# TRIFLURALIN 60D

A preemergent herbicide for control of annual grasses and broadleaf weeds

#### **ACTIVE INGREDIENT:**

INERT INGREDIENTS: 40.0%

# KEEP OUT OF REACH OF CHILDREN

# DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Inside Booklet for Additional Precautions and Directions for Use.

EPA REG. NO. 5905-

EPA EST. NO.

# ACCEPTED

MAY 20 1996

Under the Federal Insecticide Fungicide, and Redenticide Act as amended, for the pesticide PA Rog. No.

NET CONTENTS:

MANUFACTURED BY HELENA CHEMICAL COMPANY **MEMPHIS, TN 38119** 

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

# **DANGER**

Corrosive. Causes irreversible eye damage. Due to the corrosive nature, may be harmful or fatal if swallowed. Harmful if inhaled or absorbed through skin. Do not get in eyes. Avoid breathing dust or spray mist and contact with skin or clothing.

#### STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with steady gentle stream of water for 15 minutes.

**IF SWALLOWED:** 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. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

Note to Physican: Probable mucosal damage may contraindicate the use of gastric lavage.

# PERSONAL PROTECTIVE EQUIPMENT

# Applicators and other handlers must wear:

Long-sleeved shirt and long pants

Waterproof gloves

Shoes plus socks

Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

# **Engineering Controls Statements**

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

#### USER SAFETY RECOMMENDATIONS

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. ''Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish. Do not apply directly to water, 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 when disposing of equipment washwaters.

#### **CHEMIGATION PROHIBITION**

Do not apply this product through any type of irrigation system.

#### **DIRECTIONS FOR USE**

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

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

# AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

Coveralls

Waterproof gloves

Shoes plus socks

Protective eyewear

# NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep children and pets out of treated area until sprays have dried.

Storage: Store in a cool, dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Handle in accordance with information given under PRECAUTIONARY STATEMENTS. In the event of spillage, scrape up spillage. If spillage is not suitable for use, dispose of in accordance with information given under DISPOSAL. Repackage and relabel useable product in a sound container. In case of fire or other emergency, report at once by toll-free telephone to Chemtrec: 800-424-9300.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **GENERAL INFORMATION**

TRIFLURALIN 60D is a pre-emergence herbicide which is incorporated into the soil to provide long-lasting control of annual grasses and broadleaf weeds. TRIFLURALIN 60D controls weeds by killing their seeds as they germinate. It does not control established weeds. Incorporation 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

Annuar didegrass
Barnyardgrass (Watergrass)
Brachiaria (Signalgrass)
Bromegrass (Cheatgrass, Downy brome)
Cheat (Chess)
Crabgrass (Large crabgrass, Smooth crabgrass)
Fall panicum
Foxtails (Bottlegrass, Bristlegrass,
Giant foxtail, Green foxtail, Pigeongrass,
Robust foxtail, Yellow foxtail)
Goosegrass (Silver crabgrass, Silvergrass,
Wiregrass, Yardgrass)
Guineagrass
Johnsongrass (Seedling and Rhizome)
Junglerice
Raoulgrass (Itchgrass)
Sandbur (Burgrass)
Sprangletop
Stinkgrass (Lovegrass)
Texas panicum (Buffalograss, Coloradograss)
Wild cane (Shattercane)
Wooly Cupgrass

Annual bluegrass

Brachiaria sp. Bromus tectorum Bromus secalinus Digitaria sp. Panicum dichotom. Setaria sp. Eleusine indica Panicum maximum Sorghum halapense Echinochloa col. Rottoboellia exalt. Cenchrus incertus Leptochloa filifor Eragrostis cilian. Panicum texanum Sorghum bicolor

Erichloa villosa

Poa annua Echinochloa sp. 4

#### **BROADLEAF WEEDS**

Carpetweed Mollugo verticillata
Chickweed Stellaria media
Field Bindweed Convolvulus arvensis
Florida pusley (Florida purslane, Richardia scabra

Mexican clover, Pusley)

Goosefoot Chenopodium hybridum
Henbit Lamium amplexicale
Knotweed Polygonum aviculare
Kochia (Fireweed) Kochia scoparia
Lambsquarters Chenopodium album

Pigweeds (Carelessweed, Prostrate pigweed, Amaranthus sp.

Redroot, Rough pigweed, Spiny pigweed)

Puncturevine (Caltrop)

Tribulus terrestris

Purslane Portulaca oleracea Russian thistle (Tumbleweed) Salsola kali Stinging nettle (Nettle) Urtica dioica

TRIFLURALIN 60D will not control certain tolerant weeds such as Cocklebur, Jimsonweed, Ragweed, Velvetleaf, and Nutsedge.

#### TANK MIXES

TRIFLURALIN 60D, in mixture with other products, will control the following additional weeds:

# TRIFLURALIN 60D/SENCOR® OR LEXONE® TĀNK MIX (See Soybean section for instructions)

#### In soybean:

Jimsonweed Datura stramonium
Mallow, Venice (Flower-of-an-hour) Hibiscum trionum
Mustard, wild (Charlock, Field Mustard) Brassica kaber
Prickly sida (Teaweed, Spiny sida) Sida spinosa
Ragweed, common Ambrosia artemisiifolia
Sesbania, hemp (Coffeebean, Indigo) Sesbania exaltata

Smartweed, annual (Pennsylvania Polygonum pensylvanicum smartweed, Smartweed)

Velvetleaf (Butterprint, Buttonweed, Abutilon theophrasti Cottonweed, Elephant's ear,

Indian mallow, Piermarker)

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.

# TRIFLURALIN 60D/EPTAM® TANK MIX (See Drybean section for instructions)

# In drybean and potato:

Henbit

Lamium amplexicale Solanum nigrum

Nightshade, black Nightshade, hairy

Solanum sarrachoides

Nutsedge (Nutgrass, Purple nutsedge,

Cyperus sp.

Yellow nutsedge)

Wild oat

Avena fatua

# TRIFLURALIN 60D/CAPAROL® TANK MIX (See Cotton section for instructions)

### In cotton:

Smartweed

Polygonum pensylvanicum

Prickly sida (Teaweed) Annual morningglory

Sida spinosa Ipomoea sp.

Ragweed, common

Ambrosia artemisiifolia

Groundcherry, annual Mustard, wild

Physalis sp. Brassica kaber

Malva

Malva sp.

Wild pat

Avena fatua

The tank mix also controls shallow germinating seedlings of Cocklebur and Coffeeweed.

# TRIFLURALIN 60D/COTORAN® TANK MIX OR OVERLAY (See Cotton section for instructions)

#### In cotton:

Cocklebur

Xanthium strumarium

Goathead

Tribulus terrestris

Groundcherry, annual

Physalis sp.

Jimsonweed

Datura stramonium

Morningglory, annual

Ipomoea sp.

Prickly sida

Sida spinosa

Ragweed

Ambrosia artemisiifolia

Lolium sp.

Ryegrass

Sesbania

Sesbania exaltata Cassia obtusifolia

Sicklepod

Smartweed

Polygonum pensylvanicum

Tumbleweed Velvetleaf

Amaranthus albus Abutilon theophrasti

# TRIFLURALIN 60D PREPLANT FOLLOWED BY KARMEX® OVERLAY (See Cotton section for instructions)

#### In cotton:

Dogfennel Eupatorium capillifolium

Groundcherry, annual Physalis sp.

Morningglory, annual Ipomoea sp.

Pennycress Thlaspi sp.

Ragweed - Ambrosia artemisiifolia Sheperdspurse - Capsella bursa pastoris

VelvetgrassHulcus lanatusWild lettuceLactuca sp.Wild mustardBrassica kaber

# TRIFLURALIN 60D/VERNAM® 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

#### SOIL PREPARATION

A good soil preparation is essential for best results. Destroy existing weeds before herbicide application. Chop and thoroughly mix crop residue into the soil to a depth of at least 4 to 6 inches by deep plowing or discing before application. Use machinery that breaks up large clods. Before application 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 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.

#### MIXING AND APPLICATION DIRECTIONS

TRIFLURALIN 60D is a water dispersible dry formulation which must be mixed with water and applied as a spray before or in the same operation as soil incorporation.

**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 DIRECTIONS

**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 distributing the seed or mechanically damaging the crop.

IN BEDDED CULTURE: For effective weed control in bedded culture the product should be incorporated into the top 2 to 3 inches of the final seedbed. Knock off beds to planting height before application and incorporation on bedded ground. 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 and 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

TRIFLURALIN 60D may be mixed with most liquid fertilizer materials. The combination of TRI-FLURALIN 60D with solutions and suspension-type fertilizers provides weed and grass control equal to the same rates of TRIFLURALIN 60D applied in water. Follow TRIFLURALIN 60D label recom-

mendations regarding rates per acre, crops, incorporation directions, special instructions, cautions, and special precautions.

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

COMPATIBILITY TESTING: TRIFLURALIN 60D alone or in a tank mixture with dry flowables, wettable powders (WP), aqueous suspensions (AS), flowables (F), liquids (L), or solutions (S) may not combine properly with some fluid fertilizer materials. Small quantities should always be tested before full-scale mixing. This will determine whether a compatibility agent is needed, and which agent does the best job. There are many adjuvants on the market which were not designed for use with liquid fertilizers. Use the following test to select the correct agent for your mixture.

- 1. Put 1 pint of the liquid fertilizer in a quart jar.
- 2. Add 1 to 4 teaspoon(s) of the dry flowable, WP, AS, F, or L formulation (depending on the recommended rate per acre) to the liquid fertilizer. Close jar and agitate until the materials are dispersed evenly in the fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
- 3. After dispersing the materials, add 3 to 4 teaspoons of TRIFLURALIN 60D to the jar and shake well. Add solution herbicides to the mixture last and agitate. Observe the jar for about 10 minutes. If the materials rise to the surface and form a thick layer which will not redisperse when agitated, a compatibility agent is needed. If the mixture is easily redispersed to its original state with slight agitation, no agent is needed but good agitation must be provided in the fertilizer spray tank.
- 4. If the need for a compatibility agent is indicated: Use a clean quart jar; start at Step 1 above. Add 1/2 teaspoon of the compatibility agent to the liquid fertilizer; mix well; then repeat Steps 2 and 3.

Blendex has been thoroughly tested and approved as an effective compatibility agent which will enable the mixture to remain uniform with little or no separating for one half hour or longer. If slight separation does occur, 2 to 3 inversions of the jar should give a uniform remix. If curds form which will not redisperse, more Blendex or another agent, such as INDUCE PH, should be tried.

Use a clean jar for each test. The compatible mixture will have a uniform appearance and will be relatively easy to keep mixed with gentle agitation of the jar.

LIQUID FERTILIZER MIXING INSTRUCTIONS: Dry products, such as TRIFLURALIN 60D, can be mixed with liquid fertilizers. In all cases, continuous agitation is required to prevent the TRIFLURALIN 60D from forming non-dispersible clumps. When necessary, a compatibility agent can be used to enhance dispersion (see COMPATIBILITY TESTING). The use of compatibility agents is especially important when tank mixing water dispersible granules with dry flowables (DF), wettable powders (WP), aqueous suspensions (AS), flowables (F), liquids (L), or solutions (S) in liquid fertilizer. If the dispersion is not uniform and the TRIFLURALIN 60D rises to the surface of

the fertilizer, the TRIFLURALIN 60D may combine with the wettable powder, flowable, or suspension to form lumps which are difficult to redisperse. Any one of a number of compatibility agents is helpful in causing water dispersible granules to form dispersed 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 water dispersible granules. Read the label on the compatibility agent and follow the directions. Phosphate ester based adjuvants such as BLENDEX have performed well in these applications.

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

INCORPORATION: Follow normal TRIFLURALIN 60D incorporation procedures.

#### **CROP RECOMMENDATIONS**

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 proportionally less amount of product.

# ALFALFA (Established)

Use restricted to Western U.S. only.

Apply to established alfalfa stands at a broadcast rate/acre of 1-1/4 lbs. on coarse soil and 1-2/3 lbs. on medium and fine soils. Use incorporation equipment that will ensure thorough soil mixing with a minimum of damage to the established alfalfa.

# ASPARAGUS (Established)

Follow recommended soil preparation, application, and incorporation procedures for TRIFLURALIN 60D.

TRIFLURALIN 60D can be applied to established asparagus as a single or as a split application. In the winter or early spring, apply TRIFLURALIN 60D to asparagus after ferns are removed but before spears emerge. Or, apply after harvest in the late spring or early summer before ferning begins. TRIFLURALIN 60D will suppress volunteer seedling asparagus and field bindweed if the following recommended rates and application schedules are used.

Follow recommended soil preparation, application, and incorporation procedures for TRIFLURALIN 60D.

# Broadcast Rates/Acre

### TRIFLURALIN 60D

	Split Application	Single Application
	Before After	Before After
Soil Texture	Harvest + Harvest	Harvest or Harvest
	(pounds)	(pounds)
Coarse	7/8 + 7/8	1-2/3 or 1-2/3
Medium	1-1/4 + 1-1/4	2-1/2 or 2-1/2
Fine	1-2/3 + 1-2/3	3-1/3 or 3-1/3

<sup>\*</sup> In any single calendar year, the maximum TRIFLURALIN 60D to apply is 1-2/3 pounds per acre on coarse soils; 2-1/2 pounds on medium soils; and 3-1/3 pounds on fine soils.

## **BARLEY - TRIFLURALIN 60D ALONE**

TRIFLURALIN 60D is recommended as a postplant incorporated treatment to control foxtail (pigeongrass).

Apply TRIFLURALIN 60D at a broadcast rate of 7/8 pound per acre on coarse and medium soils and 1-1/4 pounds on fine soils.

Plant 2 to 3 inches deep in a well-tilled seedbed. Apply TRIFLURALIN 60D after seeding but before the crop emerges. To incorporate, use flextine or diamond harrows operated two times in different directions, at speeds of at least 5 mph. Incorporate by operating equipment 1 to 1-1/2 inches deep. Application and the first incorporation should be done in the same operation if possible. Both incorporations must be done within 24 hours.

# BARLEY (FALL APPLICATION) - FOXTAIL/PIGEONGRASS CONTROL

TRIFLURALIN 60D may be fall applied for foxtail/pigeongrass control in barley planted the following spring. TRIFLURALIN 60D may be applied to ground that has a manageable trash level, has been fallowed or pre-tilled. The first incorporation is required within 24 hours after application. A second incorporation is required prior to planting to destroy emerged weeds and to ensure an even distribution of TRIFLURALIN 60D treated soil.

	Broadcast Rate	s/Acre	
Soil Text	ure	TRIFLURALIN 60D (pounds)	
Coarse	<u> </u>	7/8	
Medium		7/8	
Fine		1-1/4	

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 the first pass only. Operates at 4-5 inches deep at 4-6 mph. A chisel plow is defined as having 3 rows of up to 18-inch sweeps on no greater than 12-inch centers. Stagger sweeps so that no soil is left unturned.
- 2. Tandem disc: Operates 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.

Planting Directions - Barley should be approximately 2 inches deep.

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

#### BARLEY - TRIFLURALIN 60D/FAR-GO TANK MIX

TRIFLURALIN 60D/Far-Go applied as a postplant incorporated treatment will control foxtail (pigeongrass) and wild oat.

Plant 2 to 3 inches deep in a well-tilled seedbed. Apply TRIFLURALIN 60D/Far-Go after seeding but before crop emerges. To incorporate, use flextine or diamond harrows two times, operated in different directions, at speeds of at least 5 mph. Incorporate by operating equipment 1 to 1-1/2 inches deep. Application and the first incorporation should be done in the same operation if possible. If not, incorporate immediately after application.

#### Broadcast Rates/Acre

Soil Tex	<u>cture</u>	TRIFLURALIN 60D (pounds)	-	Far-Go (pints)
Coarse		7/8		2-1/2
Medium		7/8		2-1/2
Fine		1-1/4		2-1/2

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

#### **BEANS**

#### DRY BEANS - CASTOR BEANS

Apply and incorporate before planting at the following:

Broadcast Rates/Acre		
<u>Soil Texture</u>	Eastern U.S.	Western U.S.
•	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

# 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 7/8 lb. on coarse soil, 1 to 1-1/4 lbs. on medium soil, and 1-1/4 lbs. on fine soil.

#### TRIFLURALIN 60D/EPTAM® TANK MIX

#### FOR DRY BEANS

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

Broadcast Rate/Acre			
Soil Texture	Eastern U.S.	TRIFLURALIN 60D Western U.S.	Eptam 7E
X X 38 - 3 Z 2-3 Z 2-3 Z	(pounds)	(pounds)	(pints)
Coarse	7/8	7/8	2-1/2 to 3-1/2
Medium	1-1/4	1 to 1-1/4	2-1/2 to 3-1/2
Fine	1-2/3	1-1/4	2-1/2 to 3-1/2
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3	2-1/2 to 3-1/2
5.1 to 10% organic matter	1-2/3	1-2/3	2-1/2 to 3-1/2

Precautions: This combination should not be used on soybean, black-eyed peas (beans), lima beans, or 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 7/8 lb. on coarse soil and 1-1/4 lbs. on medium and fine textured soils.

# LIMA BEANS - SNAP BEANS

Apply and incorporate before planting at a broadcast rate/acre of 7/8 lb. on coarse and medium soils and 1-1/4 lbs. on fine soil.

#### **CARROTS**

Apply and incorporate before planting at the following:

Broad	cast Rai	tes//	<u>lcre</u>
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Soil Texture	Eastern U.S. (pounds)	Western U.S. (pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

# **CELERY**

Both direct-seeded and transplant.

Apply and incorporate before planting or transplanting at the following:

•	Broadcast Rat	es/Acre	•
	Soil Texture	Western U.S. only (pounds)	-
	Coarse	7/8	
	Medium	1 to 1-1/4	
	Fine	1-1/4	
	2 to 5% organic matter	1-1/4 to 1-2/3	
	5.1 to 10% organic matter	1-2/3	

# COLE CROPS BROCCOLI, BRUSSELS SPROUT, CABBAGE, CAULIFLOWER

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

Broadcast Rates/Acre			
Soil Texture	Eastern U.S.	Western U.S.	
	(pounds)	(pounds)	
Coarse	7/8	7/8	
Medium	1-1/4	1 to 1-1/4	
Fine	1-2/3	1-1/4	
2 to 5% organic matter	1-1/4	1-1/4 to 1-2/3	
5.1 to 10% organic matter	1-2/3	1-2/3	

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

Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	7/8	7/8
Fine	1-1/4	7/8
2 to 5% organic matter	1-1/4	
5.1 to 10% organic matter		1-1/4

Broadcast Rate/Acre

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

# CORN (FIELD CORN)

Apply TRIFLURALIN 60D to field corn (8 inches or taller) as an over-the-top or directed spray to effectively control weeds listed for TRIFLURALIN 60D.

Soil Preparation Cultivate before a TRIFLURALIN 60D application to insure loose, friable soil, to remove established weeds, and to cover the base of plants with soil.

Application Directions - TRIFLURALIN 60D should be applied and incorporated at the recommended rates for the soil texture when the crop is well established (8 inches or taller). TRIFLURALIN 60D may be applied either as an over-the-top spray or as a directed spray. Drop nozzles should be used if foliage prevents uniform coverage of soil surface. Soil incorporation may be accomplished with only one pass of a sweep-type cultivator or a properly adjusted rolling cultivator.

The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at 6 to 8 mph. Set the middle sweeps so as to avoid exposing untreated soil. Adjust the incorporation tools to prevent crop injury.

# Broadcast Rates/Acre

Soil Texture	TRIFLURALIN 60D
	(pounds)
Coarse	5/8 - 7/8*
Medium	7/8 to 1-1/4
Fine	1-1/4 to 1-2/3

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

\* Apply 7/8 to 1-1/4 pounds per acre in Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia to control fall panicum and Texas panicum.

**Precaution:** Do not apply TRIFLURALIN 60D to corn grown for seed. Do not apply TRIFLURALIN 60D to corn as a preplant or preemergence treatment, or crop injury may occur.

#### **COTTON**

# Pre-emergence application.

Apply and incorporate before planting, at planting, or immediately after planting at the following:

### Broadcast Rates/Acre

Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3 to 2	1-2/3

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 1-2/3 lbs. on coarse and medium soils and 2 lbs. on fine soil.

In Arizona, California, Nevada, apply and incorporate at a broadcast rate/acre of 1-1/4 lbs. on coarse soil, 1-2/3 lbs. on medium soil, 2 lbs. on fine soil. In states other than those listed above, apply and incorporate at a broadcast rate/acre of 7/8 lb. on coarse soil, 1-1/4 lbs. on medium soil, 1-2/3 lbs. on fine soil, 1-1/4 lbs. on soils with 2 to 5% organic matter, and 1-2/3 to 2 lbs. 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 1-2/3 lbs. 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 TRIFLURALIN 60D 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 1-2/3 lbs. on coarse soil, 2-1/2 lbs. on medium soil, and 3-1/3 lbs. 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 TRIFLURALIN 60D 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 TRIFLUR ALIN 60D, preplant, at a broadcast rate/acre of 7/8 to 1-1/4 lbs. on coarse soil, 1-1/4 to 1-2/3 lbs. on medium soil, and 1-2/3 pts. on fine soil (2-1/2 lbs. 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 1-1/4 lbs. on coarse soil, 1-2/3 lbs. on medium soil, and 2-1/2 lbs. on fine soil.

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

#### TRIFLURALIN 60D/CAPAROL® TANK MIX

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

# Broadcast Rates/Acre

Soil Texture	TRIFLURAL	TRIFLURALIN 60D	
:	(pounds)		(pounds)
Coarse	7/8	•	2*
Medium	1-1/4		2-1/2
Fine	1-2/3		-2-1/2

<sup>\*</sup> Do not use on sand and loamy sand soils. For band application the user should apply 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 TRIFLURALIN 60D and agitate continuously.

**Precautions:** Do not use this tank mix on 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.

#### TRIFLURALIN 60D/COTORAN® TANK MIX

Except in Arizona and California.

Apply and incorporate at the following:

Broadcast Ra	tes//	<u> 1cre</u>
--------------	-------	--------------

Soil Texture	TRIFLURALIN 60D	Cotoran 80W
	(pounds)	(pounds)
Coarse	7/8	1-1/4
Medium	1-1/4	2
Fine	1-2/3	2-1/2

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 TRIFLURALIN 60D 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, and Mississippi, use 1 lb. of Cotoran in tank mix with TRIFLURALIN 60D 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 TRIFLURALIN 60D as recommended and then Cotoran as a preemergence 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.

#### TRIFLURALIN 60D PREPLANT FOLLOWED BY KARMEX® OVERLAY

For cotton grown east of the Mississippi River, Arkansas, SE Missouri, Louisiana, Eastern Texas, apply and incorporate TRIFLURALIN 60D 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 CANTALOUPES, CUCUMBERS, AND WATERMELONS

Use restricted to Western U.S. including Texas.

Apply in post-plant emerged at the following:

Soil Texture	Texas only	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1 to 1-1/4	1 to 1-1/4
Fine	1-1/4	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	_ 1 <b>-2/3</b>

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.

# GRAIN SORGHUM (Milo)

Apply TRIFLURALIN 60D to grain sorghum (8 inches or taller) as an over-the-top or directed spray to effectively control weeds listed for TRIFLURALIN 60D.

Soil Preparation - Cultivate before a TRIFLURALIN 60D application to insure loose, friable soil, to remove established weeds, and to cover the base of plants with soil.

Application Directions - TRIFLURALIN 60D should be applied and incorporated at the recommended rates for the soil texture when the crop is well established (8 inches or taller). TRIFLURALIN 60D may be applied either as an over-the-top spray or as a directed spray. Drop nozzles should be used if foliage prevents uniform coverage of soil surface. Soil incorporation may be accomplished with only one pass of a sweep-type cultivator or a properly adjusted rolling cultivator. The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at 6 to 8 mph. Set the middle sweeps so as to avoid exposing untreated soil. Adjust the incorporation tools to prevent crop injury.

#### **Broadcast Rates/Acre**

Soil Texture	TRIFLURALIN 60D
	(pounds)
Coarse	5/8 - 7/8
Medium	7/8 to 1-1/4
Fine	1-1/4 to 1-2/3

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

Precaution: Do not apply TRIFLURALIN 60D to sorghum as a preplant or preemergence treatment, or crop injury may occur.

# GREENS TURNIPGREENS (for processing), COLLARDS, KALE, AND MUSTARD GREENS

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

#### 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 to 1-1/2 pts. on medium soil, 1-1/2 pts. on fine soil and soils with 2 to 10% organic matter.

#### OKŔA

Apply and incorporate before planting at the following:

#### Broadcast Rates/Acre

Soil Texture	Eastern U.S. (pounds)	Western U.S. (pounds)
Coarse	7/8	7/8
Medium .	1-1/4	1 to 1-1/4
Fine -	1-2/3	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

#### **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 7/8 lb. on coarse soil. Care should be taken not to disturb the seed when incorporating after planting.

#### TRIFLURALIN 60D/VERNAM® TANK MIX

Apply up to 10 days prior to planting, incorporate immediately after application at a broadcast rate/acre of 7/8 lb. of TRIFLURALIN 60D 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 7/8 lb. on coarse and medium soils and 1-1/4 lbs. 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 7/8 lb. on coarse soil, 1 to 1-1/4 lbs. on medium soil, and 1-1/4 lbs. on fine soil. Do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding.

# TRIFLURALIN 60D/AVADEX® 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 Rates/Acre** 

	· Comment	
Soil Texture	TRIFLURALIN 60D	Avadex BW
	(pounds)	(quarts)
Coarse	. 5/8	1-1/4

 Medium
 5/8
 1-1/4

 Fine
 7/8
 1-1/4

**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 Rates/Acre

Soil Texture	Eastern U.S.	Western U.S.
į	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

# **PEPPERS**

Apply and incorporate before transplanting at the following:

# Broadcast Rates/Acre

Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

Do not apply after transplanting.

Not recommended for use in the state of Maine.

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

Broadcast Rates/Acre				
Soil Texture ·	Eastern U.S.		Western U.S.	
	(pound)	-	(pound)	
Coarse	7/8	,	7/8	
Medium	1-1/4	. •	1 to 1-1/4	
Fine	1-2/3	-	1-1/4	
2 to 5% organic matter	1-1/4		1-1/4 to 1-2/3	
5.1 to 10% organic matter	1-2/3		1-2/3	

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 TRIFLURALIN 60D 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, and Washington. On all soils apply and incorporate 5/8 lb. before planting and 5/8 lb. after planting when potato plants have fully emerged.

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

#### TRIFLURALIN 60D/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 drag off.

Broadcast Rate/Acre				
	TRIF	LURALIN 60D	Eptam 7E	
Soil Texture	Eastern U.S.	Western U.S.	-	
	(pounds)	(pounds)	(pints)	
Coarse	7/8	7/8	1-3/4 to 7*	
Medium	7/8 to 1-1/4	7/8 to 1-1/4	1-3/4 to 7*	
Fine	7/8 to 1-2/3	7/8 to 1-1/4	1-3/4 to 7*	
2 to 5% organic matter	1-1/4	1-1/4	1-3/4 to 7*	
5.1 to 10% organic matter	1-2/3	1-2/3	1-3/4 to 7*	

<sup>\*</sup> 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, and Oregon, apply and incorporate before planting at a broadcast rate of 5/8 lb. of TRIFLURALIN 60D/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.

#### RAPESEED

For use in all states except Alaska. TRIFLURALIN 60D may be applied in the fall or early spring prior to seeding. Set incorporation equipment to incorporate to a depth of 3 to 4 inches. Apply 7/8 lb. on coarse soil, 1-1/4 lbs. on medium soil, and 1-2/3 lbs. on fine soil.

#### **SAFFLOWER**

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

Broadcast Ra	tes/Acre

Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4	1-1/4
5.1 to 10% organic matter	1-2/3 to 2	1-2/3 to 2

#### 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 1-1/4 lbs. on coarse soil, 1-2/3 lbs. on medium soil, and 2 lbs. on fine soil.

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

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Apply and incorporate before planting at the following:

# Broadcast Rates/Acre

Soil Texture	Eastern U.S. (pounds)	Western U.S. (pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3 to 2*	1-2/3

<sup>\*</sup> Except charcoal soils in Arkansas, Louisiana, and Mississippi (see below).

# Charcoal soils in Arkansas, Louisiana, and Mississippi.

Newly cleared land often contains high organic matter (4 to 10%) and charcoal which results from burning debris. This tends to bind TRIFLURALIN 60D 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 1-1/4 to 2 lbs. on coarse soil, 2 lbs. on medium soil, and 2-1/2 lbs. 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 1-2/3 lbs. on coarse and medium soils and 2 lbs. on fine soil.

In Eastern United States other than those listed above: Apply and incorporate at a broadcast rate/acre of 7/8 lb. on coarse soil, 1-1/4 lbs. on medium soil, 1-2/3 lbs. on fine soil, 1-1/4 lbs. on coarse soil with 2 to 5% organic matter, and 1-2/3 to 2 lbs. 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, and Virginia: Apply at a broadcast rate/acre of 1-2/3 lbs. 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 7/8 to 1-1/4 lbs. on coarse soil, 1-1/4 to 1-2/3 lbs. on medium soil, and 1-2/3 lbs. on fine soil (2-1/2 lbs. in the state of Louisiana).

For more complete weed control in the Texas Gulf Coast (limited to Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller, and Wharton counties). Apply up to 2 weeks before planting at a broadcast rate/acre of 1-1/4 lbs. on coarse soil, 1-2/3 lbs. on medium soil, 2-1/2 lbs. on fine soil. For suppression or partial control of Red Rice in Arkansas, Louisiana, Mississippi, and 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:

		Bro	adcast Rates/Acre	
	Call	<u>Texture</u>	1st Voor	2nd Voor
	<u>Son</u>	<u>Texture</u>	1st Year (pounds)	2nd Year (pounds)
	Coa	rse	1-2/3	· 7/8
	Med	lium	2-1/2	1-1/4
,	Fine		3-1/3	1-2/3
	2 to	5% organic matter	2-1/2	1-1/4
		to 10% organic matter	3-1/3	1-2/3 to 2
		_		•

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 (1-1/4 to 2 lbs. on coarse soil, 2 lbs. on medium soil, and 2-1/2 lbs. on fine soil).

**Crop rotation:** Plant only those crops for which TRIFLURALIN 60D 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 Rates/Acre

		Split Spring and
Soil Texture	Spring or Fall	<u>Fall</u>
	(pounds)	(pounds)
Coarse	1-2/3	7/8
Medium	2-1/2	1-1/4
Fine	3-1/3	1-2/3
2 to 5% organic matter	2-1/2	1-1/4
5.1 to 10% organic matter	3-1/3	1-2/3

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 by using the maximum recommended rate of TRIFLURALIN 60D.

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 7/8 lb. on coarse soil, 1-2/3 lbs. on medium soil, and 2 lbs. 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 TRIFLURALIN 60D is used according to these recommendations.

#### TRIFLURALIN 60D/SENCOR® OR LEXONE® TANK MIX

For the control of grasses and weeds controlled by TRIFLURALIN 60D alone plus additional weeds listed for the mixture (see page 5 for this listing), apply from two weeks before planting up to planting at the following:

	Broadcast Rates/Acre		
·		Sencor 50WP/4L	
		or	
Soil Texture	TRIFLURALIN 60D	Lexone 50WP/4L	. '4
	(pounds)	(pound/pint)	
Coarse	7/8	1/2	
Medium	1-1/4	3/4	
Fine	1-2/3	1	

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

		Sencor (dry flowable) or
Soil Texture	TRIFLURALIN 60D	Lexone (dry flowable)
	(pounds)	(pounds)
Coarse	7/8	1/3
Medium	1-1/4	1/2
Fine	1-2/3	2/3

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 Rates/Acre	
		Sencor 50WP/4L
G NAT	CONTENT TO A T TAT CON	or
Soil Texture	TRIFLURALIN 60D	Lexone 50WP/4L
	(pounds)	(pound/pint)
Coarse	1-2/3	. 1/2
Medium	2-1/2	3/4
Fine	3-1/3	1

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

OR

		Sencor (dry flowable)
		or
Soil Texture	TRIFLURALIN 60D	Lexone (dry flowable)
	(pounds)	(pounds)
Coarse	1-2/3	1/3
Medium	2-1/2	1/2
Fine	3-1/3	2/3

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

# TRIFLURALIN 60D PREPLANT + SENCOR OR LEXONE OVERLAY

Apply TRIFLURALIN 60D as a preplant incorporated herbicide. As a separate operation make a single application of Sencor or Lexone as either a band or broadcast spray during planting or as a separate operation after planting but before soybeans emerge.

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

WP/4L
OWP/4L
Preemergence
nt)
r 3/4
/2 or 3/4 to 1
or 1

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

		Sencor (dry flowable)
		or
		Lexone (dry flowable)
Soil Texture	TRIFLURALIN 60D	Postplant/Preemergence
	(pounds)	(pound/pint)
Coarse	7/8	1/2 to 2/3 or 1/2
Medium	1-1/4	1/2 to 1 or 1/2 to 2/3
Fine	1-2/3	2/3 to 1-1/6 or 2/3
Title	1-213	2/3 to 1-1/6 of 2/3

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.

#### TRIFLURALIN 60D/VERNAM® TANK MIX

Broadcast Rates/Acre

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

# Soil Texture TRIFLURALIN 60D (pounds) Vernam 7E (pounds) Coarse 7/8 1-3/4 to 2-1/3 Medium 1-1/4 2-1/3 to 3\* Fine 1-2/3 3 to 3-1/2

#### SUGAR BEETS

Apply as a broadcast, over-the-top 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 taproot.

Broadcast Rates/Acre

Divaucasi Naics/Acie		
Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	- 7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-1/4	1-1/4

# Special application.

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

Use restricted to Eastern United States.

#### Plant Cane

Apply and incorporate twice a year at a broadcast rate/acre or 1-2/3 to 3-1/3 lbs. for all soil textures.

<sup>\*</sup> Use higher rates for nutsedge, wild cane, and velvetleaf control. Observe all directions, precautions, and limitations on both products' labeling.

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 1-2/3 to 3-1/3 lbs. 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 shoots.

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

Apply to surface after planting (for plant cane) or after harvesting (for ratoon cane) before weeds and cane emerge at a broadcast rate/acre of 5 to 6-2/3 lbs. 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 ration cane at a broadcast rate/acre of 3-1/3 lbs. 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 Rates/Acre

Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium	1-1/4	1 to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4 to 1-2/3	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3

#### **TOMATOES**

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

Bro	adcast Rates/Acre	<del>.</del>
Soil Texture	Eastern U.S.	Western U.S.
	(pounds)	(pounds)
Coarse	7/8	7/8
Medium ·	1-1/4	Í to 1-1/4
Fine	1-2/3	1-1/4
2 to 5% organic matter	1-1/4	1-1/4 to 1-2/3
5.1 to 10% organic matter	1-2/3	1-2/3
l l		

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:

Soil Texture	Broadcast Rate/Acre	
	(pounds)	<u>.</u>
Coarse	7/8	
Medium	1-1/4	
Fine	1-2/3	
2 to 5% organic matter	1-1/4	
5.1 to 10% organic matter	1-2/3	

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 1-2/3 to 3-1/3 lbs. 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, and walnut trees, apply and incorporate before planting at the following:

	Soil Texture	Broadcast Rate/Acre
ļ		(pounds)
	Coarse	7/8
	Medium	1 to 1-1/4
	Fine	1-1/4
	2 to 5% organic matter	7/8 to 1-1/4
	5.1 to 10% organic matter	1-2/3

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

Soil Texture	Broadcast Rate/Acre (pounds)	
Coarse	7/8 to 1-1/4	
Medium	1-1/4 to 2-1/2	
Fine	2-1/2 to 3-1/3	
2 to 10% organic matter	2-1/2 to 3-1/3	

Do not use more than 1-2/3 lbs./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 1-2/3 to 3-1/3 lbs. 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. 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 3-1/3 lbs. 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 3-1/3 lbs. 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 TRIFLURALIN 60D treated vineyards and orchards are diverted to other crop uses, plant only those crops for which TRIFLURALIN 60D 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.

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 1-1/4 lbs. on coarse and medium soils and 1-2/3 lbs. 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 1-1/4 lbs. on coarse and medium soils and 1-2/3 lbs. 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 AND DURUM.

Apply as a postplant incorporated treatment, after seeding but before the crop emerges, to control foxtail at a broadcast rate/acre of 7/8 lb. on coarse and medium soils and 1-1/4 lbs. 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.

TRIFLURALIN 60D may be fall applied for foxtail/pigeongrass control in spring wheat and durum planted the following spring. TRIFLURALIN 60D 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 7/8 lb. on coarse or medium soils and 1-1/4 lbs. 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, TRIFLURALIN 60D will not harm the treated crop. Overapplication 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 TRIFLURALIN 60D application or for 14 months after a fall application of the product. Do not plant sorghum, corn, or 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 Unites 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 stages 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 TRIFLURALIN 60D.

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The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man, or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against the Company exceed the price of the product which causes the alleged loss, damage, injury, or other claim. The Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income.

The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability, and remedies.