1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Do not apply TREFLAN after transplanting.

POTATOES:

Apply and incorporate **Trifluralin** after planting, before emergence on all soil textures or after the potato plants have fully emerged on coarse and medium soils at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Set incorporation equipment so that the bed and furrow will be uniformly covered with a layer of **Trifluralin**. If the layer of **Trifluralin** treated soil is not uniform and the herbicide is concentrated over the bed, potato emergence may be retarded and stem brittleness can occur. When applying the incorporating **Trifluralin** after potato plants have fully emerged, do not completely cover the foliage with treated soil. Likewise do not completely cover foliage at subsequent cultivations. Care should be taken so that incorporation machinery does not damage potato seed pieces or elongating sprouts.

POTATOES--Split Application in Idaho, Oregon and Washington Only:

On all soils apply and incorporate ¾ pint of **Trifluralin** before planting and ¾ pint after planting when potato plants have fully emerged. Do not apply to soils containing 2% or more organic matter. Follow incorporation directions listed above for application to potatoes after planting.

POTATOES—Trifluralin/Eptam Tank-mix:

Application After Planting—The **Trifluralin**/Eptam tank-mix effectively controls henbit, nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the **Trifluralin** label (see page 10). Follow normal **Trifluralin** procedures for soil preparation. The **Trifluralin**/Eptam tank-mix may be applied after planting, up to or immediately following dragoff at a broadcast rate per acre of 1 pint of **Trifluralin** and 1¾ pints of Eptam 7E on all soil textures or up to the label recommended rate for each herbicide depending on soil texture and weed problem. **Trifluralin** at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal **Trifluralin** procedures for cultivation.

Application Before Planting in Washington, Idaho and Oregon Only--**Trifluralin**/Eptam may also be applied before planting at a broadcast rate of ¾ pint of **Trifluralin** and 3½ pints of Eptam 7E on all soil textures and incorporated immediately.

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

SAFFLOWER:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter, 2 pints on soils with 5.1 to 10% organic matter, and 2 to 3 pints on soils with 10.1 to 20% organic matter.

SAFFLOWER—Fall Application:

See Page 60 on Fall Application

SUGAR BEETS:
Apply **Trifluralin** as a broadcast, overtop spray when plants are between 2 and 6 inches tall at a rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; and 1½ pints on fine soils. Exposed beet roots should be covered with soil before a **Trifluralin** application to reduce the possibility of girdling. Set incorporation machinery to throw treated soil toward the plants in the row. Care should be taken that incorporation machinery does not damage the sugar beet taproot.

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

SUGARCANE--Post-Plant in Hawaii Only For control of most annual grasses, including guineagrass:
Surface apply **Trifluralin** after planting (for plant cane) or after harvesting (for ratoon cane), before weeds and cane emerge at a broadcast rate per acre of 6 to 8 pints 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. If large amounts of crop residues are present, **Trifluralin** will not be effective. Apply just before anticipated rainfall or sprinkle irrigate immediately after application.

SUNFLOWER:
Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

TOMATOES:
For *Direct-seeded* tomatoes apply **Trifluralin** at blocking or thinning at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter. Apply **Trifluralin** as a directed spray to the soil between the rows and beneath the plants and incorporate. For Transplant tomatoes apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter. Do not apply **Trifluralin** after transplanting.

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

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

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

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

TREES AND VINEYARDS--Rhizome Johnsongrass Control:

See Page 64 on Rhizome Johnsongrass control.

TREES AND VINEYARDS --Field Bindweed Control in Vineyards, Almond, Apricot, Grapefruit, Lemon, Nectaine, Orange, Peach, Pecan, Tangelo, Tangerine and Walnut Trees in California only:

For the control of field bindweed in the state of California, apply **Trifluralin** at a broadcast rate of 4 pints per acre on all soil textures. TREFLAN must be applied in the spring with a specially designed spray blade which applies a thin concentrated layer at a soil depth of 4 to 6 inches. The layer of **Trifluralin** prevents bindweed shoots from emerging.

Land Preparation—Destroy all weeds and grasses with soil tillage before applying **Trifluralin**. This tillage is necessary to prevent trash from interfering with the operation of the spray blade.

Equipment—This operation requires a spray blade capable of running 4 to 6 inches below the surface of the soil. The spray blade should be equipped with nozzles located under the blade and directed so that the **Trifluralin** spray will be trapped under the soil which is flowing over the blade as it is pulled through the soil. Use a sufficient number of nozzles with spacing to completely and uniformly apply **Trifluralin** underground in a thin horizontal layer.

Application—Apply **Trifluralin** in 40 to 80 gallons of water per acre. Operate the spray blade at a depth of 4 to 6 inches.

Precaution: Some soils develop cracks as they dry after rainfall or irrigation. Field bindweed may emerge if the cracks extend through the **Trifluralin** layer. Prevent or eliminate cracks by shallow discing or other tillage. Avoid deep tillage which distrubs the subsurface layer. Cultivation or tillage also aids the control of germinating seeds.

WHEAT (WINTER)--Trifluralin for preplant prep emergence control of cheatgrass and other weeds in winter wheat grown in Washington, Oregon, Idaho, and Montana:

When applied as directed, **Trifluralin** will provide effective pre-emergence control of cheatgrass and a number of other annual grasses and broadleaf weeds controlled by **Trifluralin** (See page 10) in winter wheat grown in Washington, Oregon, Idaho, and Montana. The growth, development and yield of winter wheat will not be adversely affected, provided the seed is placed below the zone of soil treated with **Trifluralin**.

Broadcast Rates Per Acre:

Apply **Trifluralin** anytime during a period from 3 weeks up to immediately prior to planting. Broadcast **Trifluralin** at the following rates per acre according to soil texture

Soil Texture	TREFLAN
Coarse	1½ pints
Medium	1½ pints
Fine	2 pints

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

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

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

WHEAT (WINTER)--Fallow-soil application of Trifluralin for weed control in winter wheat grown in Washington and Oregon:

Uniformly applied **Trifluralin** at the recommended rate and shallowly incorporated into fallow soil as much as four months ahead of planting time, will effectively control cheatgrass and certain annual grasses and broadleaf weeds in winter wheat grown in Washington and Oregon. The growth, development, or yield of winter wheat will not

be adversely affected, provided the seed is placed below the zone of soil treated with **Trifluralin** with deep or semi-deep furrow-drills.

Broadcast directions and application rates per acre.

Soil Texture	**Trifluralin**
Coarse	1½ pints
Medium	1½ pints
Fine	2 pints

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

Incorporation--Shallow incorporate **Trifluralin** into the soil with a flexible tine-tooth harrow (also called Flextine or Melroe) set to cut 1 to 2 inches deep and operated at 3 to 6 mph. Thorough incorporation requires two passes of the equipment in different directions over the field. The first pass must be made within 24 hours after application of **Trifluralin.** The second pass may be delayed for several weeks but should be made before seeding. Do not till the soil with a disc after **Trifluralin** has been applied with a flexible tine harrow.

Precaution: Use only deep furrow or semi-deep furrow drills. Place seed below the zone of soil into which **Trifluralin** has been incorporated. Do not plant wheat directly into the zone of soil treated with **Trifluralin** as injury to the crop or a delay in its emergence and development may occur.

FALL APPLICATION

GENERAL

Apply and incorporate **Trifluralin** anytime between October 15 and December 31. Ground may be left flat or bedded-up over winter. On bedded ground, knock beds down to desired height before planting, moving some treated soil from tops into furrows. Where soil is left flat over winter, take care during spring bedding operations to prevent turning up untreated soil. Destroy established weeds during seedbed preparation. If weeds become established in furrows due to uncovering of untreated soil during listing, destroy these weeds before planting. Do not fall apply **Trifluralin** to soils which are wet or in poor condition. Do not fall apply **Trifluralin** to soils which are subject to prolonged periods of flooding or soils where rice was grown the previous year.

COTTON

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

SOYBEANS

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

SAFFLOWER

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

DRY BEANS AND PEAS

For dry beans and peas grown in *Idaho, Oregon* and *Washington:* Apply and incorporate **Trifluralin** at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; and 1½ pints on fine soils.

OTHER CROPS—Eastern United States Only:

For all other crops for which **Trifluralin** is recommended as a preemergence application, use the rates listed for normal spring applications. Do not fall apply **Trifluralin** for sugar beets, potatoes and direct-seeded tomatoes.

RHIZOME JOHNSONGRASS CONTROL

SOYBEANS—Eastern United States and the State of Texas

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

Soil Preparation—Proper preparation of the soil before application is very important for satisfactory results. Use a chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc before application to cut the rhizomes into small (2 to 3-inch) pieces. This should also destroy any emerged Johnsongrass.

Application—Choose the one application program that best fits your cultural practices:

Spring Application—Apply **Trifluralin** anytime in the spring before planting for 2 years in a row at a broadcast rate per acre of 2 pints on coarse soils; 3 pints on medium soils; 4 pints on fine soils; 3 pints on coarse soils with 2 to 5% organic matter; and 4 pints on soils with 5.1 to 10% organic matter. OR

Fall Application—Apply **Trifluralin** between October 15 and December 31 for 2 years in a row at the same rates as a spring application for the control of rhizome Johnsongrass. OR

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

	Spring	and	Fall
Coarse soils	1 pint		1 pint
Medium soils	1½ pints		1½ pints
Fine soils	2 pints		2 pints

Coarse soils with 2 to 5% organic matter	1½ pints	1½ pints
Soils with 5.1 to 10% organic matter .....2 pints		2 pints

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

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

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** is used according to these recommendations.

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

COTTON—

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

Soil Preparation—Proper preparation of the soil before application is very important for satisfactory results. Use a chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc before application

to cut the rhizomes into small (2 to 3-inch) pieces. This should also destroy any emerged Johnsongrass.

Application—Choose the one application program that best fits your cultural practices:

Spring Application—Apply **Trifluralin** anytime in the spring before planting for 2 years in a row at a broadcast rate per acre of 2 pints on coarse soils; 3 pints on medium soils and 4 pints on fine soils, OR

Fall Application—Apply **Trifluralin** between October 15 and December 31 for 2 years in a row at the same rates as a spring application for the control of rhizome Johnsongrass.

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

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

Precautions: Plant cotton after early season adverse, wet-weather conditions have passed. Crop injury in the form of reduced stands and delayed growth will occur under adverse cool, wet-weather conditions early in the season and may result in delayed maturity and reduced yields when **Trifluralin** is used according to these recommendations. High quality seed accompanied by a good fungicide program to control seedling diseases in addition to other recommended cultural and chemical practices should be used to minimize crop injury from **Trifluralin**.

In the season following either the 1 or 2-year treatments,

plant only those crops for which **Trifluralin** has been registered as a preplant treatment or injury may result.

TREES AND VINEYARDS—Western United States only:

Commercially acceptable control of rhizome Johnsongrass can be obtained with post-plant applications in Bearing and Non-Bearing established plantings of Vineyards, Almond, Apricot, Grapefruit, Lemon, Nectarine, Orange, Peach, Pecan, Tangelo, Tangerines and Walnut trees with a **Trifluralin** program when applied for 2 years in a row.

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

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

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

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

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

SOYBEANS, RED RICE CONTROL

Arkansas, Louisiana, Mississippi and Texas only

Suppression or partial control of red rice in soybeans can be obtained when **Trifluralin** is applied as directed

at double the normal rate the first year (not to exceed 4 pints per acre) and at the normal rate the second year. Follow normal **Trifluralin** directions for soil preparation and soil incorporation.

APPLICATION: Year 1

Apply and incorporate **Trifluralin** the first year anytime in the spring before planting at the following broadcast rates per acre:

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

APPLICATION: Year 2

Apply **Trifluralin** the second year at the following normal label broadcast rates per acre:

Coarse soils	1 pint
Medium soils	1½ pints
Fine soils	2 pints
Coarse soils with 2 to 5% organic matter	1½ pints
Soils with 5.1 to 10% oganic matter	2 to 2½ pints

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

Coarse soils	1½ pints per acre
Medium soils	2½ pints
Fine soils	3 pints

For more information on charcoal soils see page 27.

CROP ROTATION

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

PRECAUTIONS

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

TRIFLURALIN APPLIED ALONE AND IN COMBINATION WITH SENCOR WITH FLUID FERTILIZERS

GENERAL

Trifluralin alone and **Trifluralin** plus Sencor may be mixed with most fluid (liquid) fertilizer materials **Trifluralin** alone and **Trifluralin** plus Sencor with solutions and suspension-type fertilizers has provided weed and grass control as claimed on the respective labels

All recommendations for **Trifluralin** alone or **Trifluralin** plus Sencor tank-mix combinations regarding rates per acre, approved crops, incorporation, special instructions, cautions and special precautions must be followed

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

COMPATIBILITY TEST

Trifluralin alone and **Trifluralin** plus Sencor and some fluid fertilizer materials may not combine properly Small quantities should always be tested before full-scale mixing

1 Put 1 pint of fertilizer mixture in a quart jar
2. Add 2 teaspoonfuls of **Trifluralin** and 2 level teaspoonfuls of Sencor as usage dictates.
3 Close jar and shake well
4 Watch mixture for several seconds, check again 30 minutes later.
5 If the mix does not separate, or if agitation is only needed to resuspend the Sencor, the combination may be used If the mixture separates, gets very thick or syrupy, DO NOT combine for field application.
6 Mixing ability may be improved by adding a compatibility agent The suggested compatibility agents are Kalo Laboratories' Compex, Witco Chemicals' Sponto 168D and Rohm and Haas' Triton QS-44. All agents are used in the same way. Follow the procedure outlined above and add 1/10 teaspoonful of the compatibility agent in Step 2. Complete the other steps to determine if the compatibility agent solves the problem.

If a compatibility agent is needed, Compex should be used at the rate of 5 to 15 pints per ton of fluid fertilizer. Sponto 168D should be used at the rate of 1.5 to 2 pints per ton of fluid fertilizer And Triton QS-44 should be used at the rate of 1 5 to 2 pints per ton of fluid fertilizer.

Sponto 168D and Triton QS-44 are recommended when fluid fertilizer blends are used and are particularly useful in high potash grades of fluid fertilizer such as 2-6-12. Compex is recommended for use only in high nitrogen grade fluid fertilizer such as

28-0-0. If Compex is used, follow compatibility test procedures adding ¼ teaspoonful of Compex.

MIXING

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

Trifluralin alone or in combination with Sencor may be poured directly into the fluid fertilizer and mixed thoroughly. Wettable powders should be mixed with the liquid fertilizer before adding **Trifluralin**. Continued agitation is needed until application is complete

APPLICATION

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

INCORPORATION

Follow normal **Trifluralin** incorporation procedures

TRIFLURALIN APPLICATION WITH DRY BULK FERTILIZERS

GENERAL

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

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

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

LIMITATIONS

Apply a minimum of 200 pounds per acre of dry fertilizer impregnated with **Trifluralin** at the recommended rates. Any commonly used dry fertilizers can be used for **Trifluralin** impregnation *except* straight coated ammonium nitrate and straight limestone. These materials will not absorb the herbicide. Blends containing mixtures of these materials can be impregnated.

IMPREGNATION

Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender. The nozzle or nozzles used to spray the **Trifluralin** on to the fertilizer should be placed to provide uniform spray coverage.

RATES

Check the crop section to determine the rate of **Trifluralin** per acre. See the rate table which follows to determine the amount of **Trifluralin** to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be applied per acre. (See rate chart on pages 70 and 71.)

APPLICATION

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

INCORPORATION

Follow normal **Trifluralin** incorporation procedures.

RATE CHART FOR IMPREGNATING FERTILIZER WITH TREFLAN

Trifluralin added to a TON of fertilizer

Fertilizer Rate Per Acre →	**Trifluralin** Rate Per Acre	
	1 pint	1½ pints
200 pounds	10 pts. or 5 qts. per ton	15 pts. or 7½ qts. per ton
250 pounds	8 pts. or 4 qts per ton	6 qts. or 1½ gal per ton
300 pounds	6¾ pts. or 3⅓ qts. per ton	10 pts. or 5 qts. per ton
350 pounds	5¾ pts or 2¾ qts. per ton	9 pts. or 1⅛ gal. per ton
400 pounds	5 pts. or 2½ qts. per ton	7½ pts. or 1 gal. per ton
450 pounds*	4½ pts. or 2¼ qts. per ton	3⅓ qts. or ⅞ gal per ton

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

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

Trifluralin Rate Per Acre		
2 pints	3 pints	4 pints
10 qts. or 2½ gal. per ton	15 qts. or 3¾ gal. per ton	20 qts. or 5 gal. per ton
8 qts. or 2 gal. per ton	12 qts. or 3 gal. per ton	16 qts. or 4 gal. per ton
14 pts. or 1¾ gal. per ton	20 pts. or 2½ gal. per ton	27 pts. or 13⅓ qt. per ton
12 pts. or 1½ gal. per ton	17 pts. or 2¼ gal. per ton	23 pts. or 2⅞ gal. per ton
5 qts. or 1¼ gal. per ton	15 pts. or 1⅞ gal. per ton	10 qts. or 2½ gal. per ton
4½ qts. or 1⅛ gal. per ton	13⅓ pts. or 1¾ gal. per ton	9 qts. or 2¼ gal. per ton

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (WH-567)
WASHINGTON, D.C. 20460

NOTICE OF PESTICIDE: [ ] REGISTRATION [ ] REREGISTRATION

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

EPA REGISTRATION NO	DATE OF ISSUANCE
	JAN 19 1983
TERM OF ISSUANCE	
NAME OF PESTICIDE PRODUCT	

NAME AND ADDRESS OF REGISTRANT (Include ZIP Code)

[redacted]

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 indorsement 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.

[redacted]

☐ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL	DATE
	JAN 19 1983

EPA Form 8570-6 (Rev. 5-76) PREVIOUS EDITION MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

KAW VALLEY

TRIFLURALIN E. C.

HERBICIDE

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

ACTIVE INGREDIENT.	
Trifluralin (a,a,a-trifluoro-2,6-dinitro-N,N-dipropyo-p-toluidine)	44.5%
INERT INGREDIENTS:	55.5%
	100.0%

Contains 4 Pounds Active Ingredient per Gallon

ACCEPTED with comment JAN 19 1983 EPA

44315-73

KEEP OUT OF REACH OF CHILDREN

WARNING

Statement of Practical Treatment

If in eyes - Flush with plenty of water. Get medical attention.

If on skin - Wash with plenty of soap and water.

If Inhaled - Move to fresh air. If breathing stops, start artificial respiration and get prompt medical attention.

If swallowed - Drink promptly a large quantity of milk, egg whites, gelatin solution or, if these are not available, drink large quantities of water Avoid alcohol

SEE SIDE/BACK PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS GALLONS

EPA Reg. No. 44215-53 EPA Est. No.

Manufactured by:

P. O. Box 285
Lansing, Kansas 66043

KAW VALLEY

TRIFLURALIN E. C.
HERBICIDE

TRIFLURALIN E. C.

HERBICIDE

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Do not get in eyes or on clothing. Wear goggles or face shield. Harmful if swallowed. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse

ENVIRONMENTAL HAZARDS

Direct contamination of any body of water with this product may kill fish. Do not contaminate any body of water by direct application, cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

CHEMICAL AND PHYSICAL HAZARDS

Combustible liquid. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

See Literature on top of can for Complete Directions for Use. Read All Directions Carefully Before Applying

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

STORAGE AND DISPOSAL

Prohibitions: Do not contaminate water, food, or feed by storage or disposal.

Open dumping is prohibited.

Pesticide Disposal : Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

Container Disposal: Triple rinse (or equivalent) and offer for recycling or reconditioning, or dispose of in a sanitary landfill or by incineration if permitted by State and Local authorities.

General: Consult Federal, State or Local disposal authorities for approved alternative procedures.

KAW VALLEY

TRIFLURALIN E. C.

HERBICIDE

ACCEPTED
JAN 19 1983
Jan. 19, 1983
44215-73

Complete Directions For Use,
Use Warnings, Precautions and
Special Precautions, Regional Crop
Recommendations, Tank-Mix
Recommendations

Manufactured by:

P. O. Box 265
Lansing, Kansas 66043

KAW VALLEY

INDEX

Avadex® BW—trialate Monsanto Agricultural Products Company

Amiben™—chloramben Amchem Products, Inc

Caparol®—prometryn Ciba-Geigy Corporation

Cotoran®—fluometuron, Ciba-Geigy Corporation

Eptam®—EPTC Stauffer Chemical Company

Karmex®—diuron E. I. duPont de Nemours and Company.

Lexone®—metribuzin, E. I. duPont de Nemours, Company

Sencor®—metribuzin Bayer, GmbH

WARNINGS

Human

Keep out of reach of children. Do not get in eyes. Avoid contact with skin and clothing. Harmful if swallowed or absorbed through the skin. Do not contaminate foodstuffs or feeds.

First Aid: In case of contact immediately flush eyes or skin with plenty of water. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

Environmental

Direct contamination of any body of water with this emulsifiable concentrate may kill fish and other aquatic organisms. Do not contaminate any body of water by direct application, cleaning of equipment or disposal of wastes.

Storage

Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame.

Container Disposal Directions

Empty container into spray tank; drain in vertical position for 30 seconds. Refill container with water 1/5 to 1/4 full; rinse thoroughly, pour into tank, drain. Repeat rinsing and draining 3 times. Add fluid to bring spray tank up to desired level. Do not reuse. Crush container for recycling or burying.

Special Precautions

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

In the Western United States—Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming:

To avoid crop injury in arid areas, do not plant sugar beets, red beets or spinach for 12 months after a **Trifluralin** spring application or for 14 months after a **Trifluralin** fall application. Plow the land to a depth of 12 inches prior to planting sugar beets to prevent the possibility of crop injury. To avoid crop injury do not plant sorghum (milo), corn or oats for 14 months after a TREFLAN spring application or for 16 months after a TREFLAN fall application. If land has not been irrigated, do not plant any of these crops for 18 months after a **Trifluralin** spring application or 20 months after a fall application.

In the Western United States—Those portions of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota and Texas where at least 25 inches of irrigation and/or rainfall (total) was used to produce the crop:

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

In the Eastern United States:

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

In Florida Only:

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

CROPS CLEARED

	Eastern United States	Western United States
Alfalfa (Established)		44
Almonds		53, 54
Apricots		53, 54
Beans		
Castor	33	44
Dry	33	44
Guar	34	45
Lima	34	45
Mungbeans	34	45
Snap	34	45
Soybeans	25	45
Broccoli	35	46
Brussels Sprouts	35	46
Cabbage	35	46
Cantaloupes	35	47
Carrots	35	46
Castor Beans	33	44
Cauliflower	35	46
Celery		46
Citrus Trees	40	53
Cole Crops		
Broccoli	35	46
Brussels Sprouts	35	46
Cabbage	35	46
Cauliflower	35	46
Collard Greens	36	47
Cotton	31	41
Cucumbers	35	7
Cucurbits		
Cantaloupes	35	47
Cucumbers	35	47
Watermelons	35	47

	Eastern United States	Western United States
Dry Beans	33	44
Dry Peas		48
English Peas	36	48
Grapefruits	40	54
Grapes (Vineyards)	40	53, 54
Greens		
Collard	36	47
Kale	36	47
Mustard	36	47
Turnip	36	47
Guar Beans	34	45
Hops		47
Kale Greens	36	47
Lemons	40	54
Lima Beans	34	45
Mint		
Peppermint		47
Spearmint		47
Mungbeans	34	45
Mustard Greens	36	47
Mustard for seed	36	48
Nectarines		53, 54
Okra	36	48
Oranges	40	54
Peaches		53, 54
Peanuts		
Spanish	36	48
Peas		48
Dry		
English	36	48
Southern	36	48
Pecans	40	53, 54

	Eastern United States	Western United States
Peppermint		47
Peppers	37	49
Plums		54
Prunes		54
Potatoes	37	50
Safflower	38	51
Snap Beans	34	45
Southern Peas	36	48
Soybeans	25	45
Spanish Peanuts	36	48
Spearmint		47
Sugar Beets	38	52
Sugarcane	38	52
Sunflower	40	53
Tangeloes	40	54
Tangerines	40	54
Tomatoes	40	53
Trees		
Almonds		53, 54
Apricots		53, 54
Citrus	40	53
Grapefruits	40	54
Lemons	40	54
Nectarines		53, 54
Oranges	40	54
Peaches		53, 54
Pecans	40	53, 54
Plums		54
Prunes		54
Tangeloes	40	54
Tangerines	40	54
Turnip Greens	36	47

Vineyards (Grapes)	40	53	54
Walnuts		53	54
Watermelons	35		47
Wheat (winter)		55	56

WEEDS AND GRASSES CONTROLLED

Trifluralin will not control established weeds.

GRASSES CONTROLLED

Annual bluegrass *(Poa annua)*

Barnyardgrass *(Echinochloa sp.)*
(Watergrass)

Brachiaria *(Brachiaria sp.)*
(Signalgrass)

Bromegrass *(Bromus tectorum)*
(Cheatgrass)
(Downy brome)

Cheat *(Bromus secalinus)*
(Chess)

Crabgrass *(Digitaria sp.)*
(Large crabgrass)
(Smooth crabgrass)

Fall panicum *(Panicum dichotomiflorum)*
(Spreading panicgrass)
(See pages 22-26 for special instructions)

Foxtails *(Setaria sp.)*
(Bottlegrass)
(Bristlegrass)
(Giant foxtail)
(Green foxtail)
(Pigeongrass)
(Robust foxtail)
(Yellow foxtail)

Goosegrass *(Eleusine indica)*
(Silver crabgrass)
(Silvergrass)
(Wiregrass)
(Yardgrass)

Guineagrass *(Panicum maximum)*
(See page 52 for special instructions)

Johnsongrass *(Sorghum halepense)*
(Seedling and rhizome)
(See Page 61 for special instructions on rhizome control)

Junglerice *(Echinochloa colonum)*

Raoulgrass
(Itchgrass) *(Rottboellia exaltata)*
(See page 39 for special instructions)

Sandbur *(Cenchrus incertus)*
(Burgrass)

Sprangletop *(Leptochloa filiformis)*

Stinkgrass *(Eragrostis cilianensis)*
(Lovegrass)

Texas panicum *(Panicum texanum)*
(Buffalograss)
(Coloradograss)

Wild Cane *(Sorghum bicolor)*
(Shattercane)
(See page 28 for special instructions)

BROADLEAF WEEDS CONTROLLED

Carpetweed *(Mollugo verticillata)*

Chickweed *(Stellaria media)*

Field Bindweed *(Convolvulus arvensis)*
See page 54 for special instructions)

Florida pusley (Florida purslane) (Mexican clover) (Pusley)	*(Richardia scabra)*
Goosefoot	*(Chenopodium hybridum)*
Henbit (Fall application only)	*(Lamium amplexicaule)*
Knotweed	*(Polygonum aviculare)*
Kochia (Fireweed) (Mexican fireweed)	*(Kochia scoparia)*
Lambsquarters	*(Chenopodium album)*
Pigweeds (Carelessweed) (Prostrate pigweed) (Redroot) (Rough pigweed) (Spiny pigweed)	*(Amaranthus* sp.)
Puncturevine (Western U.S. only) (Caltrop)	*(Tribulus terrestris)*
Purslane	*(Portulaca oleracea)*
Russian thistle (Tumbleweed)	*(Salsola kali)*
Stinging nettle (Nettle)	*(Urtica dioica)*

Trifluralin will not control certain resistant weeds such as cocklebur, jimsonweed, nutsedge (nutgrass), ragweed, velvetleaf or Venice mallow.

Weeds controlled in soybeans by the **Trifluralin / Sencor** or **Trifluralin** / Lexone tank-mix in addition to those controlled by **Trifluralin** alone. (See page 28 for special instructions)

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

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

Weeds controlled in dry beans and potatoes by the **Trifluralin / Eptam** tank-mix in addition to those controlled by **Trifluralin** alone (See pages 34, 37, 44, 50 for special instructions)

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

Weeds controlled in soybeans by the **Trifluralin / Amiben tank mix** in addition to those controlled by **Trifluralin** alone. (See page 33 for special instructions.)

Ragweed, Common	*Ambrosia artemisiifolia*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Velvetleaf (Buttonweed)	*Abutilon theophrasti*

Trifluralin preplant soil incorporated with an Amiben application pre-emergence controls the following additional weeds:

Coffeeweed (Sesbania)	*Sesbania exaltata*
Mustard, Wild	*Brassica kaber*
Nightshade, Black	*Solanum nigrum*
Prickly sida (Teaweed)	*Sida spinosa*
Ragweed, Common	*Ambrosia artemisiifolia*
Spurge, Annual	*Euphorbia maculata*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Stinkgrass	*Eragrostis cilianensis*
Velvetleaf (Buttonweed)	*Abutilon theophrasti*

Weeds controlled in cotton by the **Trifluralin / Caparol tank mix** in addition to those controlled by **Trifluralin** alone (See page 42 for special instructions.)

Smartweed	Groundcherry (Annual)
Prickly sida (Teaweed)	Mustard
Annual morningglory	Malva
Ragweed	Wild oat

The tank mix also controls shallow-germinating seedlings of:

Cocklebur	Coffeeweed

Weeds controlled in cotton by the **Trifluralin / Cotoran tank mix** or Cotoran overlayed post plant pre-emergence in addition to those controlled by TREFLAN alone, where TREFLAN has been applied as a preplant soil incorporated herbicide in cotton (See page 23 for special instructions.)

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

Weeds controlled in cotton by an overlay treatment of Karmex post plant pre-emergence in fields where **Trifluralin** has been applied as a preplant soil incorporated herbicide in addition to those controlled by **Trifluralin** alone (See page 25 special instructions.)

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

The tank mix of **Trifluralin plus Avadex BW** will control wild oat in peas grown in Idaho, Oregon, and Washington in addition to the weeds controlled by **Trifluralin** alone. (See page 49 for special instructions.)

DIRECTIONS FOR USE

Trifluralin is a pre-emergence herbicide which is mixed (incorporated) into the soil to provide long-lasting control

of a wide range of annual grasses and broadleaf weeds **Trifluralin** controls weeds as they germinate but will not control established weeds.

SOIL TEXTURE

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

Soil Texture—Guide:

Refer to the following guide to determine your soil texture.

*Coarse** Soils*	Sand
	Loamy sand
	Sandy loam
Medium Soils	Loam
	Silty clay loam*
	Silt loam
	Silt
	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 predominately sand or silt, they are usually classified as medium-textured soils; if predominately clay, they are usually classified as fine-textured soils.*

SOIL PREPARATION

Destroy existing weeds before **Trifluralin** 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* a **Trifluralin** application. Use machinery that breaks up large clods before a **Trifluralin** application.

APPLICATION

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

AERIAL APPLICATION

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

Do not apply **Trifluralin** by aircraft when the wind is blowing at a velocity of 5 mph or greater. This will cause drift of spray particles and result in non-uniform application.

INCORPORATION DIRECTIONS

Incorporation Before Planting

For best results **Trifluralin** should be incorporated as soon as possible after application. **Trifluralin** must be incorporated one time within 24 hours after application. A second incorporation is required with most equipment (see page for specific instructions). **Trifluralin** is applied to a wet soil surface and evaporation may result from delaying the first incorporation beyond 24 hours.

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

Incorporation After Planting

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

When incorporating **Trifluralin** after planting or on established row crops use PTO-driven equipment or rolling cultivators. Adjust equipment to lift the soil over the seed or throw treated soil toward the crop. Avoid disturbing the seed or mechanically damaging the crop.

Incorporation In Bedded Culture

For effective weed control **Trifluralin** should be incorporated into the top 2 to 3 inches of the final seedbed.

Knock off beds to planting height before application of **Trifluralin** and incorporation on bedded ground. If **Trifluralin** is applied and incorporated before bedding, do not furrow out deeper than the depth to which **Trifluralin**

was incorporated. Furrowing too deep will expose untreated soil and allow weeds to germinate in the bottom of the furrow.

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

Incorporation Equipment

Use machinery that mixes **Trifluralin** thoroughly with the soil. Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Use of incorporation equipment not listed upon the label may result in poor or erratic weed control and/or crop injury.

Recommended equipment includes:

Disc set to cut 4 to 6 inches deep and operated in 2 different directions at 4 to 6 mph. A tandem or double-disc operated one time does not provide adequate incorporation.

Field cultivator set to cut 3 to 4 inches deep and operated at 5 mph or more. The field cultivator used alone or in combination with the double-disc will provide effective incorporation providing the following instructions are used:

1. Two passes over the field with a field cultivator with the second pass running at an angle to the first. Do not set cultivator to cut deeper than 4 inches, particularly on the second pass, since untreated soil may be turned up.
2. Field cultivator used for the first pass and the double-disc used for the second pass.
3. Double-disc used for the first pass and the field cultivator used for the second pass.

NOTE: A field cultivator is defined as an implement with 3 to 4 rows of sweeps, spaced at intervals of 7 inches or less and staggered so that no soil is left unturned. Chisel points should not be used.

Rolling cultivator set to cut 2 to 4 inches deep and operated 2 times at 6 to 8 mph. Rolling cultivators are adequate for use on coarse and medium-textured soils only (except when used in sugarcane where the rolling cultivator may be used on fine-textured soils).

Bed conditioner (Do-All) set to cut 2 to 4 inches deep and operated one time at 4 to 6 mph. Bed conditioners are adequate for use on coarse and medium-textured soils only.

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

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

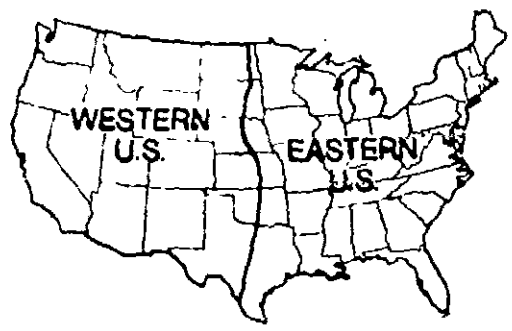
Other equipment, including the flexible tine-tooth harrow (Flextine, Melroe) is also recommended but only for the special programs for which it is specified in this label.

CULTIVATION AFTER PLANTING

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

REGIONAL USE MAP

All crop recommendations are given on a regional basis. The dividing line between the Eastern and Western United States is that point where the average rainfall per year is a minimum of 20 to 25 inches. Use the recommendation in your region only (refer to map on page 21).



CROP RECOMMENDATIONS
Eastern United States

GENERAL

These recommendations are given as the broadcast (overall) rates of **Trifluralin** per acre. For band applications, use *proportionately less*. Apply **Trifluralin** anytime after January 1 when the soil can be worked. **Trifluralin** *is not recommended on muck soils.* Where a rate range is shown, use the lighter rate for more coarse soils or soils with lower organic matter.

COTTON—Pre-emergence applications:

Apply and incorporate **Trifluralin** before planting, at planting or immediately after planting using the following broadcast rates per acre:

Coarse soils	1 pint
Medium Soils	1½ pints
Fine soils	2 pints
Coarse soils with 2 to 5% organic matter	1½ pints
Soils with 5.1 to 10% organic matter	2 to 2½ pints

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

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

COTTON—Post-emergence applications:

Apply TREFLAN anytime up to layby but not less than 90 days before harvest. Direct layby applications to the soil between the rows and beneath emerged cotton plants. Use the same rates as for a pre-emergence application.

COTTON—Fall application:

See Page 59 on Fall Application

COTTON—Fall panicum control:

For the control of fall panicum in the states of Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia, apply and incorporate **Trifluralin** at the broadcast rate of 2 pints per acre on both coarse and medium soils. Plant cotton after early season adverse weather conditions have passed. Do not plant cotton deeper than 1 inch. Crop injury in the form of delayed growth or reduced yields may occur under adverse cool, wet weather conditions when TREFLAN is used according to these special recommendations.

COTTON—Rhizome Johnsongrass control:

See Page 61 on Rhizome Johnsongrass control

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

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

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

COTTON—More Complete Weed and Grass Control in Certain Counties Along the Texas Gulf Coast:

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

See precaution in preceding paragraph.

COTTON—Trifluralin/Caparol tank mix for cotton grown in Texas:

(See page 42)

COTTON—Trifluralin/Cotoran tank mix except in Arizona and California:

The **Trifluralin**/Cotoran tank mix effectively controls all the annual grasses and broadleaf weeds listed on the **Trifluralin** label (See page 10) plus many additional annual grasses and broadleaf weeds (See page 15). Follow normal **Trifluralin** procedures for soil preparation. Apply **Trifluralin**/Cotoran tank mix in 15 to 40 gallons of clean

water per acre using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly.

Broadcast Rates *Per* Acre:

	Trifluralin E.C.	Cotoran 80W
Coarse soils	1 pint	1¼ pounds
Medium soils	1½ pints	2 pounds
Fine soils	2 pints	2½ pounds

Mixing Directions:

Carefully follow the procedures on the Cotoran 80W label for making a Cotoran slurry and adding it to a partially filled tank of water. After the Cotoran is thoroughly mixed with the partially filled tank of water, add the **Trifluralin** and continue filling. Agitate continuously throughout the filling and application operations. Follow normal **Trifluralin** incorporation procedures. Do not leave spray mixture in tank without constant agitation. If by-pass agitation is used, it should terminate at the bottom of the tank to minimize foaming. **Precautions:** Do not use the tank mix in Arizona and California. Do not plant crops other than cotton on the treated land within 6 months after the application of **Trifluralin** plus Cotoran or injury may occur.

West Texas Only: Do not use the tank mix of **Trifluralin** plus Cotoran on sandy, loamy sand or fine sandy loam soils. Do not use on cotton planted in furrows.

Arkansas, Louisiana, and Mississippi Only: Use 1 pound Cotoran 80W in tank mix with **Trifluralin** on sandy loam soils low in organic matter.

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

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

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

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

Cotoran Overlay: Refer to the Cotoran label for cautions precautions and instructions.

COTTON— Preplant incorporated Trifluralin and surface applied, preemergence Karmex for weed control in cotton grown east of the Mississippi River plus Arkansas, Southeastern Missouri, Louisiana, and Eastern Texas:

Preplant soil incorporated applications of **Trifluralin** (See page 21 for **Trifluralin** rates) may be followed by a surface applied post-plant pre-emergence application of Karmex 80W effectively controls all the weeds controlled by **Trifluralin** (See page 10) plus many additional weeds (See page 15). Apply Karmex 80W at 0.6 to 1.5 pounds per broadcast acre to the soil surface after planting but prior to crop emergence. The higher rates are used on heavier soil types. Do not use Karmex on light (sandy or low organic) soils. Do not use on heavy clay soils above 10 percent organic matter. Consult the Karmex label for additional instructions, cautions and precautions.

SOYBEANS:

Apply and incorporate **Trifluralin** before planting using the following broadcast rates per acre.

Coarse soils	1 pint
Medium soils	1½ pints
Fine soils	2 pints
Coarse soils with 2 to 5% organic matter	1½ pints

Soils with 5 to 10%

Do not plant

SOYBEANS—Fall application

See Page 60

SOYBEANS—Fall panicum control

For the control of fall panicum in Alabama, Florida, Georgia, North Ca[illegible] gumia, apply **Trifluralin** at the broadcast rate of 1½ pints per acre on both coarse and medium soils. Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth or reduced yields may occur under adverse cool wet weather conditions when **Trifluralin** is used according to these special recommendations.

SOYBEANS—More Complete Control of Pigweed and Seedling Johnsongrass in Soybeans Grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, southeastern Missouri, North Carolina, South Carolina, Tennessee and southern Virginia:

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

Precaution: Plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed

growth may occur under adverse cool wet weather conditions early in the season when **Trifluralin** is used according to these recommendations.

SOYBEANS—More Complete Weed and Grass Control in Certain Counties Along the Texas Gulf Coast:

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

See precaution in preceding paragraph.

SOYBEANS—Soils Containing Charcoal in Arkansas, Louisiana and Mississippi:

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

Apply and incorporate **Trifluralin** at the following broadcast rates per acre:

Coarse soils	1½ pints
Medium soils	2¼ pints
Fine soils	3 pints

SOYBEANS—Rhizome Johnsongrass Control:

See Page 61 on Rhizome Johnsongrass control

SOYBEANS—Wild Cane Control:

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

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

Application—Apply **Trifluralin** before planting at a broadcast rate of 1 pint on coarse soils, 2 pints on medium soils, 2½ pints on fine soils.

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

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

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

SOYBEANS—Trifluralin/Sencor or Trifluralin/ Lexone Tank-Mix:

The **Trifluralin** /Sencor or **Trifluralin** /Lexone tank-mix effectively controls, in addition to the annual grasses and

broadleaf weeds controlled by **Trifluralin** (See page 10), the broadleaf weeds listed on page 12. Follow normal **Trifluralin** procedures for soil preparation. The **Trifluralin** / Sencor or **Trifluralin** /Lexone tank-mix should be applied from 2 weeks before planting up to planting in 10 to 40 gallons of water with any low-pressure herbicide sprayer equipped with herbicide tips and screens no finer than 50 mesh in nozzle and in-line strainers.

Broadcast Rates Per Acre	Trifluralin E.C.	Lexone 50 W.P. or Sencor 50 W.P.
Coarse soils*	1 pint	½ pound
Medium soils	1½ pints	¾ pound
Fine soils**	2 pints	1 pound

	Trifluralin E.C.	Lexone 4L or Sencor 4
Coarse soils*	1 pint	½ pint
Medium soils	1½ pints	¾ pint
Fine soils**	2 pints	1 pint

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

***Silty clay loam and sandy clay loam soils are transitional soils and may be classified as medium textured soils in some regions of the U.S.*

Do not plant any crop other than soybeans within 4 months after treatment. Follow normal **Trifluralin** procedures for incorporation and cultivation.

NOTE: In those areas of the Mid-South where cocklebur is

a serious problem an overlay of Sencor or Lexone may be preferred to the **Trifluralin**/Sencor or **Trifluralin**/Lexone tank mix

Special Precaution Applied according to directions and under normal growing conditions the **Trifluralin**/Sencor or **Trifluralin**/Lexone tank-mix will not harm the treated crop Over-application may result in crop injury or soil residue Uneven application or improper soil incorporation of the **Trifluralin**/Sencor or **Trifluralin**/Lexone tank-mix can result in erratic weed control or crop injury Seeding disease, cold weather deep planting excessive moisture soil pH over 7 5. high salt concentration or drought may weaken crop seedlings and increase possibility of damage from the **Trifluralin**/Sencor or **Trifluralin**/Lexone tank mix Under these conditions. delayed crop development or reduced yields may result Caution Observe all cautions and limitations on labeling of all products used in mixtures Sencor may be harmful if swallowed or inhaled Avoid contact with eyes. skin or clothing Avoid breathing of dust or spray mist. Wash clothing thoroughly with soap and hot water before reuse Do not contaminate feed or food Keep out of reach of children

Do not use the foliage from soybeans treated with the **Trifluralin**/Sencor or **Trifluralin**/Lexone tank-mix for feed or forage Do not contaminate any body of water nor apply to any area not specified on this label Do not allow sprays to drift onto adjacent desirable plants Dispose of the Sencor or Lexone container by burying with wastes or by burning (Keep out of smoke)

*SOYBEANS—***Trifluralin** *pre-plant followed by Sencor or Lexone as an overlay treatment for weed control in soybeans:*

Trifluralin effectively controls certain annual grasses and broadleaf weeds (See page 10) See Sencor or Lexone

label for additional weeds controlled Apply **Trifluralin** as a preplant incorporated herbicide according to the directions on page 18 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 the soybeans emerge. Do not spray Sencor or Lexone over the top of emerged soybeans or injury may result.

Use directions—Follow directions on the **Trifluralin** Sencor or Lexone labels for specific instructions regarding each chemical.

Special Precautions: Do not use Lexone or Sencor on Tracy, Semmes, Altona, Vansoy or Coker 102 soybeans as these varieties are sensitive to Lexone or Sencor and injury to the crop may result.

Do not use treated vines for feed or forage.

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

Do not apply Sencor or Lexone more than once per season

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

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

Caution: Read the **Trifluralin** , Sencor or Lexone labels carefully before using. Note all cautions, precautions and special precautions.

Broadcast Applications Rates	Trifluralin E	SENCOR 50 W P Post-Plant/ Pre-Emergence			LEXONE 50 W P Post-Plant/ Pre-Emergence	
Soil Texture*		Less than 2% Organic Matter	2 to 4% Organic Matter	Over 4% Organic Matter	½ to 2% Organic Matter	More than 2% Organic Matter
Coarse**	1 pt	DO NOT USE	¾ lb	1 lb	DO NOT USE	¾ lb
Medium	1½ pts	¾ to 1 lb	1 to 1¼ lbs	1¼ to 1½ lbs	¾ lb	1 lb
Fine	2 pts	1 to 1¼ lbs	1¼ to 1½ lbs	1½ to 1¾ lbs	1 lb	1 lb
Mississippi Delta	Rate according to soil texture	1½ lbs	1¾ lbs	2 lbs	1½ lbs	1½ lbs

Do not use Lexone on sand nor on soils with less than ½% organic matter as crop injury may result

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

SOYBEANS—Trifluralin/Amiben

Amiben may be applied as a band over the soybean row at planting time in fields where **Trifluralin** has been applied as a preplant soil incorporated treatment. (See page 15 for weeds controlled by this treatment). Or Amiben may be applied several days prior to planting as a broadcast treatment to **Trifluralin** The tank mixture should be used as a second preplant soil incorporated treatment. The tank mix improves broadleaf weed control of species such as smartweed velvetleaf and ragweed. For broadcast treatments, incorporate chemicals immediately and thoroughly to an approximate depth of 2 inches with a disk, field cultivator or similar tool set to cut at a depth of 4 to 6 inches. Apply Amiben at a rate of 1 gallon (2.0 pounds) acid equivalent per broadcast acre. Apply **Trifluralin** at a rate of 1½ pints for medium soils and 2 pints for fine soils. Do not use on peat or charcoal soils. Read and observe all directions and cautions on the Amiben label.

BEANS—Castor Beans:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ to 2 pints on coarse soils with 2 to 5% organic matter and 2 pints on soils with 5.1 to 10% organic matter.

BEANS—Dry Beans (Kidney, Navy, Pinto, etc.):

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ to 2 pints on coarse soils with 2 to 5% organic matter and 2 pints on soils with 5.1 to 10% organic matter.

BEANS—Trifluralin/Eptam Tank-Mix for Dry Beans:

The **Trifluralin/Eptam** tank-mix effectively controls henbit, black nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the TREFLAN label (See page 10). Follow normal TREFLAN procedures for soil preparation. The **Trifluralin/Eptam** tank-mix should be applied from 2 days before planting up to planting. Apply at a broadcast rate of 1 pint of **Trifluralin** and 1¾ pints of Eptam 7E per acre or up to the label recommended rate for each herbicide depending on soil texture and weed problem. **Trifluralin** at 1 pint per acre alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal **Trifluralin** procedures for cultivation.

Caution: Read the Eptam label before using. Observe all cautions and limitations on labeling of all products used in mixtures. The combination of **Trifluralin** and Eptam should not be used on soybeans, black-eyed peas (beans), lima beans and other flatpodded beans except Romano. Do not use the foliage from a crop treated with the **Trifluralin** Eptam tank-mix for feed or for grazing.

BEANS—Guar Beans and Mungbeans:

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

BEANS—Lima Beans and Snap Beans:

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

CARROTS:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ to 2 pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter.

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

For *Direct-Seeded* cole crops apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils and coarse soils with 2 to 5% organic matter. Direct-seeded cole crops have exhibited marginal tolerance to recommended rates of **Trifluralin**. Stunting or reduced stands may occur. For *Transplant* cole crops apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Do not apply **Trifluralin** after transplanting.

CUCURBITS—Cantaloupes, Cucumbers and Watermelons—Post-Plant, emerged in Texas only:

Apply **Trifluralin** at a broadcast rate per acre of 1 pint on coarse soils, 1¼ to 1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on coarse soils with 2 to 5% organic matter and 2 pints on soils with 5.1 to 10% organic matter. Apply **Trifluralin** as a directed spray to the soil between the rows and beneath plants which are in the 3 to 4 true-leaf stage. Set incorporation machinery to throw treated soil toward plants in the row. Care should be taken that incorporation machinery does not damage the plants.

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

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

MUSTARD—Grown For Seed in Minnesota and North Dakota Only:

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

OKRA:

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

PEANUTS—Spanish Peanuts Grown in Texas and Oklahoma Only:

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

PEAS—English:

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

PEAS—Southern:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils; 1½ to 2 pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter

PEPPERS—Transplants only:

Apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils 1½ pints on coarse soils with 2 to 5% organic matter and 2 pints on soils with 5.1 to 10% organic matter Do not apply TREFLAN after transplanting

POTATOES—Not recommended for use in the state of Maine:

Apply TREFLAN after planting up to or immediately following dragoff at a broadcast rate per acre of 1 pint on coarse soils 1½ pints on medium soils 2 pints on fine soils; 1½ pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter **Trifluralin** is not recommended on muck soils

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

POTATOES—Trifluralin/Eptam Tank-Mix for Potatoes Grown in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota and Texas only:

The **Trifluralin**/Eptam tank-mix effectively controls henbit, black nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the **Trifluralin** label (see page 10) Follow normal **Trifluralin** procedures for soil preparation The **Trifluralin**/Eptam tank-mix may be applied after planting but prior to crop

emergence. In areas where potatoes are normally dragged-off, the **Trifluralin/Eptam** tank-mix should be applied and incorporated up to or immediately following dragoff at a broadcast rate per acre of 1 pint of **Trifluralin** and 1¾ pints of Eptam 7E on all soil textures or up to the label recommended rate for each herbicide depending on soil texture and weed problem. **Trifluralin** at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal **Trifluralin** procedures for cultivation.

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

SAFFLOWER:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ to 2 pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter.

SUGAR BEETS:

Apply **Trifluralin** as a broadcast, overtop spray when plants are between 2 and 6 inches tall at a rate per acre of 1 pint on coarse soils and 1½ pints on medium and fine soils. Exposed beet roots should be covered with soil before a **Trifluralin** application to reduce the possibility of grazing. Set incorporation machinery to throw treated soil toward the plants in the row. Care should be taken that incorporation machinery does not damage the sugar beet taproot.

SUGARCANE—Plant Cane Only:

Apply and incorporate **Trifluralin** twice a year at a broadcast rate per acre of 2 to 4 pints for all soil textures. Make the **Trifluralin** application in the fall on firmly packed beds

immediately after the seed pieces are planted. Make the **Trifluralin** 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.

SUGARCANE—Applications up to Layby for Plant Cane or Ratoon Cane Grown in Louisiana or Texas only:

Apply and incorporate **Trifluralin** at a broadcast rate per acre of 2 to 4 pints for all soil textures. Make the **Trifluralin** application in the spring from before or shortly after the cane emerges up to layby. Make the **Trifluralin** application after the beds have been shaved or false shaved. Loosen rain-packed beds 2 to 3 inches deep before application. Care should be taken so that incorporation machinery does not damage seed pieces or emerging shoots. A rolling cultivator or bed chopper may be used to incorporate **Trifluralin** layby applications in sugarcane on all soil textures. Follow normal incorporation directions for the rolling cultivator. Set bed chopper to cut 3 to 4 inches deep and operate 2 times at 4 to 6 mph.

SUGARCANE—Raoulgrass Control in Louisiana only:

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

sugarcane on all soil textures. Follow normal incorporation directions for the rotary cultivator. Set rod chopper to cut 3 to 4 inches deep and operate 2 times at 4 to 6 mph.

SUNFLOWER:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter.

TOMATOES:

For *Direct seeded* tomatoes apply **Trifluralin** at blocking or thinning at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Apply TREFLAN as a directed spray to the soil between the rows and beneath the plants and incorporate. For *Transplant* tomatoes apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils, 1½ pints on medium soils, 2 pints on fine soils, 1½ pints on coarse soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Do not apply TREFLAN after transplanting.

TREES AND VINEYARDS:

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

For *Non-Bearing Established Plantings of Citrus and Pecan Trees and Bearing Plantings of Grapefruit, Lemon, Orange, Pecan, Tangelo, Tangerine Trees* apply TREFLAN at a broadcast rate per acre of 2 to 4 pints for all soil

textures. In these established plantings, apply **Trifluralin** as a directed spray to the soil around the trees and use incorporation methods not injurious to the trees.

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

CROP RECOMMENDATIONS

Western United States

GENERAL

These recommendations are given as the broadcast (overall) rates of **Trifluralin** per acer. Is not remommended for proportionately less. **Trifluralin** in not recommended for peat soils exceeding 20% organic matter or on any muck soils. Do not exceed recommended rates at any time. Where a rate range is shown, use the lighter rate for more coarse soils or soils with lower organic matter.

COTTON—Pre-emergence applications:

Apply and incorporate **Trifluralin** before planting, at planting or immediately after planting using the following broadcast rates per acre:

Coarse soils	1 pint
Medium soils	1¼ to 1½ pints
Fine soils	1½ pints
Soils with 2 to 5% organic matters	1½ to 2 pints
Soils with 5.1 to 10% organic matter	2 pints

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

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

COTTON—Post-emergence applications:
Apply **Trifluralin** anytime up to layby, but not less than 90 days before harvest. Direct layby applications to the soil between the rows and beneath emerged cotton plants Use the same rates as for a pre-emergence application

COTTON—Fall Application:
See Page 59 on Fall Application.

COTTON—Rhizome Johnsongrass Control:
See Page 62 for Rhizome Johnsongrass control

COTTON—Trifluralin / Caparol tank mix for cotton grown in California, Arizona, New Mexico, and Texas:
The **Trifluralin**/Caparol combination will control certain grasses and broadleaf weeds listed on the **Trifluralin** label (see page 10) plus those listed on page 14 for **Trifluralin**/Caparol. This combination will also control shallow-germainating seedlings of cocklebur and coffeeweed.

NOTE: This combination will not control sunflower, rhizome johnsongrass, deep-germinating seedlings of cocklebur and sandbur or established perennials such as Bermudagrass. Follow normal **Trifluralin** procedures for soil preparation and incorporation. Apply the tank mix combination to the flat soil surface before discing.

Broadcast Rates Per Acre:

	TRIFLURALIN E.C.	Caparol 80W
Coarse soils*	1 pint	2 pounds
Medium soils	1½ pints	2½ pounds
Fine soils	2 pints	2½ pounds

Do not use on sands and loamy sands For band applications use proportionately less* **Trifluralin *is not recommended for use on muck soils*

Mixing Directions Carefully follow the procedures on

the Caparol 80W label for making a slurry and adding it to a partially filled tank of water. After the Caparol is thoroughly mixed with the partially filled tank of water, add the **Trifluralin** EC and continue filling. Agitate during the filling and spraying operation

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

Incorporation Directions The first incorporation of **Trifluralin**/Caparol should be immediately following application. A second incorporation is required with most equipment. (See incorporation equipment on page 19 for

Precautions: Do not apply more than the recommended rate for your soil texture.

The combination of **Trifluralin**/Caparol should not be used under the following conditions because crop injury may result: in the cut areas of newly leveled fields, in areas of excess salt, and where flooding over the beds is likely to happen.

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

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

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

Winter barley, winter rye and winter wheat can be planted in the fall also, if they are plowed down and not used for food or feed. Refer to the Caparol label for directions, cautions and precautions

COTTON—Trifluralin/Coloran tank mix:
(See page 23)

ALFALFA—Established Alfalfa Only:
Apply **Trifluralin** to established alfalfa stands at a broadcast rate per acre of 1½ pints on coarse soils and 2 pints on medium and fine soils. Use incorporation equipment that will insure thorough soil mixing with a minimum of damage to the established alfalfa

BEANS—Castor Beans:
Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

BEANS—Dry Beans (Kidney, Navy, Pinto, etc.):
Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

BEANS—TRIFLURALIN/Tank-Mix for Dry Beans:
The **Trifluralin**/Eptam tank-mix effectively controls henbit, nightshade and nutsedge (nutgrass) in addition to all of the annual grasses and broadleaf weeds listed on the **Trifluralin** label (see page 10). Follow normal **Trifluralin** procedures for soil preparation. The **Trifluralin**/Eptam tank-mix may be applied up to 2 days before planting. Apply at a broadcast rate of 1 pint of **Trifluralin** and 1¾ pints of Eptam 7E per acre or up to the label recommended rate for each herbicide depending on soil texture and weed problem. **Trifluralin** at 1 pint per acre, alone or in combination, should not be used on soils containing 5% or more organic matter. Incorporate immediately after application. Follow normal **Trifluralin** procedures for cultivation

Caution: Read the Eptam label before using. Observe all cautions and limitations on labeling of all products used in mixtures. The combination of **Trifluralin** and Eptam should not be used on soybeans, black-eyed peas (beans), lima beans and other flatpodded beans, except Romano. Do not use the foliage from a crop treated with the **Trifluralin**/Eptam tank-mix for feed or for grazing

BEANS—Fall Application in Dry Beans Grown in Idaho, Oregon and Washington Only:
See Page 60 on Fall Application

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

BEANS—Lima Beans and Snap Beans:
Apply and incoporate **Trifluralin** before planting at a bradcast rate per acre of 1 pint on coarse and medium soils and 1½ pints on fine soils.

BEANS—Soybeans:
Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% orgainic matter.

BEANS—Fall Application on Soybeans:
See Page 60 on Fall Application

BEANS—Rhizome Johnsongrass Control in Soybeans:
See page 61

BEANS—Trifluralin / Amiben Tank-Mix for Soybeans: See page 33

BEANS—Trifluralin/Sencor or Trifluralin/Lexone Tank-Mix for Soybeans:

See page 28

BEANS—Trifluralin pre-plant followed by Sencor or Lexone as an overlay treatment of weed control in soybeans:

See page 30

Apply and incorporate **Trifluralin** before planting at a broadcast rate of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% organic matter.

CELERY—Both Direct-seeded and Transplant:

Apply and incorporate **Trifluralin** before planting or transplanting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to 1½ pints on medium soils; 1½ pints on fine soils; 1½ to 2 pints on soils with 2 to 5% organic matter; and 2 pints on soils with 5.1 to 10% orgainc matter.

Cole Crops— Broccoli, Brussels Sprouts, Cabbage and Cauliflower:

For *Direct-seeded* cole crops apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse, medium and fine soils and 1½ pints on soils with 2 to 10% organic matter. For *Transplant* cole crops apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils, 1¼ to 1½ pints on medium soils; 1½ pints on fine soils;

1½ to 2 pints on soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter. Do not apply TREFLAN after transplanting.

CUCURBITS—Cantaloupes, Cucumbers and Watermelons—Post-plant, emerged only:

Apply **Trifluralin** at a broadcast rate per acre of 1 pint on coarse soils, 1¼ to 1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter and 2 pints on soils with 5.1 to 10% organic matter. Apply **Trifluralin** as a directed spray to the soil between the rows and beneath plants which are in the 3 to 4 true-leaf stage. Set incorporation machinery to throw treated soil toward plants in the row. Care should be taken that encorporation machinery does not damage the plants.

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

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

HOPS:

Apply and incorporate **Trifluralin** while the crop is dormant at a broadcast rate per acre of 1 pint on coarse sils; 1¼ to 1½ pints on medium soils and 1½ pints on fine soils and soils with 2 to 5% organic matter.

MINT—Established Peppermint and Spearmint:

Apply **Trifluralin** at a rate per acre of 1 pint on coarse soils, 1¼ pints on medium soils, and 1½ pints on fine soils. Use incorporation equipment that will insure thorough soil mixing with a minimum of damage to the established, dormant mint.

MUSTARD—Grown For Seed in Montana and North Dakota Only:

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

OKRA:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1¼ to 1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter.

PEANUTS—Spanish Peanuts Grown in Texas and Oklahoma Only:

Apply and incorporate **Trifluralin** before planting, at planting or immediately after planting at a broadcast rate pe5 acre of 1 pint on coarse soils. When incorporating after planting, cvare msut be taken not to disturb the seed.

PEAS—Dry Peas and English Peas:

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

PEAS—Fall Application in Dry Peas and English Peas Grown in Idaho, Orgon and Washington Only:

See Page 60 on Fall Application.

PEAS—Southern Peas:

Apply and incorporate **Trifluralin** before planting at a broadcast rate per acre of 1 pint on coarse soils, 1¼ to 1½ pints on medium soils, 1½ pints on fine soils, 1½ to 2 pints on soils with 2 to 5% organic matter, and 2 pints on soils with 5.1 to 10% organic matter.

PEAS—Trifluralin and Avadex BW tank mix for weed control peas grown in Idaho, Oregon, and Washington:

The tank mix combination of **Trifluralin** plus Avadex BW will provide control of wild oats in addition to other annual grasses and broadleaf weeds controlled by **Trifluralin** (See page 10)

Application Rates Broadcast ¾ pint of **Trifluralin** on coarser textured soils, 1 pint of **Trifluralin** on fine soils. Use 1¼ quarts of Avadex BW for all soil textures.

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

NOTE: Do not apply to lentils.

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

PEPPERS—Transplants Only:

Apply and incorporate **Trifluralin** before transplanting at a broadcast rate per acre of 1 pint on coarse soils; 1¼ to