

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (75-767)
WASHINGTON, DC 20460

EPA REGISTRATION NO.

241-343

DATE OF ISSUANCE

20 MAR 1992

TERM OF ISSUANCE

Conditional

NAME OF PESTICIDE PRODUCT

TRI-4 HF Herbicide

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

American Cyanamid Company
Agricultural Research Division
P.O. Box 400
Princeton, NJ 08543-0400

BEST AVAILABLE COPY

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an endorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others. This product is conditionally registered in accordance with

FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment:

a. Add the phrase "EPA Registration No. 241-343."

b. Submit an acceptable dermal sensitization study (§81-6) within 9 months of the date of this Notice. This study must be conducted in accordance with the rationale stated in the Agency letter and precautionary labeling review dated December 18, 1991.

c. Submit one year storage stability data at ambient warehouse conditions within 15 months of the date of this Notice.

3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1320-1 (12-70)
 SYMBOL
 NAME

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

A stamped copy is enclosed for your records.

Joanne I. Miller
 Product Manager (23)
 Fungicide-Herbicide Branch
 Registration Division (H7505C)

Enclosures

CONCURRENCES

SYMBOL	H7505C						
SURNAME	D. KENNY						
DATE	3/19/92						

TRI-4™ HF
herbicide

EMULSIFIABLE CONCENTRATE

SELECTIVE HERBICIDE
FOR THE PRE-EMERGENCE CONTROL
OF ANNUAL GRASSES AND
BROADLEAF WEEDS

ACTIVE INGREDIENT:

TRIFLURALIN: alpha, alpha, alpha-trifluoro-2,6-dinitro- N,N-dipropyl-p-toluidine	44.1%
INERT INGREDIENTS*:	55.9%
TOTAL	100.0%

*Contains Aromatic Naphtha

Contains 4 pounds of active ingredient per gallon.

EPA Reg. No. 241-

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

WARNING!/AVISO!

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicado ampliamente.

See Inside for Additional Precautionary Statements

See Directions for Use Inside

20 MAR 1992

AMERICAN CYANAMID COMPANY
Agricultural Division
Crop Protection Chemicals Department
Wayne, NJ 07470 ©1991

241-343

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NET CONTENTS: 2.5 Gallons

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

Causes substantial but temporary eye injury and skin irritation. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. When handling or applying, wear protective clothing such as goggles or face shield and rubber gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash separately from non-contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

STATEMENT OF PRACTICAL TREATMENT

- IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.
- IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.
- IF SWALLOWED:** Call a physician or Poison Control Center. Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol.
- IF INHALED:** Remove victim to fresh air. Get medical attention.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treatment areas may be hazardous to aquatic organisms in neighboring aquatic sites. DO NOT contaminate water by disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

DO NOT use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM. Refer to Additional Directions for use of TRI-4 HF and read all directions carefully before applying.

STORAGE AND DISPOSAL

STORAGE. Avoid freezing. Store above 40°F. If frozen, poor weed control may result. DO NOT store near heat or open flame.

PESTICIDE DISPOSAL. DO NOT contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL FOR 2.5 GALLON. DO NOT reuse empty containers. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or 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.

CONTAINER DISPOSAL FOR BULK. Return empty container to point of purchase.

GENERAL INFORMATION

TRI-4 HF is a herbicide which when incorporated into the soil provides long-lasting control of annual grasses and broadleaf weeds; it controls weeds by killing their seeds as they germinate. It does not control established weeds. Incorporation of TRI-4 HF assures effective control regardless of weather conditions and permits shallow cultivation, rotary hoeing and hand hoeing without reducing its weed control activity.

WEEDS AND GRASSES CONTROLLED

GRASSES

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	<i>Panicum dichotom.</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	<i>Panicum maximum</i>
Johnsongrass (Seedling and Rhizome)	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa col.</i>
Raoalgrass (Itchgrass)	<i>Rottboellia exalt.</i>
Sandbur (Burggrass)	<i>Cenchrus incertus</i>
Sprangletop	<i>Leptochloa filifor.</i>
Stinkgrass (Lovegrass)	<i>Eragrostis cilian.</i>
Texas Panicum (Buffalograss, Coloradograss)	<i>Panicum texanum</i>
Wild cane (Shattercane)	<i>Sorghum bicolor</i>
Woolly Cupgrass	<i>Eriochloa villosa</i>

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BROADLEAF WEEDS

Carpetweed	<i>Mollugo verticillata</i>
Chickweed	<i>Stellaria media</i>
Field Bindweed	<i>Convolvulus arvensis</i>
(See instructions on page 34)	
Florida pusley (Florida purslane, Mexican Clover, Pusley)	<i>Richardia scabra</i>
Goosefoot	<i>Chenopodium hybridum</i>
Henbit	<i>Lamium amplexicale</i>
Knotweed	<i>Polygonum aviculare</i>
Kochia (Fireweed)	<i>Kochia scoparia</i>
Lambsquarters	<i>Chenopodium album</i>
Pigweeds (Carelessweed, Prostrate Pigweed, Redroot, Rough Pigweed, Spiny Pigweed)	<i>Amaranthus sp.</i>
Puncturevine (Caltrop)	<i>Tribulus terrestris</i>
Purslane	<i>Portulaca oleracea</i>
Russian thistle (Tumbleweed)	<i>Salsola kali</i>
Stinging nettle (Nettle)	<i>Urtica dioica</i>

TRI-4 HF, in mixture with other products, will control the following additional weeds:

TRI-4 HF/SENCOR¹ OR LEXONE² TANK-MIX
(see Soybean section for Instructions)

In soybean:

Jimsonweed	<i>Datura stramonium</i>
Mallow, Venice (Flower-of-an-hour)	<i>Hibiscum 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 pensylvanicum</i>
Prickly sida (Teaweed, Spiny sida)	<i>Sida spinosa</i>
Velvetleaf (Butterprint, Buttonweed, Cottonweed, Elephant's ear, Indian mallow, Piermarker)	<i>Abutilon theophrasti</i>

Control of cocklebur, morningglory and giant ragweed may be erratic ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and amount and timing of soil moisture. Control may be improved with timely cultivation.

TRI-4 HF/SCEPTER® PREPLANT TANK-MIX OR OVERLAY
(see Soybean section for instructions)

In Soybean:

Cocklebur (Common)**	<i>Xanthium strumarium</i>
Jimsonweed	<i>Datura stramonium</i>
Morningglory (Pitted)	<i>Ipomoea lacunosa</i>
(Smallflower)	<i>Jacquemontia tamnifolia</i>
Mustard (Wild)	<i>Brassica kaber</i>
Nightshade (Eastern Black)*	<i>Solanum nigrum</i>
Pigweeds (Palmer)**	<i>Amaranthus palmeri</i>
(Smooth)**	<i>Amaranthus hybridus</i>
(Tall waterhemp)**	<i>Amaranthus tuberculatos</i>
Poinsettia (Wild)**	<i>Euphorbia hetrophylla</i>
Ragweed (Common)	<i>Ambrosia artemisiifolia</i>
(Giant)*	<i>Ambrosia trifida</i>
Smartweed (Ladysthumb)	<i>Polygonum persicaria</i>
Smartweed (Pennsylvania)	<i>Polygonum pennsylvanicum</i>
Sunflower (Common)	<i>Helianthus annuus</i>
Velvetleaf*	<i>Abutilon theophrasti</i>
Venice Mallow	<i>Hibiscus trionum</i>

*Controlled by preplant incorporated treatments only.

**May also be controlled by preplant incorporation with TRI-4 HF followed by postemergence treatment of SCEPTER.

TRI-4 HF/EPTAM³ TANK-MIX
(see Dry Bean section for Instructions)

In dry bean and potato:

Henbit	<i>Lamium amplexicale</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy	<i>Solanum sarrachoides</i>
Nutsedge (Nutgrass, Purple nutsedge, Yellow nutsedge)	<i>Cyperus sp.</i>
Wild oat	<i>Avena fatua</i>

TRI-4 HF/CAPAROL⁴ TANK-MIX
(see Cotton section for Instructions)

In cotton:

Smartweed	<i>Polygonum pensylvanicum</i>
Prickly sida (Teaweed)	<i>Sida spinosa</i>
Annual morningglory	<i>Ipomoea sp.</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Groundcherry, annual	<i>Physalis sp.</i>
mustard, wild mustard	<i>Brassica kaber</i>
Malva	<i>Malva sp.</i>
Wild oat	<i>Avena fatua</i>

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

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TRI-4 HF/COTORAN⁴ TANK-MIX OR OVERLAY
(see Cotto section for Instructions)

In cotton:

Buttonweed	<i>Abutilon theophrasti</i>
Cocklebur	<i>Xanthium strumarium</i>
Goathead	<i>Tribulus terrestris</i>
Groundcherry, annual	<i>Physalis</i> sp.
Jimsonweed	<i>Datura stramonium</i>
Morningglory, annual	<i>Ipomoea</i> sp.
Prickly sida	<i>Sida spinosa</i>
Ragweed	<i>Ambrosia artemisiifolia</i>
Ryegrass	<i>Lolium</i> sp.
Sesbania	<i>Sesbania exaltata</i>
Sicklepod	<i>Cassia obtusifolia</i>
Smartweed	<i>Polygonum pensylvanicum</i>
Tumbleweed	<i>Amaranthus albus</i>
Velvetleaf	<i>Abutilon theophrasti</i>

TRI-4 HF PREPLANT FOLLOWED BY KARMEX² OVERLAY
(see Cotton section for Instructions)

In cotton:

Dogfennel	<i>Eupatorium capillifolium</i>
Groundcherry, annual	<i>Physalis</i> sp.
Morningglory, annual	<i>Ipomoea</i> sp.
Pennycress	<i>Thlaspi</i> sp.
Ragweed	<i>Ambrosia artemisiifolia</i>
Shepherdspurse	<i>Capsella bursa pastoris</i>
Velvetgrass	<i>Hulcus lanatus</i>
Wild lettuce	LACTUCA SP.
WILD MUSTARD	BRASSICA KABER

TRI-4 HF/VERNAM³ TANK-MIX
(SEE SOYBEAN AND PEANUT SECTIONS FOR INSTRUCTIONS)

IN SOYBEAN AND PEANUT:

MORNINGGLORY, ANNUAL	IPOMOEA SP.
COFFEEWEED	SESBANIA EXALTATA
PURPLE NUTSEDGE	CYPERUS ROTUNDUS
YELLOW NUTSEDGE	CYPERUS ESCULENTUS
VELVETLEAF	ABUTILON THEOPHRASTI

TRI-4 HF/VADEX⁵ TANK-MIX
(SEE PEAS AND WHEAT SECTIONS FOR INSTRUCTIONS)

IN PEAS AND SPRING WHEAT:

WILD OAT	AVENA FATUA
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SOIL PREPARATION

A good soil preparation is essential for best results: destroy existing weeds before herbicide 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.

SOIL TEXTURE

Before application, determine soil texture in order to apply the correct rate. Rates given in this booklet refer to the following soil texture groups:

- Coarse soils: sand, loamy sand, sandy loam
- Medium soils: loam, silty clay loam, silt loam, silt, sandy clay loam
- Fine soils: clay, clay loam, silty clay loam, silty clay, sandy clay, sandy clay loam

Silty clay loam and sandy clay loam soils are transitional 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 DIRECTIONS

TRI-4 HF is an emulsifiable concentrate which must be mixed with water and applied as a spray before or in the same operation as soil incorporation.

GROUND APPLICATION

Apply in 10 to 40 gallons of water/acre (broadcast basis) using any properly calibrated low-pressure sprayer that will uniformly apply the spray. Pour the recommended amount of product into the spray tank during the filling operation and mix thoroughly before spraying. As the amount of water decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily.

Do not apply the herbicide to soils which are wet or in poor condition or to soils which are subject to prolonged periods of flooding.

AERIAL APPLICATION

For best results apply to a dry soil surface at a spray volume of from 5 to 10 gallons/acre. Adjust pump pressure, nozzle arrangements, flying speed and height to provide uniform application. Use markers or flagmen to assure proper application spray widths.

Do not apply when the wind is blowing at a velocity of 5 mph or greater

INCORPORATION

Before planting.

For best results the herbicide must be incorporated within 24 hours after application. A second incorporation is required at any time prior to planting using the equipment in a different direction from the first. Incorporation should place the product into the top 2 or 3 inches of the final seedbed.

Variable weed control may result from delayed incorporation if the herbicide is applied to a wet, warm soil surface or if the wind velocity is 10 mph or higher.

After planting.

When incorporating after planting (check crops approved for incorporation after planting), use P.T.O.-driven equipment or Rolling Cultivators and adjust to till the soil over the seed or throw treated soil toward the crop. Avoid disturbing the seed or mechanically damaging the crop.

In bedded culture.

For effective weed control in bedded culture the product should be incorporated in to the top 2 to 3 inches of the final seedbed.

Knock off beds to planting height before application and incorporation on bedded ground. 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.

Equipment.

For incorporation use machinery which pulverizes large clods and mix the herbicide thoroughly with the soil. Thorough incorporation may be achieved with the following: disc, set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph; field cultivator, set to cut 3 to 4 inches deep and operated at 5 mph or more; rolling cultivator, set to cut 2 to 4 inches deep and operated two times at 6 to 8 mph (adequate for use on coarse or medium textured soils only); bed conditioner, set to cut 2 to 4 inches deep and operated one time at 4 to 6 mph (adequate for use on coarse and medium textured soils only); 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 (they should not be operated at a speed greater than 4 mph).

APPLICATION WITH LIQUID FERTILIZERS

TRI-4 HF may be mixed with most liquid fertilizers. The mixture has provided weed and grass control equal to the same rates of TRI-4 HF applied in water.

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

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TRI-4 HF alone or in tank-mixture may not combine properly with some fluid fertilizer material. Therefore, it is necessary to determine whether a compatibility agent is needed and which agent works properly, testing small quantities before full-scale mixing.

1. Put 1 pt. of fertilizer mixture in a quart jar.
2. Add 1 to 4 teaspoonfuls of the formulation which must be mixed to the liquid fertilizer (depending on the recommended rate/acre).
3. Close jar and agitate until the materials are dispersed evenly in the fertilizer. If the materials do not disperse well, slurry the chemicals in water before adding to the fertilizer.
4. Add 3 to 4 teaspoonfuls of TRI-4 HF to the jar and shake well.
5. Watch the mixture for about 10 minutes. If the mixture does not separate, or if agitation is only required to resuspend, the combination may be used. If the mixture separates, gets very thick or syrupy, do not combine for field application. A compatibility agent is needed.
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.

The use of compatibility agents is especially important when tank mixing emulsifiable concentrates with dry flowables, wettable powders, aqueous suspensions, flowables, liquids or solutions in liquid fertilizers.

If a compatibility agent is needed, add it to the fluid fertilizer before adding the TRI-4 HF alone or in mixture.

Any one of the compatibility agents listed below is helpful in causing liquid concentrates to form non-oiling mixtures with liquid fertilizers. These compatibility agents can be used at rates as low as 1 1/2 to 2 pints per ton of liquid fertilizer and should be mixed well with the fertilizer before adding the liquid concentrate. Read the label on the compatibility agent and follow the directions.

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

*DO NOT use in California

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

Follow normal application procedures to apply and incorporate.

APPLICATION WITH DRY BULK FERTILIZERS

Dry bulk fertilizers may be impregnated or coated with TRI-4 HF. Application of dry bulk fertilizers impregnated with TRI-4 HF has provided weed and grass control equal to the same rates of TRI-4 HF applied in water.

All TRI-4 HF label recommendations regarding rates/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/acre of dry fertilizer impregnated with TRI-4 HF at the recommended rates. Any commonly used dry fertilizer can be used for TRI-4 HF impregnation except coated ammonium nitrate and straight limestone. These materials will not absorb the herbicide. Blends containing mixtures of these materials can be impregnated.

Impregnation.

Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender. Provide uniform spray coverage of TRI-4 HF on to the fertilizer.

Rates.

Check the crop section to determine the rate of TRI-4 HF/acre. See the rate table which follows to determine amount of TRI-4 HF to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be applied/acre.

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 incorporation procedures.

Rate Chart for Impregnating Fertilizer with TRI-4 HF

Fertilizer Rate per Acre	TRI-4 HF added to a ton of fertilizer				
	1 pt.	1 1/2 pts.	2 pts.	3 pts.	4 pts.
200 pounds	5 qts./ ton	7 1/2 qts./ ton	10 qts./ ton	15 qts./ ton	20 qts./ ton
250 pounds	4 qts./ ton	6 qts./ ton	8 qts./ ton	12 qts./ ton	16 qts./ ton
300 pounds	3 1/3 qts./ ton	5 qts./ ton	6 2/3 qts./ ton	10 qts./ ton	13 1/3 qts./ ton
350 pounds	2 3/4 qts./ ton	4 1/4 qts./ ton	5 3/4 qts./ ton	8 1/2 qts./ ton	11 1/2 qts./ ton
400 pounds	2 1/2 qts./ ton	3 3/4 qts./ ton	5 qts./ ton	7 1/2 qts./ ton	10 qts./ ton
450 pounds	2 1/4 qts./ ton	3 1/3 qts./ ton	4 1/2 qts./ ton	6 2/3 qts./ ton	9 qts./ ton

For rates other than those listed above, use the following formula to calculate the amount of TRI-4 HF to be impregnated on a ton of dry bulk fertilizer:

$$\text{Pints of TRI-4 HF X } \frac{1000}{\text{Lbs. fertilizer/acre}} = \text{Quarts TRI-4 HF/ Ton of fertilizer}$$

DIRECTIONS FOR USE

Where applicable, rates are given for Eastern United States and Western United States. The dividing line between Eastern and Western States is the point where the average rainfall/year is a minimum of 20 to 25 inches.

Rates are given for broadcast application; for band application use proportional amount of product.

ALFALFA (Established)

Use restricted to Western U.S. only.

Apply to established alfalfa stands at a broadcast rate/acre of 1 1/2 pts. on coarse soil and 2 pts. on medium and fine soils. Use incorporation equipment that will ensure thorough soil mixing with a minimum of damage to the established alfalfa.

BEANS

DRY BEANS--CASTOR BEANS

Apply and incorporate before planting at the following:

Soil Texture	Broadcast rate/acre	
	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

Fall application.

For dry beans grown in Idaho, Oregon, Washington only, apply any time between October 15 and December 31 at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/4-1 1/2 pts. on medium soil, 1 1/2 pts. on fine soil.

TRI-4 HF/EPTAM TANK-MIX

FOR DRY BEANS

Apply from two days before planting (up to planting in the Eastern U.S.) at the following:

Soil Texture	Broadcast rate/acre		
	TRI-4 HF		EPTAM 7E
	Eastern U.S.	Western U.S.	
Coarse	1 pt.	1 pt.	2 1/2-3 1/2 pts.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.	2 1/2-3 1/2 pts.
Fine	2 pts.	1 1/2 pts.	2 1/2-3 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.	2 1/2-3 1/2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.	2 1/2-3 1/2 pts.

Precautions: This combination should not be used on soybeans, black-eyed peas (beans), lima beans and other flatpodded beans except Romano. Do not use the foliage from a crop treated with this tank-mix for feed or for grazing.

Observe all directions, precautions and limitations on both products' labeling.

GUAR BEANS--MUNGBEANS

Apply and incorporate before planting at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/2 pts. on medium and fine soils.

LIMA BEANS--SNAP BEANS

Apply and incorporate before planting at a broadcast rate/acre of 1 pt. on coarse and medium soils and 1 1/2 pts. on fine soils.

CARROTS

Apply and incorporate before planting at the following:

Soil Texture	Broadcast rate/acre	
	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

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CELERY

h direct-seeded and transplant.

ply and incorporate before planting or transplanting at the following:

Broadcast rate/acre

<u>Soil Texture</u>	<u>Western U.S.</u>
Coarse	1 pt.
Medium	1 1/4-1 1/2 pts.
Fine	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.

COLE CROPS

BROCCOLI, BRUSSELS SPROUT, CABBAGE, CAULIFLOWER

For transplants, apply and incorporate before transplanting at the following:

Broadcast rate/acre

<u>Soil Texture</u>	<u>Eastern U.S.</u>	<u>Western U.S.</u>
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

For direct-seeded, apply and incorporate before planting at the following:

Broadcast rate/acre

<u>Soil Texture</u>	<u>Eastern U.S.</u>	<u>Western U.S.</u>
Coarse	1 pt.	1 pt.
Medium	1 pt.	1 pt.
Fine	1 1/2 pts.	1 pt.
2 to 5% organic matter	1 1/2 pts.	-
5.1 to 10% organic matter	-	1 1/2 pts.

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Direct-seeded cole crops have exhibited marginal tolerance to recommended rates. Stunting or reduced stands may occur.

COTTON

Pre-emergence application. Apply and incorporate before planting, at planting or immediately after planting at the following:

Broadcast rate/acre		
Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2-2 1/2 pts.	2 pts.

When incorporating after planting care must be taken not to disturb the seed.

Post-emergence application.

Apply 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 pre-emergence application.

Fall application.

Any time from October 15 to December 31.

- In Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, SE Missouri bootheel, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas: apply and incorporate at a broadcast rate/acre of 2 pts. on coarse and medium soils and 2 1/2 pts. on fine soil.
- In Arizona, California, Nevada, apply and incorporate at a broadcast rate/acre of 1 1/2 pts. on coarse soil, 2 pts. on medium soil, 2 1/2 pts. on fine soil.
- In states other than those listed above, apply and incorporate at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/2 pts. on medium soil, 2 pts. on fine soil, 1 1/2 pts. on soils with 2 to 5% organic matter, 1.6 to 2 1/2 pts. on soils with 5.1 to 10% organic matter.

Special applications.

- For the control of Fall Panicum in the states of Alabama, Florida, Georgia, North and South Carolina, and Virginia, apply and incorporate at a broadcast rate/acre of 2 pts. on both coarse and medium soils.
- For the control of Rhizome Johnsongrass in all cotton producing states except Arizona and California, apply a double-rate TRI-4 HF program for 2 years in a row.

Applications can be made in spring, any time before planting for two years in a row or between October 15 and December 31 for two years in a row at a broadcast rate/acre of 2 pts. on coarse soil, 3 pts. on medium soil and 4 pts. on fine soil. Proper preparation of the soil before application and deep incorporation is essential for best results. Some Johnsongrass plants may escape: timely cultivation during the crop season is necessary. In the season following a double-rate treatment, plant only rice and those crops for which TRI-4 HF can be applied as a pre-plant treatment or injury may result.

- For the control of Pigweed and seedling Johnsongrass in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, SE Missouri, North and South Carolina, Tennessee and Southern Virginia, apply TRI-4 HF, preplant, at a broadcast rate/acre of 1 to 1 1/2 pts. on coarse soil, 1 1/2 to 2 pts. on medium soil, 2 pts. on fine soil (3 pts. in Louisiana).
- For a more complete control of all listed grasses and weeds in counties along the Texas Gulf Coast (limited to Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller, and Wharton), apply up to 2 weeks before planting at a broadcast rate/acre of 1 1/2 pts. on coarse soil, 2 pts. on medium soil, 3 pts. on fine soil.

Precautions: Cotton should be planted after early season adverse weather conditions have passed especially when using higher rate programs.

TRI-4 HF/CAPAROL TANK-MIX

For cotton grown in California, Arizona, New Mexico and Texas, apply to the flat soil surface before discing at the following:

Soil Texture	Broadcast rate/acre	
	TRI-4 HF	CAPAROL 80W
Coarse	1 pt.	2 lbs.*
Medium	1 1/4-1 1/2 pts.	2 1/2 lbs.
Fine	2 pts.	2 1/2 lbs.

*Do not use on sand and loamy sand soils.

For band applications, the user should use proportionally less.

Carefully follow the procedures on the Caparol label for making a slurry and adding it to a partially filled tank of water. After the Caparol is well mixed add the TRI-4 HF and agitate continuously.

Precautions: Do not use this tank in the cut areas of newly leveled fields, in areas of excess salt and where flooding over the beds is likely to happen.

Crop rotation:

- Cabbage, okra, onion, and peas may be planted in the fall after a spring application of the mixture.
- 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.

Observe all directions, precautions and limitations on both products' labeling.

TRI-4 HF/COTORAN TANK-MIX

Except in Arizona and California.

Apply and incorporate at the following:

Broadcast rate/acre		
Soil Texture	TRI-4 HF	COTORAN 80W
Coarse	1 pt.	1 1/4 lbs.
Medium	1 1/2 pts.	2 lbs.
Fine	2 pts.	2 1/2 lbs.

Use 15-40 gallons of clean water/acre.

Carefully follow the procedures on the Cotoran label for making a slurry and adding it to a partially filled tank of water. After the Cotoran is well mixed add the TRI-4 HF and agitate continuously.

Precautions: Do not plant crops other than cotton on the treated land within 6 months after application of this tank-mix. Do not feed foliage from treated cotton plant or gin trash to livestock. Do not mix with liquid fertilizers.

- In West Texas do not use on sandy, loamy sand or fine sandy loam soils. Do not use on cotton planted in furrows.
- In Arkansas, Louisiana, Mississippi, use 1 lb. of Cotoran in tank-mix with TRI-4 HF on sandy loam soils low in organic matter.
- In New Mexico, do not plant treated land with crops other than cotton until one year after the last application. Do not use on sandy loam soils with less than 1 percent organic matter.

Observe all directions, precautions and limitations on both products' labeling.

COTORAN Overlay: Apply TRI-4 HF as recommended and then Cotoran as a pre-emergence surface treatment at 1 1/4 to 2 1/2 lbs./acre. On light soil and sandy soils low in organic matter, use the lower rate. Refer to Cotoran label for cautions, precautions and instructions.

TRI-4 HF PREPLANT FOLLOWED BY KARMEX OVERLAY

For cotton grown east of the Mississippi River, Arkansas, SE Missouri, Louisiana, Eastern Texas, apply and incorporate TRI-4 HF before planting at usual rates then make a pre-emergence application of Karmex 80W at 0.6 to 1.5 lbs. per broadcast acre.

Precautions: Do not use Karmex on sandy or low organic soils. Do not allow grazing on cotton treated with Karmex.

Refer to Karmex 80W label for additional instructions, cautions, and precautions.

**CUCURBITS
CANTALOUPE, CUCUMBERS, WATERMELONS**

Use restricted to Western U.S. including Texas.

Apply in post-plant emerged at the following:

Broadcast rate/acre

Soil Texture	Texas only	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/4-1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	1 1/2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5 1 to 10% organic matter	2 pts.	2 pts.

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

**GREENS
TURNIPGREENS (for processing), KALE, MUSTARD GREENS**

Apply and incorporate before planting at a broadcast rate/acre of 1 pt. on coarse and medium soils, 1 1/2 pts. on fine soil.

HOPS

Use restricted to Western U.S. only.

Apply and incorporate while the crop is dormant at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/4-1 1/2 pts. on medium soil, 1 1/2 pts. on fine soil and soils with 2 to 10% organic matter.

MINT

Established Peppermint and Spearmint. Use restricted to Oregon, Washington, Idaho. Apply at a rate of 1 pt. on coarse soil, 1 1/4 pt. on medium soil and 1 1/2 pts. on fine soil during the dormant period. Use incorporation equipment that will insure thorough soil mixing with a minimum of damage to the established dormant mint.

OKRA

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

PEANUTS

Spanish peanuts grown in Texas and Oklahoma only.

Apply and incorporate before planting, at planting or immediately after planting at a broadcast rate/acre of 1 pt. on coarse soil. Care should be taken not to disturb the seed when incorporating after planting.

TRI-4 HF/VERNAM TANK-MIX

Apply up to 10 days prior to planting, incorporate immediately after application at a broadcast rate/acre of 1 pt. of TRI-4 HF and 2 1/3 pts. of Vernam 7E.

Observe all directions, precautions and limitations on both products' labeling.

PEAS

ENGLISH PEAS--DRY PEAS.

Apply and incorporate before planting at a broadcast rate/acre of 1 pt. on coarse and medium soils and 1 1/2 pts. on fine soil.

Fall application.

- For dry and English peas grown in Idaho, Oregon and Washington only, apply and incorporate any time between October 15 and December 31 at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/4-1 1/2 pts on medium soil and 1 1/2 pts. on fine soil. Do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding.

TRI-4 HF/VADEX BW TANK-MIX

For peas grown in Idaho, Oregon and Washington only, apply and incorporate up to 3 weeks before planting at the following:

Broadcast rate/acre

Soil Texture	TRI-4 HF	VADEX BW
Coarse	3/4 pt.	1 1/4 qts.
Medium	3/4 pt.	1 1/4 qts.
Fine	1 pt.	1 1/4 qts.

Precautions: Do not apply to lentils. Do not use foliage from peas treated for feed or forage. Do not graze livestock on treated crops.

Observe all directions, precautions and limitations on both products' labeling.

SOUTHERN PEAS

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

PEPPERS

Apply and incorporate before transplanting at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

Do not apply after transplanting.

POTATOES

Not recommended for use in the state of Maine

Apply after planting, before emergence or immediately following dragoff or after the potato plants have fully emerged at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

Care should be taken so that incorporation machinery does not damage potato seed pieces or elongating sprouts. Set incorporation equipment so that bed and furrow will be uniformly covered by the product.

If the layer of TRI-4 HF treated soil is not uniform, potato emergence may be retarded and stem brittleness can occur. When applying and incorporating after potato plants have fully emerged, do not completely cover the foliage with treated soil.

Split application in Idaho, Oregon, Washington.

On all soils apply and incorporate 3/4 pt. before planting and 3/4 pt. after planting when potato plants have fully emerged.

Precautions: Do not apply to soil containing 2% or more organic matter.

TRI-4 HF/EPTAM TANK-MIX

- For potatoes grown in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, apply after planting, but prior to crop emergence. In areas where potatoes are normally dragged off the mixture should be applied and incorporated up to or immediately following dragoff.

Broadcast rate/acre

Soil Texture	TRI-4 HF		EPTAM 7E
	Eastern U.S.	Western U.S.	
Coarse	1 pt.	1 pt.	1 3/4-7 pts.*
Medium	1-1 1/2 pts.	1-1 1/2 pts.	1 3/4-7 pts.*
Fine	1-2 pts.	1-1 1/2 pts.	1 3/4-7 pts.*
2 to 5% organic matter	1 1/2 pts.	1 1/2 pts.	1 3/4-7 pts.*
5.1 to 10% organic matter	2 pts.	2 pts.	1 3/4-7 pts.*

*Use higher rates for nutsedge control.

Precautions: Do not graze or feed forage to livestock from fields treated with this mixture.

- For potatoes grown in Washington, Idaho, Oregon, apply and incorporate before planting at a broadcast rate of 3/4 pts. of TRI-4 HF/acre and 3 1/2 pts. of EPTAM 7E/acre on all soils.

Precautions: Do not use this tank-mixture both before and after planting in the same season. Do not use foliage from treated crops for feed or forage.

Observe all directions, precautions and limitations on both products' labeling.

SAFFLOWER

Apply and incorporate in the spring before planting or in the fall between October 15 and December 31 at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2 pts.
5.1 to 10% organic matter	2-2 1/2 pts.	2-2 1/2 pts.

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Fall application.

For safflower grown in Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming: apply and incorporate anytime between October 15 and December 31 at a broadcast rate/acre of 1 1/2 pts. on coarse soil, 2 pts. on medium soil, 2 1/2 pts. on fine soil.

Precautions: Do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding.

SOYBEAN

Apply and incorporate before planting at the following:

Broadcast rate/acre		
Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2-2 1/2 pts.*	2 pts.

*except charcoal soils in Arkansas, Louisiana, Mississippi (see below).

Charcoal soils in Arkansas, Louisiana, Mississippi.

Newly cleared land often contains high organic matter (4 to 10%) and charcoal which results from burning debris. This tends to bind TRI-4 HF reducing its weed control activity. Higher product rates are therefore necessary, but increased rates can cause crop injury if charcoal or organic matter is not present. Apply and incorporate at a broadcast rate/acre of 2-2 1/2 pts. on coarse soil, 2 1/2 pts. on medium soil, 3 pts. on fine soil.

Fall application.

Apply anytime between October 15 and December 31.

- In Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, SE Missouri bootheel, North Carolina, Oklahoma, South Carolina, Tennessee, Texas: apply and incorporate at a broadcast rate/acre of 2 pts. on coarse and medium soils and 2 1/2 pts. on fine soil.
- In Eastern United States other than those listed above: apply and incorporate at a broadcast rate/acre of 1 pt. on coarse soil, 1 1/2 pts. on medium soil and 2 pts. on fine soil, 1 1/2 pts. on coarse soil with 2 to 5% organic matter, 2 to 2 1/2 pts. on soils with 5.1 to 10% organic matter.

Precautions: Do not apply to soils which are wet or subject to prolonged periods of flooding or where rice was grown the previous year.

Special applications.

- For the control of Fall Panicum in Alabama, Florida, Georgia, North and South Carolina, Virginia: apply at a broadcast rate/acre of 2 pts. on both coarse and medium soils.
- For more complete control of Pigweed and seedling Johnsongrass in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, SE Missouri, North and South Carolina, Tennessee, S. Virginia: apply at a broadcast rate/acre of 1-1 1/2 pts. on coarse soil, 1 1/2-2 pts. on medium soil, 2 pts. on fine soil (3 pts. in the State of Louisiana).
- For more complete weed control in the Texas Gulf Coast (limited to the following counties: Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller, and Wharton): apply up to 2 weeks before planting at a broadcast rate/acre of 1 1/2 pts. on coarse soil, 2 pts. on medium soil, 3 pts. on fine soil.
- For suppression or partial control of Red Rice in Arkansas, Louisiana, Mississippi, Texas: apply as directed at double the normal rate the first year and at the normal rate the second year. Apply and incorporate anytime in the spring before planting at the following:

Broadcast rate/acre

Soil Texture	1st Year	2nd Year
Coarse	2 pts.	1 pt.
Medium	3 pts.	1 1/2 pts.
Fine	4 pts.	2 pts.
2 to 5% organic matter	3 pts.	1 1/2 pts.
5.1 to 10% organic matter	4 pts.	2-2 1/2 pts.

If a combination of high organic matter and charcoal are present apply in the second year the rates labeled for charcoal soils in Louisiana, Arkansas and Mississippi (1 1/2 - 2 1/2 pts. on coarse soil, 2 1/2 pts. on medium soil, 3 pts. on fine soil).

Crop rotation: Plant only those crops for which TRI-4 HF has been registered as a preplant treatment.

Precautions: Do not plant rice the second year.

- For the control of Rhizome Johnsongrass in Eastern United States and Texas. Apply in a row for two consecutive years according to the program that best fits your cultural practices:

- * as spring application, anytime in spring before planting,
- * as fall application, between October 15 and December 31,
- * as split application, directed under both spring and fall applications.

Broadcast rate/acre

Soil Texture	Spring or Fall	Split Spring and Fall
Coarse	2 pts.	1 pt.
Medium	3 pts.	1 1/2 pts.
Fine	4 pts.	2 pts.
2 to 5% organic matter	3 pts.	1 1/2 pts.
5.1 to 10% organic matter	4 pts.	2 pts.

Proper preparation of the soil before application and deep incorporation are very important for best results. Some Johnsongrass plants may escape. Timely cultivations during the crop season are necessary.

- For the control of Wild Cane (shattercane). Wild cane 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 the increased rates of TRI-4 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 before planting at a broadcast rate/acre of 1 pt. on coarse soil, 2 pts. on medium soil, 2 1/2 pts. on fine soil.

Incorporation. Deep incorporation is essential to good wild cane control. Incorporate 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.

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 TRI-4 HF is used according to these recommendations.

TRI-4 HF/SENCOR OR LEXONE TANK-MIX

- For the control of grasses and weeds controlled by TRI-4 HF alone plus additional weeds listed for the mixture, apply from two weeks before planting up to planting at the following:

Broadcast rate/acre

Soil Texture	TRI-4 HF	SENCOR 50WP/4 or LEXONE 50WP/4L
Coarse	1 pt.	1/2 lb./pt.
Medium	1 1/2 pts.	3/4 lb./pt.
Fine	2 pts.	1 lb./pt.

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

OR

Soil Texture	TRI-4 HF	SENCOR (dry flowable) or LEXONE (dry flowable)
Coarse	1 pt.	1/3 lb.
Medium	1 1/2 pts.	1/2 lb.
Fine	2 pts.	2/3 lb.

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

Precautions: Do not plant any crop other than soybeans within 4 months after treatment. Over application, uneven application or improper soil incorporation can result in erratic weed control or crop injury. Seedling 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 application of this tank-mix.

For the control of Rhizome Johnsongrass.

Apply up to two weeks before planting for two consecutive years at the following:

Broadcast rate/acre

Soil Texture	TRI-4 HF	SENCOR 50WP/4 or LEXONE 50WP/4L
Coarse	2 pts.	1/2 lb./pt.
Medium	3 pts.	3/4 lb./pt.
Fine	4 pts.	1 lb./pt.

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

OR

Soil Texture	TRI-4 HF	SENCOR (dry flowable) or LEXONE (dry flowable)
Coarse	2 pts.	1/3 lb.
Medium	3 pts.	1/2 lb.
Fine	4 pts.	2/3 lb.

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

Precautions: Do not use the foliage from soybeans for feed or forage.

Observe all directions, precautions, limitations and mixing procedures on both products' labeling.

TRI-4 HF PREPLANT + SENCOR OR LEXONE OVERLAY

Apply TRI-4 HF as a preplant incorporated herbicide. As a separate operation make a single application of Sencor or Lexone as either band or broadcast spray during planting or as a separate operation after planting but before soybeans emerge.

(Rates are given according to the use of Sencor or Lexone respectively.)

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Broadcast rate/acre

SENCOR 50WP/4

or

LEXONE 50WP/4L

Soil Texture	TRI-4 HF	Post-plant/Preemergence
Coarse	1 pt.	3/4-1 or 3/4 lbs./pts.
Medium	1 1/2 pts.	3/4 -1 1/2 or 3/4-1 lbs./pts.
Fine	2 pts.	1-1 3/4 or 1 lbs./pts.

Do not apply Sencor to coarse soils (sandy loam and loamy sand) containing less than 2% organic matter. Do not apply Lexone to sand or soils with less than 1/2% organic matter.

OR

SENCOR (dry flowable)

or

LEXONE (dry flowable)

Soil Texture	TRI-4 HF	Post-plant/Preemergence
Coarse	1 pt.	1/2-2/3 or 1/2 lb./pt.
Medium	1 1/2 pts.	1/2-1 or 1/2-2/3 lb./pt.
Fine	2 pts.	2/3-1 1/6 or 2/3 lb./pt.

Do not apply Sencor to coarse soils (sandy loam and loamy sand) containing less than 2% organic matter.

Do not apply Lexone to sand or soils less than 1/2% organic matter.

Precautions: Do not use Lexone or Sencor on Tracy, Semmes, Altona, Vansoy or Coker 102 soybeans because these varieties are sensitive to these products. Do not use treated vines for feed or forage. Seed must be planted at least 1 1/2 inches below the soil surface but not more than 2 inches before a Sencor or Lexone application.

Do not apply Sencor or Lexone more than once per season.

Do not replant areas treated with Sencor or Lexone to any crops other than soybean within 4 months after treatment.

Observe all directions, precautions and limitations on all products' labeling.

**TRI-4 HF/SCEPTER TANK-MIX
OR OVERLAY**

Tank-mix: Apply as a preplant incorporated treatment. Incorporate into the soil within 24 hours after application and plant soybeans within 45 days after treatment. Use equipment that provides uniform 2 inch incorporation.

Broadcast rate/acre

Soil Texture	TRI-4 HF	SCEPTER
Coarse	1 pt.	2/3 pt.
Medium	1 1/2 pts.	2/3 pt.
Fine	2 pts.	2/3 pt.

Preplant Overlay: Apply and incorporate TRI-4 HF as recommended and then follow a preplant surface treatment with SCEPTER at 2/3 pt./acre up to 45 days prior to planting of soybeans.

Postemergence Overlay: Apply TRI-4 HF as a preplant incorporated herbicide followed by postemergence overlay treatment with SCEPTER at 2/3 pt./acre. For best results, overlay should be applied when the weeds are actively growing but no more than 2 inches in height.

Follow recommended soil preparation and application procedure for TRI-4 HF and SCEPTER. Irrigation or rainfall sufficient to moisten soil to a depth of 2 inches is necessary to activate SCEPTER.

Precautions: SCEPTER plantback restrictions require--Do not plant rice or small grains within 4 months of application. Do not plant corn, edible beans, grain sorghum, peanuts or tobacco within 11 months of application. Do not plant crops other than those listed above within 18 months of application. Consult SCEPTER label for more specific plantback restrictions. Observe all precautions and limitations on the SCEPTER label.

TRI-4 HF/VERNAM TANK-MIX

Apply up to 10 days prior to planting at the following:

Broadcast rate/acre

Soil Texture	TRI-4 HF	VERNAM 7E
Coarse	1 pt.	1 3/4-2 1/3 pts.
Medium	1 1/2 pts.	2 1/3-3 pts.*
Fine	2 pts.	3-3 1/2 pts.

*Use higher rates for nutsedge, wild cane and velvetleaf control.

Observe all directions, precautions and limitations on both products' labeling.

SUGAR BEETS

Apply as a broadcast, overtop spray to plants immediately after blocking or thinning when plants are between 2 and 5 inches tall. Exposed beet roots should be covered with soil prior to application to reduce possibilities of girdling. Care should be taken that incorporation machinery does not damage the sugar beets taproot.

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	1 1/2 pts.	1 1/2 pts.

Special application.

- Incorporation with a tine-tooth harrow in California, Colorado, Idaho, Kansas, Montana, Nebraska, Oregon, Texas, Utah, Washington, Wyoming.

A properly operated tine-tooth harrow can provide adequate incorporation of the herbicide for effective weed control in sugar beets.

Operate the tine-tooth harrow two 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 (in Eastern United States only)

Apply and incorporate twice a year at a broadcast rate/acre of 2 to 4 pts. for all soil textures. Make the application in the fall on firmly packed beds immediately after the seed pieces are planted.

Make the 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.

Plant and Ratoon Cane (grown in Louisiana and Texas only)

Apply and incorporate at a broadcast rate/acre of 2 to 4 pts. for all soil textures. Make application in the spring from before or shortly after the cane emerges up to layby. Make application after the beds have been shaved or false shaved. Loosen rain-packed bed 2 to 3 inches deep before application. Care should be taken so that incorporation machinery does not damage seed pieces or emerging roots.

Post-plant in Hawaii (only for control of most annual grasses including guineagrass)

Apply to the surface after planting (for plant cane) or after harvesting (for ratoon cane) before weeds and cane emerge at a broadcast rate/acre of 6 to 8 pts. for all soil textures. In plant cane the beds should be formed or rolled before application. In ratoon cane the crop residue should be removed before application. Apply just before anticipated rainfall or sprinkle irrigate immediately after application.

Itchgrass control (in Louisiana only)

Apply and incorporate on either plant or ratoon cane at a broadcast rate/acre of 4 pts. for all soil textures. Apply in the spring from before or shortly after the cane emerges up to layby. Follow directions above for sugarcane layby application in Louisiana and Texas.

SUNFLOWER

Apply and incorporate in the spring or in the fall between October 15 and December 31 at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1.2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2-2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

TOMATOES

For transplant, apply and incorporate before transplanting at the following:

Broadcast rate/acre

Soil Texture	Eastern U.S.	Western U.S.
Coarse	1 pt.	1 pt.
Medium	1 1/2 pts.	1 1/4-1 1/2 pts.
Fine	2 pts.	1 1/2 pts.
2 to 5% organic matter	1 1/2 pts.	1 1/2-2 pts.
5.1 to 10% organic matter	2 pts.	2 pts.

For direct-seeded tomatoes, apply and incorporate to soil between the rows and beneath the plants.

TREES AND VINEYARDS

EASTERN U.S.

- For new planting of vineyards, citrus and pecan trees, apply and incorporate before planting at the following:

Broadcast rate/acre

<u>Soil Texture</u>	
Coarse	1 pt.
Medium	1 1/2 pts.
Fine	2 pts.
2 to 5% organic matter	1 1/2 pts.
5.1 to 10% organic matter	2 pts.

- For non-bearing established plantings of citrus and pecan trees and bearing plantings of grapefruit, lemon, orange, pecan, tangelo, tangerine trees, apply at a broadcast rate/acre of 2 to 4 pts. for all soil textures.

Apply as a directed spray to soil around the trees and use incorporation methods not injurious to the trees. 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 area, apply twice a year at an interval of approximately 4 to 6 months.

WESTERN U.S.

- For new plantings of almond, apricot, citrus, nectarine, peach, pecan, walnut trees, apply and incorporate before planting at the following:

Broadcast rate/acre

<u>Soil Texture</u>	
Coarse	1 pt.
Medium	1 1/4-1 1/2 pts.
Fine	1 1/2 pts.
2 to 5% organic matter	1-1 1/2 pts.
5.1 to 10% organic matter	2 pts.

- For new plantings of vineyards, apply before planting at the following:

Broadcast rate/acre

Soil Texture	
Coarse	1-1 1/2 pts.
Medium	1 1/2-3 pts.
Fine	3-4 pts.
2 to 10% organic matter	3-4 pts.

Do not use more than 2 pts./acre on heat-treated vines.

- For post-plant applications on bearing and non-bearing established plantings of vineyards, almonds, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine and walnut trees, apply at a broadcast rate/acre of 2 to 4 pts. for all soil textures.
- 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.
- For continued weed control in citrus trees, apply twice a year at an interval of about 4 to 6 months.
- In both the Eastern and Western U.S., if crops are planted between the trees or vines, label directions for those specific crops apply to the area which is interplanted.

Special application.

- For 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.

Work the soil thoroughly to bring the rhizomes nearer the surface. Apply for two years in a row at a broadcast rate/acre of 4 pts. on all soil textures each year.

Incorporate thoroughly with a disc set to cut 4 to 6 inches deep and operate 2 times at 4 to 6 mph.

Some Johnsongrass plants will escape. Timely cultivations are necessary.

Precautions: Do not use the 4 pts. rate on new plantings; do not apply to vineyards within 6 months of harvest; do not interplant orchards or vineyards with other crops; if the TRI-4 HF treated vineyards and orchards are diverted to other crop uses, plant only those crops for which TRI-4 HF has been registered as a preplant treatment.

- For Field Bindweed control in vineyards, almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine, and walnut trees in California only.

Apply in the spring with specially designed spray blade which applies at a soil depth of 4 to 6 inches at a broadcast rate/acre of 4 pts. on all soil textures in 40-80 gallons of water/acre.

Destroy all weeds and grasses with soil tillage before applying.

Precautions: Some soils develop cracks as they dry after rainfall or irrigation and Field Bindweed may emerge. Prevent or eliminate cracks by shallow discing or other tillage.

WHEAT

WINTER WHEAT grown in Idaho, Montana, Oregon and Washington.

Apply any time during a period from 3 weeks up to immediately prior to planting at a broadcast rate/acre of 1 1/2 pts. on coarse and medium soils and 2 pts. on fine soils. Incorporate, with a flexible tine-tooth harrow set to cut 1 to 2 inches deep and operate at 3 to 6 mph, one time within 24 hours after application and a second time, in a different direction, prior to planting.

WINTER WHEAT fallow soil application in Washington and Oregon. Apply any time from May to September prior to the fall planting at a broadcast rate/acre of 1 1/2 pts. on coarse and medium soils and 2 pts. on fine soil.

Incorporate, with a flexible tine-tooth harrow set to cut 1 to 2 inches deep and operate at 3 to 6 mph, one time within 24 hours after application and a second time, in a different direction, prior to planting.

SPRING WHEAT, DURUM

Apply as a postplant incorporated treatment, after seeding but before the crop emerges, to control foxtail at a broadcast rate/acre of 1 pt. on coarse and medium soils and 1 1/2 pts. on fine soil. Incorporate using a flex-tine or diamond harrow operating two times in different directions at 5 mph, 1 to 1 1/2 inches deep.

TRI-4 HF may be fall applied for foxtail/pigeongrass control in spring wheat, durum and barley planted the following spring. TRI-4 HF may be applied to ground that has a manageable trash level, has been fallowed or pre-tilled. Apply any time between October 15 and December 31 at a broadcast rate/acre of 1 pt. on coarse or medium soils and 1 1/2 pts. on fine soil. For the incorporation use: chisel plow (for the first pass only) operating at 4 to 6 mph, set to cut at 4-5 inches deep; tandem disc, operating at 4 to 6 mph, 3-4 inches deep; field cultivator, operating at 5 mph, 3-4 inches deep.

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

SPECIAL PRECAUTIONS

Applied according to directions and under normal growing conditions TRI-4 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.

Special precautions must be taken:

- In the Western United States (Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming): to avoid crop injury do not plant sugarbeets, red beets or spinach for 12 months after TRI-4 HF application or for 14 months after a fall application of the product.

Do not plant sorghum, corn, oats for 14 months after spring application or for 16 months after fall application. If land has not been irrigated, do not plant any of these crops for 18 months after spring application or for 20 months after fall application.

- In the Western United States (Kansas, Nebraska, North Dakota, Oklahoma, South Dakota and Texas in those areas where at least 25 inches of irrigation or rainfall was used to produce the crop): do not plant sorghum or oats for 12 months after the herbicide application. If less than 25 inches of 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 sugarbeets where spring application was made the previous season.
- In Florida only: do not plant vegetable crops other than those listed in the label within 5 months following the application of TRI-4 HF.

Use of TRI-4 HF herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associate with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Buyer's exclusive remedy and American Cyanamid Company's exclusive liability, whether in contract, tort, negligence, strict liability or otherwise, shall be limited to repayment of the purchase price of TRI-4 HF. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

USES WITH OTHER PRODUCTS (TANK-MIXES)

This product is not to be used in combination with any other product except as especially recommended in writing by AMERICAN CYANAMID COMPANY and AMERICAN CYANAMID COMPANY (and any other seller) shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically recommended. If used in a combination recommended by AMERICAN CYANAMID COMPANY, the liability of AMERICAN CYANAMID COMPANY (and any other seller) shall in no manner extend to any damage, loss, or injury not directly caused by the inclusion of the AMERICAN CYANAMID COMPANY product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the product.

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