inches of total water was used to produce the crop, do not plant sorghum or oats for 18 months after a TREFLAN application. Cool, wet weather conditions during the early stage of growth may increase the possibility of injury to sorghum.

In areas where the average annual rainfall is greater than 20 inches, moldboard plow before planting sugar beets where a TREFLAN spring application was made the previous season.

#### PRECAUTIONARY STATEMENTS

##### HAZARD TO HUMANS AND DOMESTIC ANIMALS

##### CAUTION

Harmful if swallowed or absorbed through the skin. Avoid breathing dust. Avoid contact with skin, eyes or clothing. In case of contact, immediately flush eyes or skin with plenty of water.

##### ENVIRONMENTAL HAZARD

This product is toxic to fish. Use with care when applying in areas adjacent to any body of water. Keep out of lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

Elanco Products Company, Inc. will control the weeds and grasses in the treated field when used according to label directions and subject to the following limitations:

1. Purchaser must notify Elanco promptly if a lack of satisfactory control occurs. Notice must be given within ninety days after the first planting or after application of TREFLAN to the treated crop, whichever occurs later.
2. An Elanco representative must be satisfied that Purchaser used TREFLAN according to the label directions and must visually observe unsatisfactory control of weeds in the field.
3. The Purchaser must provide an Elanco representative with an invoice or other satisfactory record which shows the price and quantity of TREFLAN purchased.
4. Elanco's liability will be limited to a refund of the purchase price of the TREFLAN applied to the acreage on which weed control was not satisfactory or, at the option of the Purchaser, a refund of an equivalent amount of TREFLAN.
5. Void outside the USA.

#### DISCLAIMER OF WARRANTIES

The warranty printed above is the only warranty applicable to this product. All other warranties, expressed or implied, including, but not limited to, any implied warranties of merchantability and fitness for a particular purpose, are disclaimed.

#### LIMITATION OF DAMAGES

Elanco's liability, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the return of the amount of the purchase price of the TREFLAN and under no circumstances shall Elanco be liable for special, indirect or consequential damages.

INHERENT RISKS OF USE

Failure to carefully follow the directions for use of TREFLAN, as well as other factors such as seedling disease, cold weather, deep planting, excessive moisture, high salt concentration or drought, may result in unsatisfactory weed control or crop injury. Reduced yields may result under these conditions.

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MAR 22 1983

L. M. Peterson  
Liance Products Company  
A Division of Eli Lilly & Company  
740 South Alabama Street  
Indianapolis, In. 46202

Dear Mr. Peterson:

Subject: Amendment/Label Revision  
DIEFLAN 30L  
EPA Registration No. 1471-125  
Your Application dated March 10, 1983

The amendment referred to above, submitted in connection with registration under FIFRA is acceptable, provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - a. On page 11, under directions for dry soils, change the language to: "For soils with 2-15% organic matter to 20 pounds per acre previously accepted or suitable data to the date of support the higher 25 pound rate."
  - b. If it is your intention to restrict use of this product to the north central and northwest states as you have indicated, or phrase "registered for use in" on page 1 should be revised to "restricted to use in" or similar wording. Also, references to AZ, CO, CA, NV, OR, UT, WY, ID, and WA should be deleted on page 11 and should be deleted.
  - c. On page 12, change "Tennis" to "Turf," "Turf Field" or "Turf Ground for use."
  - d. On page 14, change "Keep out of rivers, streams, or ponds" to "Do not apply directly to water."

and note that you have deleted the general fair application directions and restrictions (previously appearing under Appendix 1), as well as special instructions such as special incorporation and mixing directions for use in

CONCURRENCES							
SYMBOL ▶							
SURNAME ▶							
DATE ▶							

and incorporation into the label. You may wish to restate this information where appropriate.

2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

Richard A. Mountfort *RAM*  
Product Manager (23)  
Fungicide-herbicide Branch  
Registration Division (15-767)

Enclosure