



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

2749-572

Date of Issuance:

6/22/17

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Aceto Trifluralin 4E Herbicide

Name and Address of Registrant (include ZIP Code):

John F. Wright  
Aceto Agricultural Chemicals Corporation  
4 Tri Harbor Court  
Port Washington, NY 11052

**Note:** Changes in labeling 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 EPA registration number.

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

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

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

Signature of Approving Official:

Kathryn V. Montague, Product Manager 23  
Herbicide Branch, Registration Division (7505P)

Date:

6/22/17

2. You are required to comply with the data requirements described in the DCI Order identified below:

- a. Trifluralin GDCI-036101-1233

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. An accelerated study (2 weeks at 54°C) or one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.
4. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 2749-572.”
5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 1/27/2017
- Alternate CSF 1 dated 1/27/2017

If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at [schmid.emily@epa.gov](mailto:schmid.emily@epa.gov).

Enclosure

(Base label):

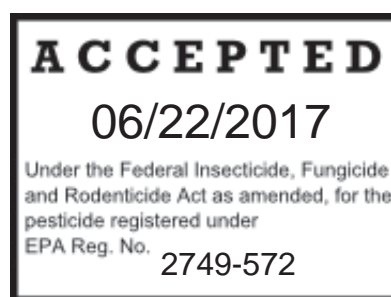
Group	3	HERBICIDE
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# Aceto trifluralin 4 E Herbicide

**A herbicide for the preemergence control of annual grasses and broadleaf weeds in certain crops, as listed in the Directions for Use, below.**

Active Ingredient:  
trifluralin. .... 46%  
Other Ingredients..... 54%  
Total ..... 100%

Contains xylene range aromatic petroleum solvent.  
Contains 4 lb. active ingredient per gallon.



**Keep Out of Reach of Children**

## **CAUTION [PRECAUCION]**

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

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### **Precautionary Statements**

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#### **Hazards to Humans and Domestic Animals**

**Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals**

#### **Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below.

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate or Viton  $\geq$  14 mils.
- Shoes plus socks
- Protective eyewear

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

## Engineering Controls

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

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### First Aid

**If in eyes:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a Poison Control Center or doctor for treatment advice.

**If on skin or clothing:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes
- Call a Poison Control Center or doctor for treatment.

**If swallowed:**

- Call a Poison Control Center or doctor immediately for treatment advice.
- Do not induce vomiting unless told to do so by a Poison Control Center or doctor.
- Do not give **any** liquid to the person.
- Do not give anything by mouth to an unconscious person.

**If inhaled:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

**Note:** Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887.

**Note to physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia. This product contains an aromatic hydrocarbon and can be extremely harmful if swallowed. Aspiration of this product may produce a severe pneumonitis. Stomach lavage with a cuffed endotracheal tube in place and immediate administration of activated charcoal, 6 to 8 heaping teaspoonfuls with water, should be considered. Treatment is otherwise symptomatic and supportive.

## Environmental Hazards

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters.

## Physical and Chemical Hazards

Do not use or store near heat or open flames.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

#### (Storage and Disposal for rigid containers 5 gal or less)

##### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### (Storage and Disposal for refillable rigid containers larger than 5 gal)

##### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

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

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Offer for recycling, if available or recondition if appropriate. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### (Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

##### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

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**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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**Refer to label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer and Notice at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

### **Avoid Freezing -- Store Above 40°F**

EPA Reg. No. 2749-LTE  
Manufactured For:  
Aceto Agricultural Chemicals Corporation  
4 Tri Harbor Court  
Port Washington, NY 11050

EPA Est. No.

**Net Contents** \_\_

(Label booklet cover):

Group	3	HERBICIDE
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# Aceto trifluralin 4 E

## Herbicide

**A herbicide for the preemergence control of annual grasses and broadleaf weeds in certain crops, as listed in the Directions for Use, below.**

Active Ingredient:

trifluralin.....	46%
Other Ingredients.....	54%
Total .....	100%

Contains xylene range aromatic petroleum solvent.  
Contains 4 lb. active ingredient per gallon.

**Keep Out of Reach of Children**

### **CAUTION [PRECAUCION]**

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

#### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer and Notice at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call CHEMTREC® TOLL FREE 1-800-424-9300 OR 1-703-527-3887.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

**Avoid Freezing -- Store Above 40°F**

EPA Reg. No. 2749-LTE

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Manufactured For:  
Aceto Agricultural Chemicals Corporation  
4 Tri Harbor Court  
Port Washington, NY 11050

**Net Contents** \_\_\_

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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

# CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals

### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate or Viton  $\geq$  14 mils.
- Shoes plus socks
- Protective eyewear

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

### Engineering Controls

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

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### First Aid

#### If in eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a Poison Control Center or doctor for treatment advice.

#### If on skin or clothing:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes
- Call a Poison Control Center or doctor for treatment.

#### If swallowed:

- Call a Poison Control Center or doctor immediately for treatment advice.
- Do not induce vomiting unless told to do so by a Poison Control Center or doctor.
- Do not give **any** liquid to the person.
- Do not give anything by mouth to an unconscious person.

#### If inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

**Note:** Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887.

**Note to physician: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.** This product contains an aromatic hydrocarbon and can be extremely harmful if swallowed. Aspiration of this product may produce a severe pneumonitis. Stomach lavage with a cuffed endotracheal tube in place and immediate administration of activated charcoal, 6 to 8 heaping teaspoonfuls with water, should be considered. Treatment is otherwise symptomatic and supportive.

### Environmental Hazards

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters.

### Physical and Chemical Hazards

Do not use or store near heat or open flames.

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### Directions for Use

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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

### Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

**Exception:** If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of barrier laminate or Viton  $\geq$  14 mils.
- Shoes plus socks
- Protective eyewear

## Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

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

### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### Refillable containers 5 gallons or larger:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Offer for recycling, if available or recondition if appropriate. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### Nonrefillable containers 5 gallons or larger:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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## Product Information

Aceto trifluralin 4 E Herbicide is a herbicide for the preemergence control of annual grasses and broadleaf weeds in certain crops, as listed in the Directions for Use, below. Aceto trifluralin 4 E Herbicide may be applied in liquid sprays of water or liquid fertilizer, or impregnated on dry bulk fertilizer.

To reduce loss of herbicidal activity, Aceto trifluralin 4 E Herbicide should be soil incorporated within 24 hours after application unless otherwise specified in specific use directions. Aceto trifluralin 4 E Herbicide may be tank mixed or followed by overlay or postemergence treatments with other herbicides to improve the spectrum of weeds controlled. Aceto trifluralin 4 E Herbicide controls weeds by disrupting growth processes during germination. Aceto trifluralin 4 E Herbicide does not control established weeds.

### **Use Precautions:**

- Applied according to directions and under normal growing conditions, Aceto trifluralin 4 E Herbicide will not harm the treated crop.
- Over application may result in crop injury or rotational crop damage from herbicide carryover.
- Uneven application or improper incorporation of Aceto trifluralin 4 E Herbicide 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 Aceto trifluralin 4 E Herbicide. Under these conditions, delayed crop development or reduced yields may result.
- Do not apply Aceto trifluralin 4 E Herbicide to soils that are wet or are subject to prolonged periods of flooding as poor weed control may result.

### **Restrictions:**

- Do not use Aceto trifluralin 4 E Herbicide on any crop grown in Pecos county or Reeves county, Texas.

**Chemigation:** Aceto trifluralin 4 E Herbicide may be applied by chemigation on certain crops. See instructions for chemigation in the Application Methods section of this label. Also, see specific instructions for certain crops in the Crops section of this label.

### **Rotation Crop Restrictions**

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

**In Arizona, Colorado, California, Idaho, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming:** Do not plant sugar beets, red beets, or spinach 12 months after a spring application or 14 months after a fall application of Aceto trifluralin 4 E Herbicide. Moldboard plowing to a depth of 12 inches prior to planting these crops will reduce the possibility of crop injury. If land has not been irrigated, do not plant these crops for 18 months after a spring application or 20 months after a fall application of Aceto trifluralin 4 E Herbicide.

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

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

**In Arizona, Colorado, California, Idaho, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming:** Delay planting proso millet, corn, sorghum (milo), oats, and annual or perennial grass crops or grass mixtures for 12 months after a spring application or 14 months after a fall application of Aceto trifluralin 4 E Herbicide to avoid the possibility of crop injury. If land has not been irrigated, delay planting these crops 18 months after a spring application or 20 months after a fall application. Moldboard plowing to a depth of 12 inches before planting these crops will reduce the possibility of crop injury.

**In Minnesota, North Dakota, and South Dakota:** Delay planting proso millet, sorghum (milo), oats, and annual or perennial grass crops or grass mixtures 18 months after a spring application or 21 months after a fall application of Aceto trifluralin 4 E Herbicide.

**In those portions of Kansas, Nebraska, Oklahoma, and Texas that receive less than 20 inches of rainfall and irrigation to produce a crop:** Delay planting proso millet, sorghum (milo), oats and annual or perennial grass crops or grass mixtures for 18 months after an application of Aceto trifluralin 4 E Herbicide. In sorghum, cool, wet weather conditions during early growth stages may increase the possibility of crop injury.

**All other areas receiving more than 20 inches of rainfall and irrigation:** Delay planting proso millet, sorghum (milo), oats, and annual or perennial grass crops or grass mixtures for 12 months after a spring application or 14 months after a fall application of Aceto trifluralin 4 E Herbicide.

#### **Rotation Crops Other Than Those Specifically Addressed Above**

For all other crops, with the exception of those to which Aceto trifluralin 4 E may be applied as a preplant soil incorporated treatment, delay planting for 5 months after an application of Aceto trifluralin 4 E.

### **Weed Resistance Management**

Trifluralin, the active ingredient in this product, is a group 3 herbicide (inhibition of microtubule assembly). Some naturally occurring weed biotypes that are tolerant (resistant) to trifluralin may exist due to genetic variability in a weed population. Where resistant biotypes exist, repeated use of herbicides with the same mode of action can lead to the selection for resistant weeds. Certain agronomic practices reduce the likelihood that resistant weed populations will develop, and can be utilized to manage weed resistance once it occurs.

Populations of green foxtail (pigeongrass) resistant to the dinitroaniline (DNA) class of herbicides have been identified in the state of North Dakota in fields which have a long history of dinitroaniline herbicide use. Aceto trifluralin 4 E Herbicide will not control green foxtail which has developed DNA resistance.

**Therefore, the grower assumes the risk of nonperformance due to DNA resistance if Aceto trifluralin 4 E Herbicide is used to control green foxtail in the state of North Dakota.** Alternative green foxtail control practices should be utilized in these fields.

Aceto Agricultural Chemicals Corporation strongly recommends use of the following management practices to prevent or delay the development or spread of DNA-resistant green foxtail in spring cereal production areas:

- Rotate herbicides so that the same product or same class of herbicide is not used repeatedly year after year. Aceto trifluralin 4 E Herbicide and/or other dinitroaniline herbicides should not be applied in consecutive years and preferably should be used only once in a three-year period. Consult your local extension service for information regarding herbicides with alternative modes of action.
- Rotate crops and use alternative weed control methods, including tillage, fallow periods and/or other herbicides with different modes of action.
- Thoroughly clean small grains harvested from fields with confirmed resistance before using as seed, or avoid using grain from DNA-resistant fields for seed.
- Thoroughly clean all crop residues from tillage and harvesting equipment before moving out of fields with confirmed resistance.

### **Soil Texture Guide for Application Rates**

Use rates for incorporated treatments of Aceto trifluralin 4 E Herbicide are based on Soil Texture Class (coarse, medium, or fine) and soil organic matter content. A fine textured soil (e.g., clay loam) will require a higher application rate than a coarse textured soil (e.g., loamy sand). In the table below, find the Soil Texture Class (coarse, medium, or fine) corresponding to the Soil Texture to be Treated. Choose the proper rate for each application based on the Soil Texture Class and specific crop Directions for Use. Do not exceed listed maximum use rates.

Soil Texture Class	Soil Texture to be Treated
Coarse (Light) Soils	Sand, loamy sand, sandy loam
Medium Soils	Loam, silty clay loam <sup>1</sup> , silt loam, silt, sandy clay loam <sup>1</sup>
Fine (Heavy) Soils	Clay, clay loam, silty clay loam <sup>1</sup> , silty clay, sandy clay, sandy clay loam <sup>1</sup>

<sup>1</sup>Silty clay loam and sandy clay loam soils are transitional soils and may be classified as either medium or fine textured soils. If silty clay loam or sandy clay loam soils are predominantly sand or silt, they are usually classified as medium textured soils. If they are predominantly clay, they are usually classified as fine textured soils.

## Mixing Directions

### Aceto trifluralin 4 E Herbicide - Alone

Aceto trifluralin 4 E Herbicide may be mixed with water or most liquid fertilizer materials. Prior to mixing Aceto trifluralin 4 E Herbicide in liquid fertilizer, refer to the label section entitled Testing for Compatibility in Liquid Fertilizers for testing procedures to determine compatibility with the liquid fertilizer product to be used. The combination of Aceto trifluralin 4 E Herbicide with solution and suspension-type fertilizers provides weed and grass control equal to water sprays.

Fill spray tank 1/3 to 1/2 full with clean water or liquid fertilizer. Start agitation. Add correct amount of Aceto trifluralin 4 E Herbicide and continue agitation while filling tank to required spray volume.

### Restrictions:

- Do not allow water or spray mixture to back-siphon into a water source.

### Aceto trifluralin 4 E Herbicide in Tank Mix

For broader spectrum weed control, Aceto trifluralin 4 E Herbicide may be applied in tank mix combination with other products registered for use on crops listed in this label unless tank mixing with trifluralin is prohibited by the manufacturer's label. When tank mixing, use the listed use rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Aceto trifluralin 4 E Herbicide may be tank mixed with other products and applied with water or most liquid fertilizer materials. Prior to mixing Aceto trifluralin 4 E Herbicide with other pesticides or liquid fertilizers, refer to the Compatibility Testing for Tank Mix Partners Including Liquid Fertilizers section below.

Vigorous, continuous agitation during mixing, filling, and throughout application is required for all tank mixes. Sparger pipe agitators normally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture. To prevent foaming during filling, keep end of fill pipe below the surface of the liquid in the spray tank.

**Mixing Order:** Fill the spray tank to 1/4 to 1/3 of the total spray volume required. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.



Add different formulation types in the following order: Dry flowables (DF); wettable powders (WP); aqueous suspensions (AS), flowables (F) and liquids (L).

Maintain agitation and fill spray tank to 3/4 of total spray volume. Add Aceto trifluralin 4 E Herbicide and other emulsifiable concentrates (EC) and any solutions (S).

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling, and throughout application. If spraying/agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

**Restrictions:**

- Do not allow water or spray mixture to back-siphon into a water source.

**Premixing:** Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these products in liquid fertilizer or water. Use line screens in the spray tank no finer than 50 mesh (100 mesh is finer than 50 mesh).

**Compatibility Testing for Tank Mix Partners Including Liquid Fertilizers**

A jar test is suggested prior to tank mixing this product with other pesticides or liquid fertilizer to ensure compatibility. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions and in the order indicated in the tank mixing section above. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If components of the mixture separate readily, a compatibility agent may be helpful in maintaining the stability of the spray mixture. If the mixture balls-up, forms flakes, sludges, jells, oily films or layers, or other precipitates, the components of the mixture are not compatible and full-scale tank mixing should not be attempted.

**Note:** Compliance with state regulations for liquid fertilizer mixing, registration, labeling, and application are the responsibility of the individual and/or company offering the fertilizer or chemical mixture for sale.

**Application Methods**

As spray volume decreases, the importance of accurate calibration and uniform application increases. Check calibration and uniformity of spray application daily. To avoid spray drift, do not apply when winds are gusting or when wind speed is greater than 15 mph.

**Ground Broadcast Application**

Apply Aceto trifluralin 4 E Herbicide in 5 to 40 gallons of liquid carrier per acre (broadcast basis) using any properly calibrated, low-pressure herbicide sprayer that will apply the spray uniformly. The carrier may be water or liquid fertilizer as specified for the crop to be treated in the Crops section of this label. For band application, adjust herbicide rate and spray volume in proportion to the band width and row width treated.

**Aerial Broadcast Application**

Apply Aceto trifluralin 4 E Herbicide in 5 to 10 gallons of water per acre. Adjust pump pressure, nozzle arrangements, speed, and application height to provide uniform application to the soil surface. Use swath markers or flaggers to assure proper swath width interval.

**Avoiding Spray Drift:** Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following spray drift management practices are suggested to avoid off-target movement of sprays:

- The distance from the outer most nozzles on the spray boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

**Information on Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's suggested pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the suggested practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Avoid applications below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Applications should not occur during a local, low-level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the

movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** Only apply the pesticide when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

### Application with Dry Bulk Fertilizer

Dry bulk fertilizers impregnated or coated with Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment on crops. Follow all label use directions for Aceto trifluralin 4 E Herbicide regarding application rates, incorporation directions, special instructions, and precautions. Read and follow all label instructions below concerning use of Aceto trifluralin 4 E Herbicide with dry bulk fertilizer. Properly applied dry bulk fertilizers impregnated with Aceto trifluralin 4 E Herbicide provides weed and grass control equal to water sprays.

Use the following formula to calculate the amount of Aceto trifluralin 4 E Herbicide required to impregnate a ton of dry bulk fertilizer.

$$\begin{array}{r} \text{Pints Aceto trifluralin} \\ \text{4 E Herbicide} \\ \text{Per Acre} \\ \times \\ \hline \end{array} \quad \begin{array}{r} \text{1000} \\ \text{Pounds Fertilizer} \\ \text{Per Acre} \end{array} = \begin{array}{r} \text{Quarts Aceto} \\ \text{trifluralin 4 E} \\ \text{Herbicide} \\ \text{Per Ton of} \\ \text{Fertilizer} \end{array}$$

**Limitations:** Apply a minimum of 200 lb. per acre of dry fertilizer impregnated with Aceto trifluralin 4 E Herbicide at the suggested broadcast rate per acre. Any commonly used dry fertilizer can be used for impregnation with Aceto trifluralin 4 E Herbicide except coated ammonium nitrate and pure 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. Nozzles used to apply Aceto trifluralin 4 E Herbicide to dry bulk fertilizer should be placed to provide uniform spray coverage.

**Application and Incorporation:** Spread the fertilizer/chemical mixture with properly calibrated application equipment. Be certain the material is applied uniformly to the soil surface. Dry bulk fertilizer impregnated with Aceto trifluralin 4 E Herbicide must be incorporated two times. The first incorporation should occur within 24 hours after application. The second incorporation should be delayed a minimum of 5 days after the first and be completed prior to planting.

**Compliance with State Regulations:** Compliance with state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company offering the fertilizer or chemical mixture for sale.

### Application by Chemigation

Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in certain crops as specified in the Crops section of this label. Read and follow all label instructions outlined below concerning chemigation before applying Aceto trifluralin 4 E Herbicide by this method.

### Chemigation Directions:

Apply this product only through continuously moving center pivot, lateral move end tow, solid set, or hand move irrigation systems, or certain other systems described in this label.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of chemigation treated water.

If you have questions about calibration contact state extension specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **Sprinkler Chemigation Directions:**

The following directions must be followed for all listed sprinkler irrigation systems (center pivot, lateral move, or end tow):

1. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point that pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Inject Aceto trifluralin 4 E Herbicide continuously throughout the chemigation period. Check the chemigation-metering pump periodically during application to insure proper operation.
9. The injection-metering pump must be calibrated as specified by the manufacturer.
10. Pesticide injection hoses which connect chemigation-metering equipment to the sprinkler irrigation system should be of braided reinforced construction with an internal tube made of nylon, cross-linked polyethylene, or high-density polyethylene.
11. Aceto trifluralin 4 E Herbicide may cause staining of plastic hoses and tanks.
12. Apply Aceto trifluralin 4 E Herbicide in sprinkler irrigation equal to 1/2 to 1 inch of water.
13. During chemigation, maintain agitation in supply tank at all times.

### **Chemigation System Calibration:**

Sample calculation for use of Aceto trifluralin 4 E Herbicide in a chemigation system:

- Assume, in this example, 133 acres are to be covered by a chemigation treatment.
- Product required, assuming 1.5 pints per acre, is 199.5 pints  
(133 acres X 1.5 pt./acre = 199.5 pt. = 25 gallons)
- Add 25 gallons of product directly to the injection supply tank.
- Adjust the injection system to deliver 25 gallons during the time required to apply 1 inch of water to 133 acres.

If the irrigation system requires 20 hours to apply 1 inch of water to 133 acres, the injection rate is 1.25 gal/hr. and is calculated as follows:

- $25 \text{ gal} \div 20 \text{ hr.} = 1.25 \text{ gal/hr.}$   
 $1.25 \text{ gal/hr.} = 160 \text{ fl. oz./hr.}$

Proper calibration requires the injection pump to be adjusted to deliver 2.7 fl. oz./min and is calculated as follows:

- $160 \text{ fl. oz./hr.} \div 60 \text{ min./hr.} = 2.7 \text{ fl. oz. per min.}$

### **Chemigation Mixing Directions:**

**Undiluted Aceto trifluralin 4 E Herbicide:** When used alone, the injection of undiluted Aceto trifluralin 4 E Herbicide is preferred in chemigation systems. For undiluted use, the metering pump, supply tank, and any associated equipment must be thoroughly clean and dry before Aceto trifluralin 4 E Herbicide is added to the system for injection. When injecting undiluted Aceto trifluralin 4 E Herbicide, maintain continuous agitation in the supply tank.

**Diluted Aceto trifluralin 4 E Herbicide:** Aceto trifluralin 4 E Herbicide may be diluted if required to achieve accurate calibration for existing equipment. Partially fill the injection supply tank with a volume of water equal to the amount of Aceto trifluralin 4 E Herbicide required (do not add water to Aceto trifluralin 4 E Herbicide). Start agitation. Add the required amount of Aceto trifluralin 4 E Herbicide to water in the supply tank and continue mixing while filling the tank to the final volume required by the injection pump calibration. When injecting diluted Aceto trifluralin 4 E Herbicide, maintain continuous agitation in supply tank.

### **Application Timing**

#### **Preplant Incorporated Application**

Aceto trifluralin 4 E Herbicide may be applied and incorporated prior to planting when soil can be worked and is in a condition that allows thorough mixing to insure uniform incorporation. See Crops section for application timing for specific crops.

#### **Preemergence Application Immediately After Planting**

Apply and incorporate Aceto trifluralin 4 E Herbicide immediately after planting and prior to crop germination. Adjust incorporation equipment so as to avoid disturbance of planted seed. Refer to the Crops section of this label for crop specific instructions.

#### **Postemergence and Layby Application**

Apply and incorporate Aceto trifluralin 4 E Herbicide at the suggested rate to the established crop at or before the last cultivation. Required pre-harvest intervals for treatments with Aceto trifluralin 4 E Herbicide for certain crops are specified in the Crops section of this label. Crop cover may prevent uniform soil coverage from over-the-top sprays. To avoid this problem, use drop nozzles or directed sprays to achieve uniform soil coverage.

#### **Fall Application**

Aceto trifluralin 4 E Herbicide may be applied in the fall for weed control in the crop of the following growing season in all crops for which Aceto trifluralin 4 E Herbicide is listed as a preplant incorporated treatment. Refer to the Crops section for any crop specific fall application instructions. In the states of California, North Dakota, South Dakota and Minnesota, apply and incorporate Aceto trifluralin 4 E Herbicide any time between September 1 and December 31. In all other states, fall apply Aceto trifluralin 4 E Herbicide between October 15 and December 31.

Do not use fall application of Aceto trifluralin 4 E Herbicide on fields which remain wet or are subject to periods of flooding. Ground may be bedded up over winter. On bedded ground, reduce beds to desired height before planting, by moving some treated soil from beds into furrows. Where soil is left flat over

winter, care should be taken not to turn up untreated soil during spring bedding operations. Destroy established weeds during seedbed preparation. Weeds established in furrows as a result of exposing untreated soil should be destroyed before planting.

## **Incorporation Directions**

### **Soil Preparation and Incorporation**

Ground cover or existing weeds can interfere with uniform soil incorporation of Aceto trifluralin 4 E Herbicide. A manageable level of ground cover will allow uniform incorporation into the top 2 to 3 inches of the final seedbed. If ground cover and crop residues are, excessive, reduce by appropriate soil tillage prior to application.

Aceto trifluralin 4 E Herbicide must be incorporated within 24 hours after application unless otherwise specified on this label. Non-uniform application may result in erratic weed control or crop injury. With most equipment and methods of application, a second incorporation is required and may occur any time before planting. Make the second incorporation in a different direction. To avoid bringing untreated soil to the surface, the second application must not be deeper than the first. **Note: Two-pass incorporation is required for all special use programs unless otherwise specified.**

**Soil Conditions: Ensure** the soil surface is smooth enough to allow for uniform application and efficient incorporation of Aceto trifluralin 4 E Herbicide. Break up clods using tillage equipment prior to application of Aceto trifluralin 4 E Herbicide. Apply when soil moisture is sufficient to allow the breakup of large clods and uniform mixing during the incorporation process. Soil compaction and/or non-uniform incorporation may occur if soil is excessively moist.

**Incorporation in Bedded Culture:** In bedded culture, incorporate Aceto trifluralin 4 E Herbicide to a depth of 2 to 3 inches in the final seedbed.

**Application Prior to Bedding:** Apply Aceto trifluralin 4 E Herbicide and incorporate one time with suggested equipment. The bedding operation serves as the second incorporation. Do not expose untreated soil during post-bedding operations such as planting since removal of treated soil during planting can allow weed germination and establishment in the drill row.

**Application After Bedding:** Knock off beds to planting height before applying Aceto trifluralin 4 E Herbicide. Apply and incorporate Aceto trifluralin 4 E Herbicide with suggested equipment that will conform to the shape of the bed. Do not expose untreated soil.

**Cultivation After Planting:** Treated crops may be shallowly cultivated without reducing the weed control activity of Aceto trifluralin 4 E Herbicide. Limit depth of cultivation to the zone of treated soil to avoid moving untreated soil to the surface. Exposure of untreated soil may cause loss of weed control.

## **Incorporation Equipment**

Use incorporation equipment capable of mixing Aceto trifluralin 4 E Herbicide uniformly into the top 2 to 3 inches of the final seedbed. Use of inappropriate equipment or improper use of suggested equipment may result in erratic weed control and/or crop injury. Incorporation equipment such as a tandem disc will mix Aceto trifluralin 4 E Herbicide approximately half as deep as the equipment is set to operate. For example, a disc set to cut 4 inches deep will mix most of the Aceto trifluralin 4 E Herbicide within the top 2 inches of soil. Any suggested incorporation implement may be used alone or in combination with any other suggested implement. Two incorporation passes are required when using the following incorporation implements (for single pass incorporation, refer to soil conditions and equipment listed under Single Pass Incorporation Option below):

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

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

**Bed Conditioner (Do-All):** Set equipment to cut 2 to 4 inches deep and operate at 4 to 6 mph. One incorporation pass is adequate in bedded culture, while 2 incorporation passes are required in flat planted culture. The Do-All should be used only on coarse and medium textured soils.

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

**Other Equipment:** Other implements including the flexible tine-tooth harrow (Flextine or Melroe) are suggested, but only for certain uses defined in the Crops section of this label.

**Conservation Tillage Practices:** In reduced or minimum tillage situations, fall or spring application and incorporation of Aceto trifluralin 4 E Herbicide may be combined with tillage operations. The first incorporation may utilize equipment such as a tandem disc, combination implement or bedding equipment that provides good soil mixing but leaves a maximum amount of crop residue on the soil surface. The second incorporation may be accomplished with tillage equipment that provides uniform soil mixing used in conjunction with no-till planters (see specific instructions for reduced or conservation tillage situations for cotton and soybeans in the Crops section).

**Springtooth Harrow on Coarse Textured Soils to be Bedded up Prior to Planting (Texas only):**

A springtooth harrow is defined as an implement with 3 to 4 rows of shanks equipped with chisel points spaced at intervals of 7 inches or less and staggered so that no soil is left unturned. The springtooth harrow may be used to effectively incorporate (mix) this product into coarse textured (sandy) soils to be bedded up prior to planting. Destroy existing weeds before an application of this product. Chop and thoroughly mix crop residues into the soil to a depth of at least 4 to 6 inches by deep plowing or discing prior to an application of this product. Use machinery that breaks up large clods before application of Aceto trifluralin 4 E Herbicide. The first incorporation must occur within 24 hours after application. Set the springtooth harrow to cut 3 to 4 inches deep and operate at a speed of 5 mph or greater. Two passes over the field are required with the second pass in a different direction than the first. The springtooth harrow also may be used as the first or second incorporation tool in combination with other suggested equipment for the other incorporation. Do not incorporate with springtooth harrow if soil is too wet for good mixing. When this product is applied and incorporated before bedding, do not furrow out deeper than the depth to which this product was incorporated. Furrowing too deep will expose untreated soil and allow weeds to germinate in the bottom of the furrow.

**Single Pass Incorporation Option**

Aceto trifluralin 4 E Herbicide may be incorporated in a single pass if incorporation conditions allow for thorough and uniform mixing into the top 2 to 3 inches of the final seedbed. Thorough and uniform incorporation may be achieved if the soil at the time of incorporation is of good tilth with moderate moisture, and is relatively free of clods and crop residue. **The following types of equipment can be used to obtain thorough and uniform soil mixing from a single incorporation pass:**

**Finishing Disc** with disc blades no greater than 22 inches in diameter, spaced no more than 7 1/2 inches apart. Operate at 4 to 6 mph. Best results are obtained when the disc is equipped with harrow, reel, or basket attachments.

**Field Cultivator:** Set equipment to cut 3 to 4 inches deep and operate at a minimum of 5 mph. A field cultivator is defined as an implement with 3 to 4 rows of sweeps, spaced at intervals of 7 inches or less with sweeps on successive rows staggered so that no soil is left unturned. Chisel points must not be used. Best results are obtained when the field cultivator is equipped with harrow, reel, or basket attachments.

**Combination Implements:** These implements are defined as two or more tillage devices combined to operate as a single tillage unit. For example, two to three rows of field cultivator C- or S-shaped shanks with successive rows of sweeps staggered so that no soil is left unturned, followed by a spike-tooth or flexline harrow, followed by ground driven reel, basket or incorporator wheels. Set combination implements to cut 3 to 4 inches deep and operated at a minimum of 6 mph. Two incorporations are suggested under conditions which prevent optimum soil mixing such as excessive surface residue, roughness, high clay content or soil is too wet or too dry. Combination tools can also be composed of two rows of wide crown sweeps that overlap so that the roots of all weeds and plants are severed. Follow this by 2 gangs of rotating spoked wheels that thoroughly mix Aceto trifluralin 4 E Herbicide into the top 2 to 3 inches of the final seedbed.

**P.T.O.-Driven Equipment (Tillers, Cultivators, Hoes):** Adjust equipment to incorporate Aceto trifluralin 4 E Herbicide into the top 2 to 3 inches of the final seedbed with rotors spaced to provide a clean sweep of the soil. P.T.O. equipment should not be operated at more than 4 mph.

## Weeds Controlled

Common Name	Scientific Name
<b>Grass Weeds</b>	
annual bluegrass	<i>Poa annua</i>
barnyardgrass (watergrass)	<i>Echi nochloa crus-galli</i>
brachiaria (signalgrass)	<i>Brachiaria</i> spp.
bromegrass (cheatgrass) (downy brome)	<i>Bromus tectorum</i>
cheat (chess)	<i>Bromus secalinus</i>
crabgrass (large crabgrass) (smooth crabgrass)	<i>Digitaria</i> spp.
foxtail (bottlegrass) (bristlegrass) (giant foxtail) (green foxtail) <sup>8</sup> (foxtail millet) (pigeongrass) (robust foxtail) (yellow foxtail)	<i>Setaria</i> spp.
guineagrass <sup>1</sup>	<i>Panicum maximum</i>
itchgrass (raoulgrass) <sup>1</sup>	<i>Rottboellia exaltata</i>
johnsongrass (from seed) <sup>2</sup>	<i>Sorghum halepense</i>
jungerice	<i>Echinochloa coloum</i>
panicum (fall panicum) <sup>3</sup>	<i>Panicum dichotomiflorum</i>
ryegrass, Italian (annual ryegrass)	<i>Lolium multiflorum</i>
Texas panicum (buffalograss) (Coloradograss)	<i>Panicum texanum</i>
red rice <sup>4</sup>	<i>Oryza sativa</i>
sandbur (burgrass)	<i>Cenchrus incertus</i>
sprangletop	<i>Leptochloa filiformis</i>
stinkgrass (lovegrass)	<i>Eragrostis cilianensis</i>
shattercane (wild cane) <sup>5</sup>	<i>Sorghum bicolor</i>
woolly cupgrass	<i>Eriochloa villosa</i>
<b>Broadleaf Weeds</b>	
carpetweed	<i>Mollugo verticillata</i>
chickweed	<i>Stellaria media</i>



field bindweed <sup>6</sup>	<i>Convolvulus arvensis</i>
goosefoot	<i>Chenopodium hybridum</i>
henbit	<i>Lamium amplexicaule</i>
knotweed	<i>Polygonum aviculare</i>
kochia (fireweed)	<i>Kochia scoparia</i>
(Mexican fireweed)	
lambsquarters, common	<i>Chenopodium album</i>
pigweed (carelessweed)	<i>Amaranthus</i> spp.
(palmer amaranth) <sup>7</sup>	
(prostrate pigweed)	
(redroot)	
(rough pigweed)	
(spiny pigweed) <sup>5</sup>	
puncturevine (western U.S. only)	<i>Tribulus terrestris</i>
(caltrop)	
(goatweed)	
purslane, common	<i>Portulaca oleracea</i>
pusley, Florida (Florida purslane)	<i>Richardia scabra</i>
(Mexican clover)	
(pusley)	
Russian thistle (tumbleweed)	<i>Salsola iberica</i>
stinging nettle (nettle)	<i>Urtica dioica</i>

<sup>1</sup>See special instructions for control in sugarcane in the Crops section.

<sup>2</sup>Rhizome - see special instructions for control in cotton, soybeans, fruit and nut crops and grapes in the Crops section.

<sup>3</sup>Spreading panicgrass - see special instructions for control in cotton and soybeans in the Crops section.

<sup>4</sup>See special instructions for suppression or partial control in soybeans in the Crops section.

<sup>5</sup>See special instructions for control in soybeans in the Crops section.

<sup>6</sup>See special instructions for control in fruit and nut crops and grapes in the Crops section.

<sup>7</sup>Suppression only in areas of the southwest U.S. where tolerance to trifluralin has been observed. Consult your local extension service for information regarding alternative weed control practices.

<sup>8</sup>Will not control dinitroaniline (DNA) herbicide weed biotypes. See Weed Resistance Management Section.

## Special Use Programs

Aceto trifluralin 4 E Herbicide is approved for the following special use programs. Refer to the Crops section of this label for details on soil preparation, use rates, application, soil incorporation, and precautions for each type or program.

### Cotton

- Fall Application Prior to Planting in the Spring (Only for use in Arkansas, Louisiana and Mississippi)
- Chemigation
- Postemergence Soil Incorporated (Only for use in Kansas, Texas, Oklahoma, and New Mexico)
- Weed Control in Conservation Tillage
- Fall Panicum Control
- Pigweed and Seedling Johnsongrass Control
- Additional Weed and Grass Control (Only for use in Gulf Coast Counties of Texas)
- Rhizome Johnsongrass Control

### Soybeans

- Fall Application Prior to Planting in the Spring (Only for use in Arkansas, Louisiana and Mississippi)
- Chemigation
- Weed Control Under Reduced or Conservation Tillage
- Fall Panicum Control
- Pigweed and Seedling Johnsongrass Control
- Additional Weed and Grass Control (Only for use in Gulf Coast Counties of Texas)
- Itchgrass (Raoulgrass) Suppression
- Charcoal Soils in Arkansas, Louisiana, and Mississippi
- Red Rice Control (Only for use in Arkansas, Louisiana, Mississippi, and Texas)
- Rhizome Johnsongrass Control Only for use in Eastern United States and Texas
- Wild Cane (Shattercane) Control
- Enhanced Control of Broadleaf Signalgrass in Soybeans with Aceto trifluralin 4 E Herbicide Plus Dual Tank Mix
- Control of DNA-Resistant Goosegrass in Soybeans with Aceto trifluralin 4 E Herbicide Plus Dual Tank Mix

**Citrus, Stone Fruit and Nut Crops and Grapes**

- Rhizome Johnsongrass Control
- Field Bindweed Control

**Crops**

**Alfalfa - Established**

**Mechanically Incorporated**

Apply Aceto trifluralin 4 E Herbicide with ground or aerial equipment and mechanically incorporate prior to weed emergence to control weeds listed in the Product Information section of this label. Use mechanical incorporation equipment that will insure thorough soil mixing with minimal damage to crop stand.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5
medium	2.0
fine	2.0

**Surface Applications (Chemigation or Water Incorporated)**

Aceto trifluralin 4 E Herbicide may be surface applied for annual grass control in established alfalfa by chemigation, or ground or aerial broadcast application equipment.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	4.0

**Chemigation:** Refer to Application by Chemigation section in the Product Information section of this label for use directions for chemigation.

### Surface Applications Activated by Rainfall or Irrigation

Broadcast surface applications of Aceto trifluralin 4 E Herbicide to established alfalfa may be activated by rainfall, sprinkler, flood, or furrow irrigation. Rainfall or a single overhead sprinkler irrigation of 0.5 acre inch or more is required to activate Aceto trifluralin 4 E Herbicide. If activated by furrow irrigation, care should be taken to thoroughly wet beds between furrows. If rainfall or irrigation has not occurred within three days after application, Aceto trifluralin 4 E Herbicide may be mechanically incorporated. If mechanically incorporated, use equipment that will insure thorough soil mixing with minimum damage to the established alfalfa.

### Application Timing and Weeds Controlled

Applications to established alfalfa for annual grass control can be made during dormancy or semi-dormancy, or during the growing season immediately after a cutting. Because Aceto trifluralin 4 E Herbicide does not control established weeds, application must be made prior to the expected time of weed germination. Bromegrass and cheat begin to germinate in the fall with the onset of cooler weather. To control these weeds, apply Aceto trifluralin 4 E Herbicide immediately after a cutting between August 1 and October 1, but prior to weed germination. When fall applied, Aceto trifluralin 4 E Herbicide controls bromegrass and cheat in addition to other labeled weeds that germinate after application.

The following weeds are controlled when Aceto trifluralin 4 E Herbicide is applied by chemigation or surface applied and incorporated by rainfall or irrigation:

barnyardgrass	crabgrass
bromegrass	cupgrass
(cheatgrass)	foxtail
(downy brome)	junglerice
(cheat)	sandbur
(chess)	wild barley
canarygrass	

#### Restrictions:

- Do not cut or graze alfalfa within 21 days after application of Aceto trifluralin 4 E Herbicide.
- Apply no more than 4 pints of Aceto trifluralin 4 E Herbicide during any growing season. In the growing season following application of 4 pints of Aceto trifluralin 4 E Herbicide to alfalfa, plant only those crops for which Aceto trifluralin 4 E Herbicide is registered as a preplant treatment or crop injury may occur.

### Tank Mixing

Other products registered for use on established alfalfa may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or applied as sequential treatments following application of Aceto trifluralin 4 E Herbicide. Tank mixes containing Aceto trifluralin 4 E Herbicide must be applied by ground broadcast when alfalfa is dormant or semi-dormant, or immediately after a cutting.

### Alfalfa - New Seeding Establishment

This product may be applied as a preplant incorporated treatment for preemergence control of labeled weeds in direct seeded alfalfa. Apply and incorporate prior to planting.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0 – 1.5†
fine	1.5

†Use lower rate in rate range in areas receiving less than 20 inches of rainfall and irrigation.

**Precautions:**

- Some crop stand reduction and stunting may occur with this use of this product, however, reduced weed competition will allow establishment of a quality stand.

**Asparagus - Established**

Apply Aceto trifluralin 4 E Herbicide to established asparagus as a single or split application. Aceto trifluralin 4 E Herbicide will suppress volunteer seedling asparagus and field bindweed when applied as directed. Follow suggested soil preparation, application, and incorporation procedures for Aceto trifluralin 4 E Herbicide.

**Application Timing**

Make applications to dormant asparagus in winter or early spring after mature ferns have been removed. Do not apply after new spears begin to emerge. Apply post-harvest applications immediately after harvest in late spring or early summer just before ferns are allowed to develop.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Split Application	Single Application
	Before and After Harvest	Before or After Harvest
coarse	1.0 + 1.0	2.0
medium	1.5 + 1.5	3.0
fine	2.0 + 2.0	4.0

**Restrictions:**

- Do not apply more than 2 pints per acre on coarse soils, 3 pints per acre on medium soils or 4 pints per acre on fine soils during any calendar year.

**Beans - All Dry and Fresh Beans/Peas from Crop Group 6 (Except Guar, Mungbean, Lima Bean, Soybean, English Pea and Southern Pea.)****Aceto trifluralin 4 E Herbicide - Alone**

Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting or in the fall in advance of spring planting. See instructions for fall application of Aceto trifluralin 4 E Herbicide under the heading Application Timing in the Product Information section of this label.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to-10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### Tank Mixing or Sequential Treatments

For broader spectrum weed control, other products registered for use in dry and fresh beans/peas may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

### Beans - Guar and Mungbean

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	1.5

- All soils with 2 to 5% organic matter - 1.5 pints

### Beans - Lima Bean and Snap Bean

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0
fine	1.5

- All soils with 2 to 5% organic matter - 1.5 pints

### Carrot

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

**Chemigation:** Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in carrot. Refer to Application by Chemigation section under the Application Methods section of this label for chemigation use directions. Do not apply Aceto trifluralin 4 E Herbicide through any type of irrigation system unless these directions are carefully followed.

## Celery

Apply Aceto trifluralin 4 E Herbicide as a soil incorporated treatment. Aceto trifluralin 4 E Herbicide may be applied to direct seeded or transplant celery before planting, at planting, or immediately after planting.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

## Chicory (*Cichorium intybus* or *Cichorium endiva*)

Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment to chicory grown either as a root crop or leafy vegetable as indicated below:

*Cichorium intybus*, considered to be a root crop, may yield the following:

- Chicory - the dried and processed root used as a coffee substitute.
- Radicchio - green leaves harvested from field grown plantings.
- Belgian Endive - white leaves grown in the dark; growth from field grown rootstalks.

*Cichorium endiva*, considered to be a leafy vegetable, may yield the following:

- Escarole - curly green leaves from field grown plantings.
- Endive - very curly green leaves from field grown plantings.

Apply Aceto trifluralin 4 E Herbicide as a soil incorporated treatment in spring or early summer prior to planting.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints

## Cole Crops - Broccoli, Brussels Sprouts, Cabbage, and Cauliflower

### Direct Seeded Cole Crops

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0
fine	1.5

- Soils with 2 to 5% organic matter - 1.5 pints

### Transplanted Cole Crops

Apply and incorporate Aceto trifluralin 4 E Herbicide prior to transplanting.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter- 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### Direct Seeded Chinese Cabbage or Kohlrabi

Apply this product as a preplant soil incorporated treatment.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0
fine	1.5

- All soils with 2-5% organic matter - 1.5 pints of Aceto trifluralin 4 E Herbicide

#### Precautions:

- Chinese cabbage and kohlrabi may be sensitive to this product under certain conditions.
- The combined effect of certain cultural practices and unfavorable soil or environmental conditions may cause excessive crop seedling stress resulting in retarded crop growth, stand reduction, and reduced yield.
- For best results, observe the following cultural practices or precautions when applying Aceto trifluralin 4 E Herbicide:
  - Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration, or drought may weaken crop seedlings and increase the possibility of crop stress and damage.

- Do not exceed specified application rates. This is particularly important on coarse textured or low organic matter soils.
- Carefully follow incorporation directions.
- Use only high quality seed and plant at maximum seeding rates.

## Corn - Field Corn Only

### Postemergence Incorporated Treatment

Apply Aceto trifluralin 4 E Herbicide as a postemergence treatment following cultivation and/or use of a preemergence herbicide. Aceto trifluralin 4 E Herbicide does not control established weeds. Apply when crop is well established (2 true leaf stage or taller). Apply as an over-the-top spray or as a directed spray using drop nozzles if foliage prevents uniform coverage of the soil surface.

### Incorporation Directions

Applications of Aceto trifluralin 4 E Herbicide must be mechanically incorporated within 24 hours. Mechanical incorporation may be accomplished with one pass of a sweep-type cultivator or properly adjusted rolling cultivator. The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at a speed that will provide vigorous soil mixing. Set middle sweeps so as to avoid exposing untreated soil. Adjust incorporation equipment so as to avoid mechanical injury to the crop.

**Water In Option for Coarse and Medium Textured Soils:** On coarse and medium textured soils, Aceto trifluralin 4 E Herbicide may be incorporated by continuous rainfall or sprinkler irrigation amounting to at least 1/2 to 1 inch of water. Best results are obtained if application is made immediately after a cultivation when the soil surface is open and porous. Rainfall or sprinkler irrigation prior to application will tend to consolidate and seal the soil surface and prevent the downward movement of Aceto trifluralin 4 E Herbicide that is expected under porous, open, recently tilled conditions. Supplemental irrigation can be applied through a center pivot, solid set, or hand moved sprinkler system. Do not use furrow irrigation. Mechanically incorporate as described above if the required amount of rainfall or sprinkler irrigation does not occur within 24 hours after application.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	0.75 - 1.0 <sup>1</sup>
medium	1.25 - 1.5
fine	1.5 - 2.0

<sup>1</sup>Apply 1 to 1.5 pints per acre on coarse soils in Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia to control fall panicum and Texas panicum.

- Apply lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### Precautions:

- Where corn is planted in a furrow, Aceto trifluralin 4 E Herbicide must be applied only after a cultivation to move soil into the row.

### Restrictions:

- Do not apply to sweet corn, popcorn, or corn grown for seed.
- Pre-harvest Interval (PHI): Do not apply Aceto trifluralin 4 E Herbicide within 6 weeks prior to harvesting forage, fodder, or silage, or after corn is 30 inches tall.

### Chemigation



Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in field corn. Refer to Application by Chemigation section in the Product Information section of this label for chemigation use directions. Do not apply Aceto trifluralin 4 E Herbicide through any type of irrigation system unless these directions are carefully followed.

**Application Timing**

Apply Aceto trifluralin 4 E Herbicide in 1/2 to 1 acre inch of sprinkler irrigation when field corn is at the 2 true leaf stage of growth or taller. Apply Aceto trifluralin 4 E Herbicide prior to weed emergence or after existing weeds have been controlled with herbicides or cultivation. Aceto trifluralin 4 E Herbicide does not control established weeds.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5 - 2.0
medium	1.5 - 2.0
fine	Do not apply by chemigation to fine textured soils.

**Precautions:**

- Where corn is planted in a furrow, Aceto trifluralin 4 E Herbicide should be applied only after a cultivation to move soil into the row.

**Restrictions:**

- Pre-harvest Interval (PHI): Do not apply Aceto trifluralin 4 E Herbicide within 6 weeks prior to harvesting forage, fodder, or silage, or after corn is 30 inches tall.
- Do not apply Aceto trifluralin 4 E Herbicide to corn as a preplant or preemergence treatment as crop injury may occur.

**Aceto trifluralin 4 E Herbicide + Atrazine (Only for use in Alabama, Florida, Georgia, and Texas)**

Aceto trifluralin 4 E Herbicide may be applied for weed control in field corn in tank mix combination with atrazine herbicide plus an emulsifiable oil or oil concentrate when corn is from the 2-leaf stage of growth up to 12 inches tall and weeds are no more than 1 1/2 inches in height. A period of 24 to 48 hours is required to obtain atrazine postemergence activity after which the preemergence activity of this product plus atrazine combination may be activated by 0.5 inch or more of rainfall or overhead sprinkler irrigation or mechanical incorporation.

**Note:** In Texas, the tank mix of this product plus atrazine may be applied only to coarse textured soils.

**Incorporation Directions:** Mechanical incorporation may be accomplished with one pass of a sweeptype cultivator or properly adjusted rolling cultivator. The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at a speed that will provide vigorous soil mixing. Set middle sweeps so as to avoid exposing untreated soil. Adjust incorporation equipment so as to avoid mechanical injury to the crop.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse†	1.0††
medium	1.0 – 1.5
fine	1.5 – 2.0

†In Texas, the tank mix of this product plus atrazine may be applied only to coarse textured soils.

††Apply 1.5 pints/acre of this product on coarse soils to control fall panicum, pigweed and Texas

panicum.

**Precautions:**

- Where corn is planted in a furrow, apply this product only after a cultivation to move soil into the row.
- Refer to the atrazine product label for application rates, additional use directions, precautions and limitations before use.

**Restrictions:**

- Do not apply to sweet corn or corn grown for seed.
- Do not apply this product to corn as a preplant or preemergence treatment or crop injury may occur.

**Cotton and Cottonseed**

**Application Timing**

Aceto trifluralin 4 E Herbicide may be applied for weed control in cotton in the fall, in the spring before planting, after planting, but prior to crop emergence, or to established cotton up to and including layby, but no later than 90 days before harvest.

**Application Directions**

Aceto trifluralin 4 E Herbicide may be applied and soil incorporated or it may be applied through chemigation (see directions for chemigation in Chemigation section below).

Follow suggested soil preparation, application, and incorporation procedures in the Product Information section of this label. For fall application, in addition to the directions below, refer to instructions in the Application Timing section under Product Information. For layby application, refer to instructions in the Layby Application section below.

If incorporating after planting, incorporate Aceto trifluralin 4 E Herbicide soon after planting and set equipment so as to avoid disturbing planted cottonseed.

For band applications, reduce the application rate in proportion to the row spacing and bandwidth treated. For example, treating a 12-inch band where the row spacing is 36 inches would require 1/3 of the listed broadcast rate per acre (12 inches divided by 36 inches = 1/3).

**Tank Mixing or Sequential Treatments:** For broader spectrum weed control, other products registered for use in cotton may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

**Conventional Tillage Cotton**

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)		
	Spring Application <sup>1</sup>	Fall Application	
		Eastern U.S. <sup>2</sup>	Western U.S. <sup>3</sup>
coarse	1.0	2.0	1.5
medium	1.25 – 1.5	2.0	2.0
fine	1.5 – 2.0	2.5	2.5

<sup>1</sup> Spring Application:

- On coarse and medium soils with 2 to 5% organic matter use 1.5 pints per acre.
- On fine soils with 2 to 5% organic matter use 2 pints per acre.
- On all soils with 5 to 10% organic matter use 2 to 2.5 pints per acre.
- Use lower rate in rate range for areas receiving less than 20 inches of total annual rainfall and irrigation.

<sup>2</sup> Fall Application: Only for use in eastern U.S. including Alabama, Arkansas, northern Florida, Georgia, Louisiana, Mississippi, southeastern Missouri (Bootheel), North Carolina, New Mexico, Oklahoma, South Carolina, Tennessee, and Texas.

<sup>3</sup> Fall Application: Only for use in western U.S. including Arizona and California.

For fall application in all other states and areas not listed in the above footnotes: Apply Aceto trifluralin 4 E Herbicide at the spring application rate, using the high rate where a range is given.

**Minimum Tillage Cotton (Conservation Tillage Cotton)**

**Fall Application Prior to Establishing a Cover Crop**

Apply Aceto trifluralin 4 E Herbicide to flat ground at a broadcast rate of 2 to 3 pints per acre. Use the 3 pints per acre rate where crop residues are present or where dense weed populations are anticipated. Incorporate once within 24 hours using incorporation implements, such as a springtooth harrow, set to cut no more than 2 to 3 inches deep. **Do not incorporate with a tandem disc.** Form beds with disc bedders or other bedding implements that will mix and move most of the treated soil from the furrow area to the beds. Fertilizer may be applied as appropriate during incorporation operations. Plant 2 to 4 rows of a small grain cover crop, such as barley, rye or wheat, 2 inches deep in the furrow area between the beds. To avoid injury to small grain seedlings, place seed below the treated layer of soil. Barley is more tolerant to injury than wheat or rye. Existing soil moisture must be present to establish and maintain the cover crop. In late winter (February), apply 2,4-D if necessary for broadleaf weed control.

**Spring Application Before or After Planting**

Apply Aceto trifluralin 4 E Herbicide as a broadcast treatment or as a band to bare ground or standing dead cover following burndown with a postemergence herbicide. Aceto trifluralin 4 E Herbicide may be applied and incorporated either before planting or after planting. If applied after planting, incorporate immediately and set incorporation equipment to operate at a depth that will not disturb the planted seed. If Aceto trifluralin 4 E Herbicide is applied as a band, adapt incorporation equipment to the width of the treated band and use equipment that that will uniformly mix Aceto trifluralin 4 E Herbicide into the top 1 inch of soil. Be aware that compared to double-pass incorporation, weed control may be reduced when using single pass incorporation; or, if using equipment that does not provide thorough soil mixing.

**Broadcast Application Rates per Acre for Minimum Tillage**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 – 2.0
medium	1.5 – 2.0
fine	2.0 – 4.0

Use the lower rate in the rate range when additional sequential applications of Aceto trifluralin 4 E Herbicide are anticipated. Use the higher rate in the rate range where crop residues are present, and where dense weed populations are anticipated.

**Fall Application Prior to Planting Cotton in the Spring (Only for use in Arkansas, Louisiana and Mississippi)**

Apply Aceto trifluralin 4 E Herbicide at higher specified rates as a preplant soil incorporated treatment in the fall prior to planting cotton in the spring only in Arkansas, Louisiana, and Mississippi.

**Broadcast application rates for fall application prior to spring planted cotton:**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	2.0
medium	2.0 – 3.0
fine	2.5 – 4.0

**Note:** Use the higher rate in the rate range under conditions of abundant rainfall and mild winter temperatures.

**Restrictions:**

- In the season following this treatment, plant only those crops for which this product can be applied as a preplant incorporated treatment.

**Chemigation**

Apply Aceto trifluralin 4 E Herbicide in overhead sprinkler irrigation equal to 1/2 to 1 inch of water in either conventional or minimum tillage cotton. Aceto trifluralin 4 E Herbicide must be applied within two days after planting and prior to crop emergence. Because Aceto trifluralin 4 E Herbicide does not control established weeds, planting and application should occur as soon as possible after the last tillage operation. Soil incorporation is not required when Aceto trifluralin 4 E Herbicide is applied through chemigation systems.

**Cultivation:** Soil treated by chemigation with Aceto trifluralin 4 E Herbicide may be shallow cultivated without reducing weed control activity.

Refer to Application by Chemigation in the Product Information section of this label for use directions for chemigation. Apply Aceto trifluralin 4 E Herbicide only through the kinds of sprinkler irrigation systems specified in that section of the label.

**Broadcast Application Rates per /Acre for Chemigation**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Conventional Tillage	Minimum Tillage <sup>1</sup>
coarse	1.0	1.0 – 3.0
medium	1.5	1.5 – 4.0
fine	2.0	2.0 – 4.0

<sup>1</sup> In minimum tillage situations, use the lower rate in the rate range when additional sequential applications of Aceto trifluralin 4 E Herbicide are anticipated. Use the higher rate in the rate range when a large amount of crop residue is present, where dense weed populations are anticipated, or when additional sequential applications will not be made.

**Rotational Crop Restrictions after Chemigation:**

- **Conventional Tillage:** Refer to the rotational crop restrictions in the Use Precautions section of this label.
- **Minimum Tillage:** In addition to the rotational crop restrictions listed in the Use Precautions section of this label, do not plant grain sorghum in the year following the application of Aceto trifluralin 4 E Herbicide.

**Postemergence Soil Incorporated (Only for use in Kansas, Texas, Oklahoma and New Mexico)**

Aceto trifluralin 4 E Herbicide may be applied to cotton as a postemergence incorporated treatment from the 4-true leaf stage up to layby. Apply as a broadcast spray using ground or aerial equipment. A ground applied directed spray is suggested if cotton foliage prevents uniform coverage of the soil surface.

**Incorporation Directions:** This product must be mechanically incorporated within 24 hours. Mechanical incorporation may be accomplished with one pass of a sweep-type cultivator or properly adjusted rolling cultivator. The sweep-type cultivator should have 3 to 5 sweeps per row middle and be operated at a speed that will provide vigorous soil mixing. Set middle sweeps so as to avoid exposing untreated soil. Adjust incorporation equipment so as to avoid mechanical injury to the crop.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	0.75 – 1.0
medium	1.0 – 1.5
fine	1.5 – 2.0

- Coarse and medium soils with 2-5% organic matter - 1.5 pints of this product
- Fine soils with 2-5% organic matter - 2.0 pints of this product

**Restrictions:**

- Do not apply within 90 days of harvest.
- Treated soil may be shallow cultivated or rotary hoed without loss of herbicidal activity. To avoid bringing untreated soil to the surface and loss of weed control, do not cultivate deeper than the depth of incorporation.

**Layby Application**

Layby application may be made in established cotton after the 4 true leaf growth stage, but no later than 90 days before harvest. Apply Aceto trifluralin 4 E Herbicide uniformly to the soil surface using drop nozzles if necessary. Incorporate into soil using one pass of a sweep-type cultivator or properly adjusted rolling cultivator. Operate cultivation equipment at speeds sufficient to provide vigorous soil mixing, and exercise care to avoid mechanical injury to the crop. Compared to conventional double pass incorporation, weed control may be reduced when using single pass incorporation, or if using equipment that does not provide thorough soil mixing. The layby application rate must not exceed the rate given in the layby table below for each soil texture.

**Layby Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	2.0

**Application Over Standing or Shredded Cotton Stalks After September 1 (Only for use in California)**

Aceto trifluralin 4 E Herbicide may be broadcast applied, after September 1, over the top of standing cotton stalks or after shredding using ground or aerial equipment. First incorporation must occur within 24 hours after application using a disc operated at 4 to 6 mph. The second incorporation may be delayed until spring prior to bedding. To avoid dilution of the herbicide or bringing untreated soil to the surface, the treatment should not be chiseled, ripped or deep plowed following incorporation.

**Special Use Programs**

**1. Cotton – Fall Panicum Control**

Apply as a preplant incorporated treatment at a broadcast rate of 2 pints per acre on both coarse and medium soils.

## 2. Cotton – Pigweed and Seedling Johnsongrass Control

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment Only for use in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, southeastern Missouri (Bootheel), North Carolina, South Carolina, Tennessee, and southern Virginia.

### Broadcast Application Rates per Acre for Pigweed and Seedling Johnsongrass Control

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 – 1.5
medium	1.5 – 2.0
fine	2.0

Exception: Louisiana, where 3 pints per acre can be applied to fine soils.

- Use higher rates in the rate range where high weed populations are anticipated.

## 3. Cotton – Additional Weed and Grass Control in Gulf Coast Counties of Texas

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment up to 2 weeks before planting in Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller, and Wharton counties of the Texas Gulf Coast.

### Broadcast Application Rates per Acre in Gulf Coast Counties of Texas

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5
medium	2.0
fine	3.0

## 4. Cotton – Rhizome Johnsongrass Control (For use in all cotton producing states except Arizona and California)

Rhizome johnsongrass control with Aceto trifluralin 4 E Herbicide requires maximum application rates for two consecutive years (see Broadcast Application Rates per Acre for Rhizome Johnsongrass Control below). Commercially acceptable control cannot be obtained with only one year of applying the maximum use rate of Aceto trifluralin 4 E Herbicide. Carefully follow all special use directions.

**Soil Preparation:** Satisfactory results are dependent upon proper preparation of soil prior to application. Chisel plow to bring rhizomes to the soil surface. Disc twice before application to chop rhizomes into small (2 to 3 inch) pieces and destroy any recently emerged johnsongrass plants.

### Broadcast Application Rates per Acre for Rhizome Johnsongrass Control

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	2.0
medium	3.0
fine	4.0

**Spring Application:** Apply Aceto trifluralin 4 E Herbicide any time before planting in the spring for two years in succession.

**Fall Application:** Apply Aceto trifluralin 4 E Herbicide between October 15 and December 31 for two years in succession.

**Incorporation:** Deep incorporation with a tandem disc is essential for good results. Set disc to operate 4 to 6 inches deep and operate at 4 to 6 mph. Two incorporation passes are necessary; make the second in a different direction than the first.

**Cultivation:** Some johnsongrass plants will not be controlled. Timely cultivation during the crop season is necessary to remove escaped plants and maintain commercially acceptable control.

**Precautions:**

- In the season following a maximum rate treatment, plant only rice or crops for which Aceto trifluralin 4 E Herbicide is labeled as a preplant incorporated treatment, or crop injury may occur.
- To avoid crop injury, cotton should be planted after early season adverse weather conditions have passed, especially when using high rates. Cool, wet weather early in the growth cycle causes stress to the cotton plant. The added stress may result in reduced stand, delayed maturity, and reduced yields.

**Restrictions:**

- **Maximum Crop Year Use Rates:** For full season weed control, Aceto trifluralin 4 E Herbicide may be applied one or more times sequentially during the crop year observing the rates, methods of application, and a 90-day pre-harvest interval. The maximum dosage must not exceed the rates given, and **the maximum cumulative amount of Aceto trifluralin 4 E Herbicide that may be applied *within the same crop year* (includes fall application or spring application plus layby application) must not exceed 4 pints per acre (2 lb. active ingredient per acre).**
- **Rotation Crop Restrictions:** Refer to Rotation Crop Restrictions section under Product Information for specific rotational crop restrictions. When the cumulative amount of Aceto trifluralin 4 E Herbicide in one crop year (fall or spring plus layby) exceeds the rates in the table below, plant only those crops for which Aceto trifluralin 4 E Herbicide is labeled as a preplant incorporated treatment in the season following the application of Aceto trifluralin 4 E Herbicide, or crop injury may result.

Soil Texture	Cumulative Amount of Aceto trifluralin 4 E Herbicide per Acre in One Crop Year (pints)
coarse	1.5
medium	1.5
fine	2.0

A small grain cover crop such as barley, rye, or wheat that is intended for prevention of wind erosion in minimum tillage cotton may be planted in the fall following a maximum crop year use rate of 4 pints per acre of Aceto trifluralin 4 E Herbicide; however, reduced stand and delayed emergence and development of the cover crop may result. The cover crop must not be grazed or harvested.

**Cottonwood Trees Grown for Pulp**

Apply as a soil incorporated treatment to control weeds susceptible to Aceto trifluralin 4 E Herbicide in new and established plantings of cottonwood trees grown for pulp.

**Application Before Planting**

Apply and incorporate Aceto trifluralin 4 E Herbicide before planting.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- All soils with 2 to 5% organic matter - 1.5 to 2 pints
- All soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total rainfall and irrigation.

### Application to Established Plantings

In established plantings, apply and incorporate Aceto trifluralin 4 E Herbicide prior to periods of weed germination or immediately after existing weeds are controlled by tillage or herbicide treatment. Apply as a directed spray and use incorporation methods not injurious to the crop.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	2.0 - 4.0

Application rate within the rate range may be adjusted according to weed pressure.

### Johnsongrass Suppression in Established Plantings

Proper soil preparation before application is necessary for satisfactory results. Use a chisel plow or similar implement to bring rhizomes to the soil surface. Then work the soil twice using a tandem disc to cut rhizomes into small (2 to 3 inch) pieces and to destroy emerged johnsongrass.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	4.0

**Incorporation:** Incorporate twice with tandem disc set to cut 4 to 6 inches deep and operated at 4 to 6 mph.

**Cultivation:** Some johnsongrass plants will escape. Timely cultivation with tillage implements or spot spraying with effective postemergence herbicides will improve the level of johnsongrass control.

### Cucurbits

Apply Aceto trifluralin 4 E Herbicide after emergence when plants have reached the 3 to 4 true leaf stage of growth. Apply as a directed spray to soil between the rows. Avoid foliage contact as slight crop injury may occur. Set incorporation equipment to move treated soil around the base of plants.



### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

#### Restrictions:

- Do not apply to watermelon within 60 days of harvest.
- Do not apply to other cucurbit crops within 30 days of harvest.

### Eggplant (Transplant)

Apply and incorporate Aceto trifluralin 4 E Herbicide before transplanting or apply post-transplant and incorporate. When applied post-transplant, direct liquid sprays to the soil between rows and beneath plants.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0
fine	1.5

- On coarse and medium soils with 2-5% organic matter - 1.5 pints of Aceto trifluralin 4 E Herbicide

For best results, observe the following cultural practices or precautions when applying Aceto trifluralin 4 E Herbicide:

- Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration, or drought may weaken crop seedlings and increase the possibility of crop stress and damage.
- Carefully follow incorporation directions.

#### Precautions:

- Eggplant may be sensitive to this product under certain conditions. The combined effect of certain cultural practices and unfavorable soil or environmental conditions may cause excessive crop seedling stress resulting in retarded crop growth, stand reduction, and reduced yield.

#### Restrictions:

Do not exceed specified application rates.

### Flax and Flax Seed (Fall Application Only)

Apply and incorporate Aceto trifluralin 4 E Herbicide in the fall for weed control in spring seeded flax. Incorporate once within 24 hours after application. The second incorporation may be performed in the spring prior to planting.

### Special Instructions for Flax

1. Incorporation operations or other tillage practices performed in the spring prior to seeding should be relatively shallow so as to maintain a firm seedbed, and the seedbed should be packed prior to seeding.
2. Seeding should be done with a press drill or hoe drill. Seed into moist seedbed and plant no more than 1 1/2 inches deep.
3. Delay seeding until soil has warmed sufficiently to allow rapid germination and establishment.
4. Refer to Use Precautions in the Product Information section of this label for information on growing conditions that can lead to crop injury or yield reduction.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	2.0

### Grain Sorghum (Milo)

#### Postemergence Incorporated Treatment

Apply Aceto trifluralin 4 E Herbicide as a directed or over-the-top spray when grain sorghum is 8 to 24 inches tall. Use drop nozzles if foliage prevents uniform soil coverage.

**Soil Preparation:** Cultivate before application of Aceto trifluralin 4 E Herbicide to remove established weeds and to cover the base of grain sorghum plants with soil. Set cultivation equipment to add approximately 1 inch of soil to the base of sorghum plants.

**Incorporation Directions:** Applications of Aceto trifluralin 4 E Herbicide must be mechanically incorporated within 24 hours after application. Mechanical incorporation may be accomplished with one pass of a sweep-type cultivator or properly adjusted rolling cultivator. With sweep-type cultivators make 3 to 5 sweeps per row middle and operate at a speed that will provide vigorous soil mixing. Set middle sweeps so as to avoid exposing untreated soil. Adjust incorporation equipment so as to avoid mechanical injury to the crop.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	0.75 - 1.0
medium	1.0 - 1.5
fine	1.5 - 2.0

- Apply Aceto trifluralin 4 E Herbicide at lower rate in rate range in areas receiving less than 20 inches total rainfall and irrigation.

#### Precautions:

- Over-application may result in injury to grain sorghum.

#### Restrictions:

- Do not apply Aceto trifluralin 4 E Herbicide to grain sorghum as a preplant or preemergence treatment or crop injury will occur.
- Do not apply after grain sorghum is 24 inches tall.

### Chemigation

Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in grain sorghum 8 to 24 inches tall. Refer to Application by Chemigation section in the Product Information section of this label for chemigation use directions. Do not apply Aceto trifluralin 4 E Herbicide through any irrigation system unless these directions are carefully followed.

**Soil Preparation:** Cultivate before application of Aceto trifluralin 4 E Herbicide to destroy existing weeds and cover the base of the grain sorghum plants with soil. Set cultivation equipment to add approximately 1 inch of soil to the base of sorghum plants.

**Application Timing:** Apply Aceto trifluralin 4 E Herbicide to grain sorghum in 1/2 to 1 acre inch of overhead sprinkler irrigation as soon as possible after a cultivation when grain sorghum is 8 to 24 inches tall. Aceto trifluralin 4 E Herbicide must be applied prior to weed emergence or after existing weeds are controlled. Aceto trifluralin 4 E Herbicide does not control established weeds.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	0.75 - 1.0
medium	1.0 - 1.5
fine	Do not apply by chemigation to fine textured soils.

### Restrictions:

- Do not apply after grain sorghum is 24 inches tall.

### Greens - Collard, Kale, Mustard and Turnip (Fresh, for Processing, or Grown for Seed)

Apply Aceto trifluralin 4 E Herbicide to greens as a preplant soil incorporated treatment.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	1.5

- Soils with 2 to 10% organic matter - 1.5 pints

### Hops

Apply and incorporate Aceto trifluralin 4 E Herbicide to established crop during dormancy. Use incorporation equipment that will insure thorough soil mixing with minimal damage to crop stand.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5

- Soils with 2 to 10% organic matter - 1.5 pints

### Kenaf

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse <sup>1</sup>	1.0
medium	1.0 - 1.5
fine	1.5

<sup>1</sup>Coarse soils with 2 to 5% organic matter - 1.5 pints

- Use higher rate in rate range where high weed populations are anticipated.

### Restriction:

- Do not graze or harvest treated crop for livestock forage.

### Lentils (Only for use in North Dakota)

Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse <sup>1</sup>	1.0
medium	1.0
fine	1.5

### Precautions:

- Lentil may be sensitive to this product under certain conditions. The combined effect of certain cultural practices and unfavorable soil or environmental conditions may cause excessive crop seedling stress resulting in retarded crop growth, stand reduction, and reduced yield.
- For best results, observe the following cultural practices or precautions when applying Aceto trifluralin 4 E Herbicide:
  - Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration, or drought may weaken crop seedlings and increase the possibility of crop stress and damage.
  - Carefully follow incorporation directions.
  - Use only high quality seed and plant at maximum seeding rates.

**Restrictions:**

- Do not exceed specified application rates. This is particularly important on coarse textured or low organic matter soils.

**Mustard - Grown for Seed or Processed for Food (Refer to Greens Section)**

**Oilseed - Borage, Crambe, Cuphea, Echium, Gold of pleasure (Camelina), Hare's ear mustard, Lesquerella, Lunaria, Meadowfoam, Milkweed, mustard seed, Oil radish, Poppy seed, Rapeseed (Canola Varieties Only), Sesame, Sweet rocket**

Apply as a soil incorporated treatment in the spring before planting, or in late summer or early fall before a fall planting. Follow soil preparation, application and incorporation directions for Aceto trifluralin 4 E Herbicide.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
Fine	2.0

**Precautions:**

- Were applications are made in late summer or fall, plant as rotation crops in the season following application only those crops to which Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment or crop injury may occur.

**Restrictions:**

- Do not apply to rapeseed (canola) grown in the state of Alaska.
- Do not graze or harvest crambe for livestock forage.
- Do not exceed 1.5 pt./A for mustard seed.

**Weed Control in Rapeseed (Canola), Crambe in the state of Montana:** Apply and incorporate Aceto trifluralin 4 E Herbicide in the fall after September 1 or in the spring before planting. Make only one application of this product per crop cycle. Follow soil preparation, application and incorporation instructions in the product label for this product.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
Coarse	1.0
Medium	1.5
Fine	2.0

Use 1.5 to 2.0 pints of Aceto trifluralin 4 E Herbicide per acre on coarse and medium soils with 2-5% organic matter.

**Restrictions:**

- **Rotational Crop Planting Restriction:** Plant only spring seeded barley (grown under irrigated

conditions), rapeseed, safflower or sunflower as rotational crops in the crop year following the crop treated with this product. If one of these specified crops is not planted, leave the land idle or fallow for the entire crop year following the crop treated with this product.

- Do not graze or harvest crambe for livestock forage.

**Oilseed – Calendula, Castor oil plant, Chinese tallowtree, Euphorbia, Evening primrose, Jojoba, Niger seed, Rose hip, Stokes aster, Sunflower, Tallowwood, Tea oil plant, and Vernonia**

**Aceto trifluralin 4 E - Alone**

Apply and incorporate Aceto trifluralin 4 E in the spring before planting or in the fall in advance of spring planting. See instructions for fall application under Application Timing in the Product Information section of this label.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 to 2 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to-10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

**Tank Mixing or Sequential Treatments**

For broader spectrum weed control, other products registered for use in sunflowers may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

**Weed Control in Sunflower in the state of Montana:** Apply and incorporate Aceto trifluralin 4 E Herbicide in the fall after September 1 or in the spring before planting. Make only one application of this product per crop cycle. Follow soil preparation, application and incorporation instructions in the product label for this product.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
Fine	2.0

Use 1.5 to 2.0 pints of Aceto trifluralin 4 E Herbicide per acre on coarse and medium soils with 2-5% organic matter.

**Restrictions:**

- **Rotational Crop Planting Restriction:** Plant only spring seeded barley (grown under irrigated

conditions), rapeseed, safflower or sunflower as rotational crops in the crop year following the crop treated with this product. If one of these specified crops is not planted, leave the land idle or fallow for the entire crop year following the crop treated with this product.

- Do not graze or harvest crambe for livestock forage.

## Oilseed – Safflower

Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting, or in fall in advance of spring planting. See instructions for fall application under Application Timing in the Product Information section of this label.

### Broadcast Application Rates per /Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Spring Application	Fall Application
coarse	1.0	1.5
medium	1.25 – 1.5	2.0
fine	1.5 – 2.0	2.5

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to-10% organic matter – 2.5 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

**Weed Control in Safflower in the state of Montana:** Apply and incorporate Aceto trifluralin 4 E Herbicide in the fall after September 1 or in the spring before planting. Make only one application of Aceto trifluralin 4 E Herbicide per crop cycle.

Follow soil preparation, application and incorporation instructions in the product label for Aceto trifluralin 4 E Herbicide.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
Fine	2.0

Use 1.5 to 2.0 pints of Aceto trifluralin 4 E Herbicide per acre on coarse and medium soils with 2-5% organic matter.

### Restrictions:

- **Rotational Crop Planting Restriction:** Plant only spring seeded barley (grown under irrigated conditions), rapeseed, safflower or sunflower as rotational crops in the crop year following the crop treated with Aceto trifluralin 4 E Herbicide. If one of these specified crops is not planted, leave the land idle or fallow for the entire crop year following the crop treated with Aceto trifluralin 4 E Herbicide.
- Do not graze or harvest crambe for livestock forage.

## Okra

Apply Aceto trifluralin 4 E Herbicide as a soil incorporated treatment, before or immediately after planting. If applied and incorporated after planting, set equipment so as to avoid disturbance of planted seed.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

## Onions (Dry Bulbs Only)

**Postemergence Layby Application:** Apply at layby to the soil between onion rows. Avoid applying directly to the tops or exposed bulbs of onion plants. Emerged weeds should be removed prior to application of Aceto trifluralin 4 E Herbicide. Aceto trifluralin 4 E Herbicide will not control established weeds.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	0.75 - 1.0
medium	1.0 - 1.25

- Apply only to soils containing 3.5% or less organic matter
- **Note:** Use the lower rate in rate range where light weed pressure is anticipated.

**Incorporation:** Aceto trifluralin 4 E Herbicide should be uniformly incorporated into the soil between the onion rows. Incorporation may be accomplished by operating a sweep-type or rolling cultivator 2 to 4 inches deep at 6 to 8 mph. Two incorporation passes are required with the first occurring within 24 hours after application or erratic weed control may result. Delay the second incorporation for a minimum of 5 days after the first. Avoid covering onions with treated soil during incorporation as injury to the crop may occur. Care should be taken to avoid mechanical injury to onion roots during incorporation.

### Precautions:

- Reduced yields may result from use of Aceto trifluralin 4 E Herbicide on onion crops weakened by diseases, improper incorporation depth, excessive moisture, high salt concentration, or drought may weaken the crop and increase the possibility of damage from Aceto trifluralin 4 E Herbicide. Under these conditions reduced yields may result.

### Restrictions:

- **Pre-harvest interval:** Do not apply within 60 days of harvest.
- Do not apply as a preplant or preemergence treatment.
- Do not apply to muck soils.



## Peas - Dry Peas and English Peas

### Aceto trifluralin 4 E - Alone

Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting or in the fall in advance of spring planting. Refer to instructions for fall application under Application Timing in the Product Information section of this label.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Spring Application	Fall Application <sup>1</sup>
coarse	1.0	1.0
medium	1.0 - 1.5 <sup>2</sup>	1.25 - 1.5
fine	1.5	1.5

<sup>1</sup>Aceto trifluralin 4 E Herbicide may be fall applied to dry and English peas in the states of Idaho, Oregon and Washington.

<sup>2</sup>Medium soils with 3% or greater organic matter - 1.5 pints

- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### Tank Mixing or Sequential Treatments

For broader spectrum weed control, other products registered for use in dry and English peas may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

## Peas - Southern Peas

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- All soils with 5 to 10% organic matter - 2 pints
- Use the lower rate in the rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

## Peanuts

### Aceto trifluralin 4 E Herbicide – Alone (Only for use in Texas, Oklahoma, and New Mexico)

Apply and incorporate Aceto trifluralin 4 E Herbicide before planting, at planting or immediately after planting. When incorporating after planting, adjust equipment so as to avoid disturbance of planted seed.

### Broadcast Application Rates per Acre

<b>Soil Texture</b>	<b>Aceto trifluralin 4 E Herbicide (pints)</b>
coarse	1.0
medium	1.5

### **Tank Mixing or Sequential Treatments**

For broader spectrum weed control, other products registered for use in peanuts may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

### **Aceto trifluralin 4 E Herbicide plus Pursuit Combinations for Weed Control in Peanuts**

Aceto trifluralin 4 E Herbicide may be tank-mixed with Pursuit and applied as a preplant incorporated treatment to control additional weeds.

### **Broadcast Application Rates per Acre†**

<b>Soil Texture</b>	<b>Aceto trifluralin 4 E Herbicide (pints)</b>
coarse	1.0
medium	1.5

†Refer to the labeling for use of Pursuit on peanuts for application rates.

Pursuit may also be used as a preemergence, "at cracking", postemergence or sequential (split) application following preplant soil incorporated application of Aceto trifluralin 4 E Herbicide. Refer to the labeling for use of Pursuit on peanuts for application rates, use directions, cautions and limitations before use.

### **Pepper (Transplant Only)**

Apply and incorporate Aceto trifluralin 4 E Herbicide prior to transplanting.

### **Broadcast Application Rates per Acre**

<b>Soil Texture</b>	<b>Aceto trifluralin 4 E Herbicide (pints)</b>
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### **Potatoes (Not for Use in the State of Maine)**

#### **Application After Planting**

Apply and incorporate Aceto trifluralin 4 E Herbicide after planting but before emergence, immediately following dragoff, or after potato plants have fully emerged.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25-1.5
fine	1.5-2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints,
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

**Incorporation Directions:** Set incorporation equipment so that the bed and furrow will be uniformly covered with a layer of treated soil. If the layer of 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 and incorporating Aceto trifluralin 4 E Herbicide after potato plants have fully emerged, do not completely cover the foliage with treated soil. Likewise, do not completely cover foliage at subsequent cultivations. Be careful that incorporation machinery does not damage potato seed pieces or elongating sprouts.

**Split Applications Before and After Planting (Only for use in Idaho, Oregon and Washington)**

On all soils apply and incorporate Aceto trifluralin 4 E Herbicide at the rates shown below as split applications before planting and after planting when potato plants have fully emerged. Do not apply to soils containing 2% or more organic matter. Follow incorporation directions provided above for application to potatoes after planting.

**Broadcast Application Rates per Acre**

	Aceto trifluralin 4 E Herbicide (pints)
before planting	0.75
after planting	0.75

**Aceto trifluralin 4 E Herbicide Plus Eptam Herbicide Tank Mix - Post Plant Preemergence Treatment (Only for use in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota and Texas)**

Aceto trifluralin 4 E Herbicide may be tank-mixed with Eptam herbicide and applied as a soil incorporated treatment to control additional weeds. Apply after planting, but before crop emergence. In areas where potatoes are normally dragged off, apply and incorporate up to or immediately following drag off. Use application rates for Aceto trifluralin 4 E Herbicide listed for Applications After Planting, above. Incorporate immediately.

**Precautions:**

- Refer to the label for Eptam for application rates, additional use directions, precautions and limitations before use.

**Restrictions:**

- Do not graze for feed forage to livestock from fields treated with the Aceto trifluralin 4 E Herbicide plus Eptam tank mix.

**Aceto trifluralin 4 E Herbicide Plus Eptam Tank-Mix - Preplant Treatment (Only for use in Idaho, Oregon and Washington)**

Aceto trifluralin 4 E Herbicide may be tank mixed with Eptam and applied as a soil incorporated treatment to control additional weeds. Apply before planting and incorporate immediately.

**Broadcast Application Rates per Acre**

	<b>Aceto trifluralin 4 E Herbicide (pints)</b>
all soil textures	0.75

**Precautions:**

- Refer to the label for Eptam for application rates, additional use directions, precautions and limitations before use.

**Restrictions:**

- Do not use this tank mix both before and after planting in the same season.
- Do not graze for feed forage to livestock from fields treated with the Aceto trifluralin 4 E Herbicide plus Eptam tank mix.

**Chemigation (Aceto trifluralin 4 E Herbicide Only)**

Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in potatoes. Refer to Chemigation section in the Product Information section of the label for Aceto trifluralin 4 E Herbicide. Do not apply Aceto trifluralin 4 E Herbicide through any type of irrigation system unless these directions are carefully followed.

Apply Aceto trifluralin 4 E Herbicide to potatoes in 0.5 to 1 acre inch of overhead sprinkler irrigation after planting, before emergence, or immediately following dragoff or after the potato plants have fully emerged. Existing weeds must be destroyed by tillage or cultivation prior to application of Aceto trifluralin 4 E Herbicide. Aceto trifluralin 4 E Herbicide does not control established weeds. Incorporation is not necessary when Aceto trifluralin 4 E Herbicide is applied by chemigation.

**Broadcast Application Rates per Acre**

<b>Soil Texture</b>	<b>Aceto trifluralin 4 E Herbicide (pints)</b>
coarse	1.0
medium	1.5

**Precautions:**

- If cultivation is required after treatment with Aceto trifluralin 4 E Herbicide, avoid completely covering potato plants with treated soil. Erratic weed control may result if cultivation exposes untreated soil between rows.

**Restrictions:**

- Do not apply by chemigation to fine textured soils.

**Radish**

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	1.5

### Small Grains - Barley and Wheat (including Durum)

#### Special Precautions for Use of Aceto trifluralin 4 E Herbicide on Small Grains

Carefully follow directions for use of Aceto trifluralin 4 E Herbicide on small grains to minimize potential crop stress. Under certain conditions, delayed crop emergence and or stand reduction may occur when Aceto trifluralin 4 E Herbicide is applied to barley, or wheat (including durum). The combined effect of certain cultural practices and unfavorable soil or environmental conditions may cause excessive crop seedling stress resulting in retarded crop growth, stand reduction, and possibly reduced yield. **For best results, observe the following cultural practices or precautions:**

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

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

Do not exceed soil-specific application rates for Aceto trifluralin 4 E Herbicide. This is particularly important on coarse textured or low organic matter soils.

Carefully follow incorporation directions. When applying preplant incorporated treatments, operate equipment at suggested depth and speed to place Aceto trifluralin 4 E Herbicide into the upper 1 to 1 1/2 inches of soil. If applied after planting, set incorporation equipment so as to avoid disturbance of planted seed.

Set drills to place seed at the depth specified in use directions. A planting depth greater than 2 1/2 inches for **spring wheat (including or durum)** will result in increased seedling stress and decreased emergence.

Use only high quality seed where Aceto trifluralin 4 E Herbicide is to be applied (avoid use of small seed with low starch reserves).

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

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

**Soil characteristics and environmental conditions which may contribute to crop seedling stress that may be accentuated by use of Aceto trifluralin 4 E Herbicide include:**

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

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

**Restrictions:**

- Do not apply Aceto trifluralin 4 E Herbicide on small grains where a dinitroaniline herbicide such as Trifluralin or Sonalan® herbicide was applied at a rate greater than 0.5 lb. ai per acre the previous growing season.

**Application Directions for Small Grains**

**Barley, Spring Seeded -- Spring Application Preplant Incorporated for Foxtail (Pigeongrass) Control (Only for use in Minnesota, North Dakota, and South Dakota)**

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment prior to planting spring seeded barley. Aceto trifluralin 4 E Herbicide may be applied to ground that has a manageable level of crop residue or has been fallowed or pre-tilled. The first incorporation is required within 24 hours after application. The second incorporation is required prior to planting to destroy emerged weeds and to insure even distribution of Aceto trifluralin 4 E Herbicide in the soil surface.

**Broadcast Application Rates/Acre:** Apply at a rate of **1 pint per acre** for all soil textures regardless of organic matter content.

**Incorporation:** Suggested incorporation tools include the chisel plow (first incorporation pass only), tandem disc and field cultivator. Refer to Incorporation Equipment in Product Information section of this label for details on operation of incorporation equipment.

**Planting Directions:** Barley should be seeded approximately 1 1/2 inches deep.

**Precautions:**

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide. While use of this weed control practice may result in a stand reduction, slight stand reductions do not normally affect yield.

**Barley, Spring Seeded -- Spring Application Preplant Incorporated for Foxtail (Pigeongrass) Control in Barley Used as a Cover Crop or in the Conservation Reserve Program**

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment prior to planting spring seeded barley on land enrolled in acreage conservation reserve programs. Follow listed soil preparation, application, and incorporation procedures for Aceto trifluralin 4 E Herbicide.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.5
fine	1.5

**Planting Directions:** Barley should be seeded approximately 1 1/2 inches deep.

**Precautions:**

- Use of this weed control practice may result in slight stand reduction.

**Restrictions:**

- Follow the most severe grazing restrictions imposed either by the label for Aceto trifluralin 4 E Herbicide or by the USDA Acreage Conservation Reserve Program, whichever is longest. Consult the local ASCS office or other state agency to determine the period of USDA grazing restriction.

### **Spring Application for Foxtail (Pigeongrass) Control in Spring Seeded Barley Grown Under Irrigation (Only for use in Montana)**

Aceto trifluralin 4 E Herbicide may be spring applied as a preplant incorporated treatment for foxtail (pigeongrass) control in spring seeded barley grown under irrigated conditions in Montana. Make applications to ground that has a manageable trash level or has been fallowed or pretilled. The first incorporation is required within 24 hours after application. The second incorporation is required prior to planting to destroy emerged weeds and to ensure even distribution of Aceto trifluralin 4 E Herbicide in treated soil.

**Broadcast Application Rate:** Apply Aceto trifluralin 4 E Herbicide, at a rate of 1 pint per acre regardless of soil texture or soil organic matter content. Do not exceed this application rate as crop injury may occur.

#### **Incorporation Directions:**

The following tools are suggested for soil incorporation:

**1. Chisel Plow alone or Chisel Plow with a Rod Weeder attached:** A chisel plow alone should be used for the first incorporation pass only. With rod weeder attached, the chisel plow may be used for both incorporation passes. Operate 4 to 5 inches deep and at 4 to 6 mph. A chisel plow is defined as having three rows of up to 18 inch sweeps on no greater than 12 inch centers. Stagger successive rows of sweeps to ensure that no soil is left unturned.

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

**3. Field Cultivator:** Operate 3 to 4 inches deep and at 5 or more mph. A field cultivator is defined as having 3 to 4 rows of sweeps with "C" or "S" shaped shanks spaced at intervals of 7 inches or less. Stagger successive rows of sweeps to ensure that no soil is left unturned.

#### **Planting Directions:**

Plant barley 1 to 2 inches deep. Planting greater than 2 inches deep will result in increased seedling stress and decreased emergence.

#### **Irrigation Directions:**

Irrigate prior to planting, or after crop emergence only. Irrigation between planting and emergence may cause reduced crop stands or delayed emergence because of soil crusting, especially on loose friable seedbeds.

#### **Precautions:**

- Carefully follow Special Use Precautions for Small Grains section on this label.

#### **Restrictions:**

- **Rotational Crop Planting Restrictions:** Plant only barley (grown under irrigated conditions), rapeseed, safflower or sunflower as a rotational crop in the year following the crop treated with Aceto trifluralin 4 E Herbicide. If one of the specified rotational crops is not planted, leave the land idle or fallow for the entire crop year following the crop treated with Aceto trifluralin 4 E Herbicide.

### **Winter Wheat -- Preplant Incorporated for Control of Cheatgrass and Other Annual Grasses and Broadleaves (Only for use in Idaho, Oregon, and Washington)**

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment for control of downy brome (cheatgrass), annual ryegrass, annual bluegrass, pacific meadow foxtail (blackgrass), henbit, and fiddleneck (tarweed). 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 Aceto trifluralin 4 E Herbicide. Aceto trifluralin 4 E Herbicide may be applied for up to three weeks before planting.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5
medium	1.5
fine	2.0

**Incorporation Directions:** Incorporate Aceto trifluralin 4 E Herbicide with a flexible tine-tooth harrow (Flextine or Melroe) set to cut 1 to 2 inches deep and operate at 3 to 6 mph. Incorporate once within 24 hours after application and a second time in a different direction from the first prior to planting. Do not till the soil with a disc after Aceto trifluralin 4 E Herbicide has been incorporated with a flexible tine harrow.

**Planting Directions:** Use only a deep furrow or semi-deep furrow drill that will place the seed below the zone of soil treated with Aceto trifluralin 4 E Herbicide.

**Precautions:**

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide. Wheat planted in direct contact with treated soil may suffer crop injury in the form of delayed emergence and development.

**Winter Wheat -- Post Plant Incorporated Treatment**

Apply and incorporate Aceto trifluralin 4 E Herbicide after planting, but before emergence, to control the following weeds susceptible to Aceto trifluralin 4 E Herbicide in winter wheat: annual ryegrass, annual bluegrass, downy brome (cheatgrass), pacific meadow foxtail (blackgrass), fiddleneck (tarweed), and henbit.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 - 1.5
medium	1.5

**Planting Directions:** Plant wheat 2 to 3 inches deep in a well-tilled seedbed. Do not use a deep or semi-deep furrow drill.

**Incorporation Directions:** Incorporate Aceto trifluralin 4 E Herbicide using two passes with a flex-tine or spike-tooth harrow operated at least 5 mph. Make the second incorporation pass should be in a different direction than the first. Set equipment to cut 1 to 1 1/2 inches deep and avoid disturbing seed.

Application and first incorporation should be done in the same operation if possible. Both incorporations must be done within 24 hours.

**Precautions:**

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide. Wheat seed in direct contact with treated soil may suffer crop injury in the form of delayed emergence and development. If less than 20 inches of rainfall plus irrigation was received between planting and harvest, refer to rotation crop restrictions before planting sorghum or oats.

**Winter Wheat -- Fallow Soil Application Prior to Planting (Only for use in Idaho, Oregon, and Washington)**

Aceto trifluralin 4 E Herbicide may be applied and shallowly incorporated into fallow soil up to 4 months before planting wheat to control cheatgrass and certain annual grasses and broadleaf weeds. Apply



Aceto trifluralin 4 E Herbicide any time from May to September prior to fall planting of winter wheat. Wheat growth, development and yield will not be adversely affected so long as the seed is placed below the zone of soil treated with Aceto trifluralin 4 E Herbicide.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5
medium	1.5
fine	2.0

**Incorporation Directions:** Incorporate Aceto trifluralin 4 E Herbicide with a flexible tine-tooth harrow (Flextine or Melroe) set to cut 1 to 2 inches deep and operate at 3 to 6 mph. Incorporate once within 24 hours after application and a second time in a different direction from the first prior to planting. Do not till the soil with a disc after Aceto trifluralin 4 E Herbicide has been incorporated with a flexible tine harrow.

**Planting Directions:** Use only a deep furrow or semi-deep furrow drill that will place the seed below the zone of soil treated with Aceto trifluralin 4 E Herbicide.

**Precautions:**

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide. Wheat planted in direct contact with treated soil may suffer crop injury in the form of delayed emergence and development.

**Winter Wheat - Partial Control or Suppression of Annual Brome Species (Cheatgrass, Downy Brome, Japanese Brome, Hairy Chess) and Jointed Goatgrass in Winter Wheat (Only for use in Colorado, Kansas, Nebraska and Wyoming)**

Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment for **partial control or suppression** of annual Brome species (cheatgrass, downy brome, Japanese brome, hairy chess) and jointed goatgrass in winter wheat in Colorado, Kansas, Nebraska, and Wyoming. Apply Aceto trifluralin 4 E Herbicide anytime during a period from three (3) weeks before planting up to immediately prior to planting.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 – 1.5
medium	1.0 - 1.5
fine	1.0 - 1.5

<sup>1</sup>Use the higher rate in the rate range where heavy weed populations are anticipated or where medium to high crop residues are present.

**Incorporation and Planting Directions: Aceto trifluralin 4 E Herbicide** should be incorporated with tillage equipment such as a flexible tine-tooth harrow or springtooth harrow that mixes the soil no more than 1-2 inches deep. The grain drill (disc drill or hoe drill) can serve as the incorporation implement. Do not use discs, undercutters or field cultivators for incorporation. Incorporate one time within 24 hours after application. Use a grain drill that will place the seed below the zone of soil into which **Aceto trifluralin 4 E Herbicide** has been incorporated.

One pass incorporation is adequate; however, where the grain drill is used as the incorporation tool, mounting a springtooth harrow in front of the drill can enhance performance. Where a tillage tool is used

to incorporate prior to planting, **the wheat must be seeded below the soil treated with Aceto trifluralin 4 E Herbicide or crop injury may result.** The wheat seed should be placed at least 1 1/2 - 2 inches deep.

**Precautions:**

- Crop injury in the form of delayed emergence and development may result from planting wheat in direct contact with treated soil. • Do not incorporate with undercutters, field cultivators, chisel plows or discs. Any implement that incorporates **Aceto trifluralin 4 E Herbicide** deeper than the planting depth of wheat will contribute to crop injury.
- Use of seeding equipment that does not place the seed below the **Aceto trifluralin 4 E Herbicide** treated soil layer will result in crop injury.
- Use of **Aceto trifluralin 4 E Herbicide** in accordance with this label may result in stand reduction.
- Heavy rainfall prior to wheat emergence can cause soil compaction and soil crusting resulting in delayed emergence, stand reduction, stunting and yield loss

**Wheat (including Durum) and Barley, Spring Seeded - Fall Applied Preplant Soil Incorporated for Foxtail (Pigeongrass) Control (Only for use in Minnesota, North Dakota and South Dakota)**

Apply Aceto trifluralin 4 E Herbicide in the fall for foxtail (pigeongrass) control during the following growing season. Incorporate one time within 24 hours. Incorporate a second time before planting to destroy existing weeds and insure a uniform distribution of Aceto trifluralin 4 E Herbicide in treated soil. Aceto trifluralin 4 E Herbicide may be applied to ground that has a manageable level of crop residue, or has been fallowed or pre-tilled.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse and medium	1.0
fine	1.5

**Incorporation:** Listed incorporation tools include the chisel plow (first incorporation pass only), tandem disc and field cultivator. Refer to Incorporation Equipment in Product Information section of this label for details on operation of incorporation equipment.

**Planting Directions:** Set equipment to place seed approximately 1 1/2 inches deep.

**Precautions:**

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide.
- While use of this control practice may result in a stand reduction, slight stand reductions do not normally affect yield.

**Spring Wheat (including Durum) and Barley -- Postplant Incorporated for Foxtail (Pigeongrass) Control**

Apply and incorporate Aceto trifluralin 4 E Herbicide after planting, but before emergence, to control foxtail (pigeongrass) in spring wheat (including durum) and barley.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.0
fine	1.5

**Planting Directions:** Plant wheat 2 to 3 inches deep in a well-tilled seedbed.

**Incorporation Directions:** Incorporate Aceto trifluralin 4 E Herbicide using two passes with a flex-tine or diamond harrow operated at least 5 mph. Make the second incorporation pass in a different direction than the first. Set equipment to cut 1 to 1 1/2 inches deep and avoid disturbing seed. Make application and first incorporation in the same operation if possible. Both incorporations must be done within 24 hours.

#### Precautions:

- Carefully read and follow Special Precautions for Use of Aceto trifluralin 4 E Herbicide in Small Grains before application of Aceto trifluralin 4 E Herbicide.
- Wheat seed in direct contact with treated soil may suffer crop injury in the form of delayed emergence and development.

## Soybeans

### Aceto trifluralin 4 E Herbicide - Alone

Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting or in the fall in advance of spring planting. See instructions for fall application under Application Timing in the Product Information section of this label.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Spring Application	Fall Application <sup>1</sup>
coarse	1.0	2.0
medium	1.5	2.0
fine	2.0	2.5

<sup>1</sup>Fall Application Rates only for use in these States: Alabama, Arkansas, northern Florida, Georgia, Louisiana, Mississippi, southeastern Missouri (Bootheel), North Carolina, Oklahoma, South Carolina, Tennessee, and Texas.

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 to 2.5 pints

For soybeans grown in states other than those listed above, fall apply Aceto trifluralin 4 E Herbicide at broadcast rates listed for spring preplant incorporated treatment.

#### Restrictions:

- Do not fall apply this product to soybeans planted in soil where rice was grown the previous year.

#### Precautions:

- Plant soybeans after early season adverse weather conditions have passed, especially when using higher rate programs.

- Cool, wet weather early in the growth cycle causes additional stress on soybean plants which may result in reduced stand, delayed maturity and reduced yield.

**Tank Mix Overlay and Postemergence Instructions**

For broader spectrum weed control, other products registered for use in soybeans may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

**Special Use Programs**

**1. Fall Application Prior to Planting Soybeans in the Spring (Only for use in Arkansas, Louisiana and Mississippi)**

Apply Aceto trifluralin 4 E Herbicide as a preplant soil incorporated treatment in the fall prior to planting soybean in the spring.

**Broadcast application rates for fall application prior to spring planted soybean:**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	2.0
medium	2.0 – 3.0
fine	2.5 – 4.0

**Note:** Use the higher rate in the rate range under conditions of abundant rainfall and mild winter temperatures.

**Restrictions:**

- In the season following this treatment, plant only those crops for which this product can be applied as a preplant incorporated treatment.

**2.Soybeans - Chemigation**

Aceto trifluralin 4 E Herbicide may be applied through properly equipped chemigation systems for weed control in soybeans. Refer to Application by Chemigation in the Product Information section of this label for use directions for chemigation. Do not apply Aceto trifluralin 4 E Herbicide through any irrigation system unless these directions are carefully followed.

Apply Aceto trifluralin 4 E in sprinkler irrigation equal to 1/2 to 1 inch of water. Plant and apply Aceto trifluralin 4 E Herbicide as soon as possible after the last tillage operation. Aceto trifluralin 4 E Herbicide must be applied within two days after planting and prior to crop emergence. Aceto trifluralin 4 E Herbicide does not control established weeds. Soil incorporation is not required when Aceto trifluralin 4 E Herbicide C is applied through chemigation systems.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5 - 2.0
medium	1.5 - 2.0
fine	2.0 - 2.5

- Soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 to 2.5 pints

**Cultivation:** Soil treated by chemigation with Aceto trifluralin 4 E Herbicide may be shallow cultivated without reducing weed control activity.

### 3 Soybeans - Weed Control Under Reduced or Conservation Tillage

Aceto trifluralin 4 E Herbicide can be applied either in the fall or in the spring as a preplant incorporated treatment for weed control in soybeans grown under reduced or conservation tillage conditions. Make only one application per crop cycle.

Apply to tilled land or standing or chopped stubble from the previous season's crop. The first incorporation of Aceto trifluralin 4 E Herbicide must occur within 24 hours. For the first incorporation, a tandem disc or combination tool that can thoroughly mix Aceto trifluralin 4 E Herbicide into the top 2 to 3 inches of the final seedbed while leaving the desired amount of plant residue on the soil surface is preferred. For fall or spring application, the second incorporation can occur any time prior to planting or at planting with tillage equipment that provides uniform soil mixing used in conjunction with no-till planters.

#### Application with Dry Bulk Fertilizers

Dry bulk fertilizers impregnated or coated with Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment. See instructions for Application with Dry Bulk Fertilizer in the Product Information section of this label. Under reduced or conservation tillage conditions, uniformly applied dry bulk fertilizers impregnated with Aceto trifluralin 4 E Herbicide provide weed and grass control equal to or better than Aceto trifluralin 4 E Herbicide applied in liquid sprays. Two incorporation passes are required when Aceto trifluralin 4 E Herbicide is applied with dry bulk fertilizer. For best results with spring applications, incorporate once within 24 hours after application and a second time at least 5 days later.

#### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Spring Applied	Fall Applied
coarse	1.0 - 1.5	1.5 - 2.0
medium	1.5 - 2.0	2.0 - 2.5
fine	2.0 - 2.5	2.5 - 3.0

Use the higher rate in the rate range where higher crop residues are present or where dense weed populations are anticipated.

#### Precautions:

- To be effective, Aceto trifluralin 4 E must be mixed thoroughly in the top 2 to 3 inches of soil in the final seedbed. Weed control may be poor or erratic where soil conditions or heavy crop residues do not permit thorough soil mixing.

### 4. Soybeans - Fall Panicum Control

Apply Aceto trifluralin 4 E as a preplant incorporated treatment at a broadcast rate of 2 pints per acre on coarse and medium soils.

### 5. Soybeans - Pigweed and Seedling Johnsongrass Control

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment.

**Broadcast Application Rates per Acre: Only for use in** Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, Tennessee, and southern Virginia, apply Aceto trifluralin 4 E Herbicide at the following broadcast rates:

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 - 1.5
medium	1.5 - 2.0
fine	2.0 - 2.5

**Exception:** Louisiana, 3 pints per acre on fine soils.

**6. Soybeans - Additional Weed and Grass Control in Gulf Coast Counties of Texas**

Apply Aceto trifluralin 4EC Herbicide as a preplant incorporated treatment up to two weeks before planting.

**Broadcast Application Rates per Acre:** For soybeans grown only in Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Victoria, Waller, and Wharton counties of the Texas Gulf Coast, apply Aceto trifluralin 4 E Herbicide at the following broadcast rates:

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5
medium	2.0
fine	3.0

**7. Soybeans - Itchgrass (Raoulgrass) Suppression**

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment or at layby.

**Layby Treatment:** Cultivate to remove existing weeds and treat when soybeans are well established (10 inches tall). Apply as a directed spray to the soil surface and incorporate using a rolling cultivator set to cut 2 to 4 inches deep or sweep-type cultivator with 3 to 5 sweeps per row middle operated 2 to 3 inches deep. Set incorporation equipment to throw treated soil to the row.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Preplant Incorporated	Layby Application
medium	3.0	1.0
fine	3.0	2.0

**8. Soybeans - Charcoal Soils Only for use in Arkansas, Louisiana, and Mississippi**

Newly cleared land often contains high organic matter (5 to 10%) and charcoal from burning debris. Charcoal and organic matter tends to bind Aceto trifluralin 4 E Herbicide and reduce weed control activity. Under these conditions, higher rates of Aceto trifluralin 4 E Herbicide are necessary for weed control. Increased rates, however, can cause crop injury if charcoal or organic matter is not present to bind some of the Aceto trifluralin 4 E Herbicide. In the burn row a high level of charcoal is usually present. Consequently, poor weed control may result, even if an increased rate of Aceto trifluralin 4 E Herbicide is used. Follow listed application and incorporation procedures for Aceto trifluralin 4 E Herbicide.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5 - 2.5
medium	2.5
fine	3.0

**9. Soybeans - Red Rice Control Only for use in Arkansas, Louisiana, Mississippi, and Texas**

Suppression or partial control of red rice can be obtained from a two-year treatment program which consists of a maximum rate application the first year followed by application in the second year at normal rates indicated for soil texture, organic matter or charcoal content. Apply and incorporate Aceto trifluralin 4 E Herbicide in the spring before planting. Follow suggested soil preparation and incorporation procedures for Aceto trifluralin 4 E Herbicide.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)	
	Application Year 1	Application Year 2
coarse	2.0	1.0
medium	3.0	1.5
fine	4.0	2.0
coarse soils with 2-5% organic matter	3.0	1.5
soils with 5-10% organic matter	4.0	2.0 - 2.5

In Arkansas, Louisiana and Mississippi, if a combination of high soil organic matter (5 to 10%) and charcoal are present, apply Aceto trifluralin 4 E Herbicide at the following broadcast rates:

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.5 - 2.5
medium	2.5
fine	3.0

For more information on charcoal soils see discussion in preceding section.

**Precautions:**

- Crop Rotation: The practice for red rice control in soybeans is a two-year program. In the first year following a maximum rate application, plant only soybeans. During the second year, after applying Aceto trifluralin 4 E Herbicide at the normal rate indicated for soil texture and charcoal level, plant only those crops for which Aceto trifluralin 4 E Herbicide is registered as a preplant treatment or crop injury may result. Rice may be planted during the third year following application of normal use rates in year two.

**10. Soybeans - Rhizome Johnsongrass Control Only for use in Eastern United States and Texas**

Rhizome johnsongrass control with Aceto trifluralin 4 E Herbicide requires maximum rate application for two consecutive years. Commercially acceptable control cannot be obtained with only 1 year of maximum rate use of Aceto trifluralin 4 E Herbicide. Carefully follow the special use directions which follow.

**Soil Preparation:** Satisfactory results are dependent upon proper soil preparation prior to application. Use implements such as a chisel plow to bring rhizomes to the soil surface. Disc twice before application to chop rhizomes into small (2 to 3 inch) pieces and destroy any recently emerged johnsongrass plants.

**Broadcast Application Rates per Acre:**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	2.0
medium	3.0
fine	4.0

- Coarse soils with 2 to 5% organic matter - 3 pints
- Soils with 5 to 10% organic matter - 4 pints

**Spring Application:** Apply Aceto trifluralin 4 E Herbicide any time before planting in the spring for two consecutive years.

**Fall Application:** Apply Aceto trifluralin 4 E Herbicide after October 15 for two consecutive years.

**Split Application:** Apply Aceto trifluralin 4 E Herbicide at the broadcast rates indicated in the following table both spring and fall for two consecutive years.

Soil Texture	Aceto trifluralin 4 E Herbicide Spring + Fall (pints)
coarse	1.0 + 1.0
medium	1.5 + 1.5
fine	2.0 + 2.0
coarse soils with 2-5% organic matter	1.5 + 1.5
soils with 5-10% organic matter	2.0 + 2.0

**Incorporation:** Deep incorporation with a tandem disc is essential for good results. Set disc to operate 4 to 6 inches deep and operate at 4 to 6 mph. Two incorporation passes are necessary. Make the second pass in a different direction than the first.

**Cultivation:** Some johnsongrass plants will not be controlled. Timely cultivation during the crop season is necessary to remove escaped plants and maintain commercially acceptable control.

**Precautions:**

- In the season following a maximum rate treatment, plant only rice and those crops to which Aceto trifluralin 4 E Herbicide can be applied as a preplant treatment or crop injury may result.

**11. Soybeans - Wild Cane (Shattercane) Control**

Follow suggested soil preparation and application procedures for Aceto trifluralin 4 E Herbicide. Wild cane (shattercane) can germinate throughout the growing season and from greater soil depth than most other weed seeds. Commercially acceptable control of wild cane can be obtained by using increased rates of Aceto trifluralin 4 E Herbicide.



### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	2.0
fine	2.5

**Incorporation:** Deep incorporation with a tandem disc is essential for good wild cane control. Incorporate Aceto trifluralin 4 E Herbicide thoroughly with a disc set to cut 4 to 6 inches deep and operate at 4 to 6 mph. Two incorporation passes are necessary with the second pass in a different direction than the first.

**Cultivation:** Cultivation during the growing season will improve shattercane control.

### 12. Aceto trifluralin 4 E Herbicide plus Scepter in Soybeans (Not for Use in California)

Aceto trifluralin 4 E Herbicide plus Scepter herbicide may be applied as a preplant incorporated tank mix treatment. Scepter may also be applied as a preemergence overlay treatment or as an early postemergence treatment following a preplant incorporated application of Aceto trifluralin 4 E Herbicide.

#### Precautions:

- Use of Scepter in combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following application of Aceto trifluralin 4 E Herbicide is subject to a number of special precautions and limitations required by the label for Scepter. Carefully read, understand and follow all use precautions, rotational crop restrictions and other limitations in the label for Scepter.
- The user must comply with all applicable use directions, precautions and limitations imposed by the Aceto trifluralin 4 E Herbicide and Scepter product labels.

#### Restrictions:

- Use of Scepter is limited to certain states. Do not use the Aceto trifluralin 4 E Herbicide plus Scepter tank mix applied preplant incorporated, or Scepter applied as a preemergence overlay or postemergence treatment following Aceto trifluralin 4 E Herbicide preplant incorporated, in the "Northern Use Area" as defined by the Scepter product label.

#### Tank Mix of Aceto trifluralin 4 E Herbicide plus Scepter - Preplant Incorporated

Apply the tank mix of Aceto trifluralin 4 E Herbicide plus Scepter as a preplant incorporated treatment up to 45 days before planting soybeans. Apply and shallowly incorporate into the soil within 24 hours. Follow soil preparation, mixing and application procedures described in the label for Aceto trifluralin 4 E Herbicide. Use incorporation equipment that provides uniform incorporation into the top 2 inches of soil. When using a disc, field cultivator, or rolling cultivator, a second pass must be made at an angle to the first pass to ensure thorough incorporation. If soybeans are planted on beds, apply and incorporate after bed formation.

#### Aceto trifluralin 4 E Herbicide Preplant Incorporated Followed by Scepter Preemergence Overlay Application

Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment. Follow soil preparation, application and incorporation procedures described in the label for Aceto trifluralin 4 E Herbicide. Apply Scepter to the soil surface after planting but before the crop emerges. Rainfall or overhead sprinkler irrigation is necessary to move the Scepter overlay treatment into the weed germination zone. The amount of rainfall or sprinkler irrigation required depends on existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is normally adequate. If

adequate moisture is not received within 7 days after a surface applied treatment, a cultivation is suggested to control escaped weeds.

**Weeds Controlled (Tank Mix or Overlay)**

The tank mix of Aceto trifluralin 4 E Herbicide plus Scepter or Aceto trifluralin 4 E Herbicide followed by overlay treatments of Scepter control the weeds listed on the label for Aceto trifluralin 4 E Herbicide alone plus these additional weeds:

cocklebur, common	pigweed Palmer) (smooth) (tall waterhemp)	ragweed (common) (giant) <sup>1</sup>
Jimsonweed	poinsettia, wild	smartweed (ladysthumb) (pennsylvania)
mallow, venice	prickly sida (teaweed)	sunflower, common
morning-glory (pitted) (smallflower)		velvetleaf <sup>1</sup>
mustard species		
nightshade, eastern black <sup>1</sup>		

<sup>1</sup>Eastern black nightshade, giant ragweed, and velvetleaf are controlled by preplant incorporated treatments only.

Aceto trifluralin 4 E Herbicide plus Scepter tank mix or Scepter overlay treatments will aid in the control and reduce competition from weeds in the following list. Control of these weeds may be erratic, ranging from poor to excellent, depending upon soil temperature, time of weed germination, depth of weed seed in soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

morning-glory <sup>2</sup> (entireleaf) (ivyleaf) (tall))	nutsedge, yellow <sup>3</sup>
	panicum, fall <sup>4</sup>
	shattercane <sup>4</sup>

<sup>2</sup>For best activity on morning-glory species, use tank mix preplant incorporated treatments.

<sup>3</sup>Use tank mix preplant incorporated treatments only to aid in control of yellow nutsedge.

<sup>4</sup>Aceto trifluralin 4 E Herbicide alone control fall panicum and shattercane at increased rates. See the label for Aceto trifluralin 4 E Herbicide for special instructions.

**Broadcast Application Rates for Preplant Incorporated or Preemergence Overlay Treatments:**

<b>Soil Texture</b>	<b>Aceto trifluralin 4 E Herbicide (pints)</b>	<b>Dual 8 E</b>
coarse	1.0	Refer to Label
medium	1.5	Refer to Label
fine	2.0	Refer to Label

Aceto trifluralin 4 E Herbicide Preplant Incorporated Followed by Scepter Postemergence Application  
Apply Aceto trifluralin 4 E Herbicide as a preplant incorporated treatment. Additional weeds tolerant to Aceto trifluralin 4 E Herbicide may be controlled using a post emergence application of Scepter. Consult the Scepter product label for application rates, additional weeds controlled, application directions and precautions before use.

### 13. Enhanced Control of Broadleaf Signalgrass with Aceto trifluralin 4 E Herbicide plus Dual Tank Mix

Apply Aceto trifluralin 4 E Herbicide plus Dual® herbicide tank-mix as a preplant incorporated treatment for enhanced control of broadleaf signalgrass in soybeans.

#### Broadcast Application Rates/Acre

Soil Texture	Soils with 0 – 2% Organic Matter	
	Aceto trifluralin 4 E Herbicide (pints)	Dual 8 E
coarse	1.0	Refer to Label
medium	1.5	Refer to Label
fine	2.0	Refer to Label

- Coarse and medium soils with 2-5% organic matter - 1.5 pints of Aceto trifluralin 4 E Herbicide
- Fine soils with 2-5% organic matter - 2.0 pints of Aceto trifluralin 4 E Herbicide

**Note:** Follow all applicable use directions, precautions and limitations in the product label for Dual herbicide.

### 14. Control of DNA-Resistant Goosegrass with Aceto trifluralin 4 E Herbicide Plus Dual Tank Mix

Apply Aceto trifluralin 4 E Herbicide plus Dual® herbicide tank-mix as a preplant incorporated treatment to control DNA-resistant goosegrass in soybeans.

#### Broadcast Application Rates/Acre

Soil Texture	Soils with 0 – 2% Organic Matter	
	Aceto trifluralin 4 E Herbicide (pints)	Dual 8 E
coarse	1.0	Refer to Label
medium	1.5	Refer to Label
fine	2.0	Refer to Label

- Coarse and medium soils with 2-5% organic matter - 1.5 pints of Aceto trifluralin 4 E Herbicide
- Fine soils with 2-5% organic matter - 2.0 pints of Aceto trifluralin 4 E Herbicide

**Note:** Follow all applicable use directions, precautions and limitations in the product label for Dual herbicide.

### Spearmint and Peppermint

Apply to established spearmint and peppermint as a soil incorporated treatment, by chemigation, or surface applied and watered-in. Apply during dormancy or semi-dormancy in late winter to spring or in the fall after harvest. Aceto trifluralin 4 E Herbicide does not control established weeds, therefore, application must be made prior to germination time of target weeds (refer to product label for labeled weeds). Late winter to early spring application will control susceptible weeds that germinate in the spring and early summer and fall application will control susceptible fall germinating weeds. If mechanically incorporated, use equipment that will provide thorough soil mixing with minimal damage to the crop stand (refer to product label for incorporation equipment suggestions and labeled weeds).

Aceto trifluralin 4 E Herbicide may be surface applied for annual grass control in established mint using chemigation, or ground, or aerial broadcast application equipment.

**Chemigation:** For chemigation application, apply at the specified broadcast application rates. See instructions for chemigation in the Application Methods section of this label.

**Surface Applications Activated by Rainfall or Irrigation:** Surface applications of Aceto trifluralin 4 E Herbicide may be activated by rainfall, sprinkler irrigation, or flood irrigation. Rainfall or a single overhead sprinkler irrigation of 0.5 acre inch or more is required to activate Aceto trifluralin 4 E Herbicide. If rainfall or irrigation has not occurred within 3 days after application, mechanical incorporation is suggested to activate the treatment.

**Broadcast Application Rates:**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
Coarse	1.0
Medium	1.25
Fine	1.5

**Sugar Beets**

**Aceto trifluralin 4 E Herbicide - Alone**

Apply Aceto trifluralin 4 E Herbicide as an over-the-top spray and incorporate. Apply from the time the first true leaves have formed until plants are 6 inches tall.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.25 - 1.5

**Incorporation:** Set incorporation equipment to move treated soil around the plants in the row. Avoid damage to the sugar beet tap root from incorporation equipment.

**Precautions:**

- Cover exposed beet roots with soil before application of Aceto trifluralin 4 E Herbicide to reduce the possibility of girdling.

**Incorporation with a Tine-Tooth Harrow (Only for use in California, Colorado, Idaho, Nebraska, Oregon, Texas, Utah, Washington, and Wyoming)**

A tine-tooth harrow (Flextine or Melroe) can be used to incorporate Aceto trifluralin 4 E Herbicide in sugar beets. Incorporation with tine-tooth harrow requires two passes in opposite directions over the same set of rows. Set the harrow to cut 1 to 2 inches deep and operate at 3 to 6 mph. Set incorporation equipment carefully to avoid damage to sugar beet tap root. Use application procedures and broadcast application rates listed in preceding section.

**Tank Mixing**

For broader spectrum weed control, other products registered for use in sugar beets may be applied in tank mix combination with Aceto trifluralin 4 E Herbicide or as a sequential treatment following

application of Aceto trifluralin 4 E Herbicide. When tank mixing, use the listed rate of Aceto trifluralin 4 E Herbicide. Follow the label Directions for Use of each tank mix partner for applicable use instructions including application rate, application timing, weeds controlled, and specific precautions and restrictions of product use. See detailed information for tank mixing in the Product Information section of this label.

## Sugarcane

Apply and incorporate Aceto trifluralin 4 E Herbicide twice a year. Make the first application of Aceto trifluralin 4 E in the fall on firmly packed beds immediately after the seed pieces are planted. Make the second application of Aceto trifluralin 4 E Herbicide in the spring before or shortly after the cane emerges. Loosen rain-packed beds 2 to 3 inches deep before the spring application. Take care that incorporation equipment does not damage the seed pieces or emerging shoots.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all textures	2.0 - 4.0 <sup>1</sup>

<sup>1</sup>Application rate within rate range may be adjusted according to weed pressure.

### Postplant Application for Control of Most Annual Grasses, Including Guineagrass (Only for use in Hawaii)

Surface apply Aceto trifluralin 4 E Herbicide after planting (for plant cane) or after harvesting (for ratoon cane). For best results in plant cane, the soil surface should be smooth and finely tilled. Apply Aceto trifluralin 4 E Herbicide as soon as possible after tillage and planting before germination and emergence of grass weeds. For optimum efficacy in ratoon cane, minimize surface residue from previous crop before applying. Apply Aceto trifluralin 4 E Herbicide just before anticipated rainfall in non-irrigated and furrow-irrigated sugarcane. Apply 1/2 inch or more irrigation in drip-irrigated or sprinkler-irrigated sugarcane as soon as possible after applying Aceto trifluralin 4 E Herbicide.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all textures	6.0 - 8.0

### Repeat Applications:

Subsequent germination of grass weeds may occur prior to the development of a full dense canopy of sugarcane. If this occurs, additional grass weed establishment is strongly suppressed. One or two additional applications of Aceto trifluralin 4 E Herbicide can be applied to maintain weed control during the early crop development period. For repeat applications, direct the spray to the soil surface to minimize interception of the herbicide by the crop.

### Restrictions:

- Pre-harvest Interval (PHI): Do not apply Aceto trifluralin 4 E Herbicide as a postplant surface applied treatment within 180 days of harvest.

### Applications Up to Layby for Plant Cane or Ratoon Cane (Only for use in Louisiana and Texas)

Apply and incorporate Aceto trifluralin 4 E Herbicide in spring from shortly before or after cane emergence until layby. Apply after beds have been shaved or false shaved. Loosen rain-packed beds 2 to 3 inches deep before application. Avoid incorporation equipment damage to seed pieces or emerging shoots. Incorporate with a rolling cultivator or bed chopper for all soil textures. Set rolling cultivator to cut 2 to 4 inches deep and operate at 6 to 8 mph. Set bed chopper to cut 3 to 4 inches deep and operate 4 to 6 mph. Two incorporation passes are necessary.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all textures	2.0 - 4.0 <sup>1</sup>

<sup>1</sup>Application rate within rate range may be adjusted according to weed pressure.

### Itchgrass (Raoulgrass) Control (Only for use in Louisiana)

Apply and incorporate Aceto trifluralin 4 E Herbicide on plant or ratoon cane. Follow use directions in preceding section for layby application.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all textures	2.0 - 4.0

### Tomatoes

Apply Aceto trifluralin 4 E Herbicide to direct-seeded tomato as a directed spray between rows and beneath plants and incorporate at the time of blocking or thinning. For transplant tomatoes, apply and incorporate before transplanting or apply post-plant as a directed spray to the soil between the rows and beneath plants and incorporate.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- Coarse and medium soils with 2 to 5% organic matter - 1.5 pints
- Fine soils with 2 to 5% organic matter - 2 pints
- Soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total annual rainfall and irrigation.

### Tree and Vine Crops - Citrus, Stone Fruits, and Nut Trees and Grapes

#### New Plantings of Citrus, Stone Fruits, and Nut Trees

For new plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine, and walnut trees, apply and incorporate Aceto trifluralin 4 E Herbicide before transplanting.

### Broadcast Application Rates per Acre

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0
medium	1.25 - 1.5
fine	1.5 - 2.0

- All soils with 2 to 5% organic matter - 1.5 to 2 pints
- All soils with 5 to 10% organic matter - 2 pints
- Use lower rate in rate range in areas receiving less than 20 inches total rainfall and irrigation.

**New Plantings of Grapes**

Apply and incorporate Aceto trifluralin 4 E Herbicide before transplanting.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
coarse	1.0 - 1.5
medium	1.5 - 3.0
fine	3.0 - 4.0

- Soils with 2 to 10% organic matter - 4 pints
- Use lower rate in rate range in areas receiving less than 20 inches total rainfall and irrigation.

**Restrictions:**

- Do not use more than 2 pints per acre on mist propagated grape rootings.
- Pre-harvest Interval: Do not apply to grapes within 60 days of harvest.

**Established Non-Bearing and Bearing Citrus, Stone Fruits, and Nut Trees and grapes**

Aceto trifluralin 4 E Herbicide may be applied in established non-bearing and bearing grapes and plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine and walnut trees. In established plantings, apply and incorporate Aceto trifluralin 4 E Herbicide prior to periods of weed germination or immediately after existing weeds are controlled by tillage or herbicide treatment. Apply as a soil directed spray and incorporate using methods not injurious to the crop.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	2.0 - 4.0

Application rate within the rate range may be adjusted according to weed pressure.

**Restrictions:**

- Pre-harvest Interval: Do not apply to grapes within 60 days of harvest.

**Aceto trifluralin 4 E Herbicide may be applied to non-bearing citrus trees through irrigation water rings to provide preemergence control of labeled weeds.  
(Use Only in the State of Florida)**

**Mixing:** Mix at a rate of 12 fluid ounces of Aceto trifluralin 4 E Herbicide per 500 gallons of water. Agitate until uniformly dispersed in tank.

**Application:** Apply 10 gallons of the mixture per four foot diameter water ring per tree. Application should be made at the second or third watering and should not be applied in combination with any other pesticide.

**Special Use Programs**

**Rhizome Johnsongrass Control - Special Two-Year Use Program**

Aceto trifluralin 4 E Herbicide may be applied for two consecutive years in a special use program to control rhizome johnsongrass in established grapes and in plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, plum, prune, tangerine, and walnut trees. Do not apply to grapes within 60 days of harvest.

**Soil Preparation:** Work the soil thoroughly to move rhizomes near the soil surface and cut them into smaller pieces.

**Broadcast Application Rates per Acre**

The following application rate must be applied for two consecutive years:

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	4.0

**Incorporation:** Incorporate Aceto trifluralin 4 E Herbicide thoroughly with a disc set to cut 4 to 6 inches deep and operate 4 to 6 mph. Two incorporation passes are necessary, with a second pass in a different direction from the first.

**Cultivation:** Some johnsongrass plants will escape. Timely cultivations are necessary to obtain commercially acceptable control. Commercially acceptable control cannot be obtained with only a single year use of Aceto trifluralin 4 E Herbicide.

**Precautions:**

- If treated grapes and orchards are diverted to other crop uses, then in the next cropping season plant only those crops for which Aceto trifluralin 4 E Herbicide has been registered as a preplant incorporated treatment.

**Restrictions:**

- Do not use the 4 pint rate on new plantings or crop injury may result.
- Do not interplant orchards or grapes with other crops

**Bindweed Control in California**

Aceto trifluralin 4 E Herbicide can be applied using a specially equipped spray blade for the control of field bindweed in grapes and in plantings of almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine, and walnut trees.

**Soil Preparation:** Destroy existing weeds with soil tillage before applying Aceto trifluralin 4 E Herbicide to prevent interference with operation of the spray blade.

**Equipment:** Application requires a spray blade capable of operation at 4 to 6 inches below the soil surface. Equip the blade with nozzles located under the blade and directed so as to allow spray to be trapped in a thin layer as the blade is pulled through the soil. Use a nozzle spacing sufficient to insure application of a uniform horizontal layer.

**Application:** Apply Aceto trifluralin 4 E Herbicide in 40 to 80 gallons of water per acre. Operate blade at a depth of 4 to 6 inches.

**Broadcast Application Rates per Acre**

Soil Texture	Aceto trifluralin 4 E Herbicide (pints)
all soil textures	4.0



**Precautions:**

- Some soils may develop cracks as they dry after rainfall or irrigation. Field bindweed may emerge if the cracks extend through the layer of Aceto trifluralin 4 E Herbicide. Prevent or eliminate cracks by shallow discing or other tillage. Avoid deep tillage which disturbs the subsurface layer. Cultivation or tillage also aids the control of germinating seeds.

**Chemigation in Established Plantings of Tree and Vine Crops**

Aceto trifluralin 4 E Herbicide may be applied through sprinkler irrigation systems for weed control in certain fruit and nut orchards or vineyards. Follow all label instructions for chemigation in the Product Information section of this label before applying.

**Application Instructions**

- Apply Aceto trifluralin 4 E Herbicide at a rate of 2.0 to 4.0 pints per broadcast acre.
- Application of Aceto trifluralin 4 E Herbicide through irrigation systems should be used as a supplemental weed control practice.
- Calibration and distribution may be more accurately achieved by injecting a larger volume of a more dilute solution. If desired, dilute Aceto trifluralin 4 E Herbicide with water prior to injection and mix thoroughly. During chemigation, maintain agitation in the supply tank at all times.
- Calibrate sprinkler systems to deliver a volume of 4-50 gallons per hour per emitter.
- Inject Aceto trifluralin 4 E Herbicide into the irrigation system during the middle of the irrigation cycle. The application interval should be such that at one period of time during the injection, the first and last emitters in the system are simultaneously emitting water containing Aceto trifluralin 4 E Herbicide. After application is complete, flush equipment with clean water and then continue to irrigate for one to two hours.

**Restrictions:**

- Pre-harvest Interval: Do not apply to vineyards within 60 days of harvest.
- Do not allow treated irrigation water to contact the fruit or foliage.
- To prevent groundwater contamination, follow all irrigation system requirements.
- Do not apply when wind speed favor drift beyond the area intended for treatment.
- Do not exceed a total chemigation period for Aceto trifluralin 4 E Herbicide of 4 hours.

**Chemigation System Calibration (Sample Calculations)****A. Broadcast Application:**

- Assume, in this example, 20 acres are to be covered by a chemigation treatment.
- Product required, assuming a rate of 4.0 pints/acre, is 80 pints  
(20 acres x 4.0 pt./acre = 80 pints = 10 gallons)
- Inject 10 gallons of Aceto trifluralin 4 E Herbicide into the irrigation system over a time period not to exceed 4 hours.

**B. Non-Broadcast Application:**

- Calculation of use rate is based on wetted area around each emitter or sprinkler head.
- Treated area per emitter = A ( $A = 3.14 \times \text{radius} \times \text{radius}$ )  
*Example:* If the average distance from the emitter to the perimeter of the wetted area = 36 inches, then:  $A = 3.14 \times 36" \times 36" = 4069.4$  square inches
- Area in square feet wetted in each = B  
 $B = A \times \text{Emitters/acre}$   
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*Example:* If there are 200 emitters per acre, then:

$$B = 4069.4 \times 200 = 5651.9 \text{ square feet}$$

- Total area in square feet wetted by system = C  
 $C = B \times \text{acres covered by the irrigation system}$

*Example:* If the system covers 20 acres, then:  
 $C = 5651.9 \text{ square feet} \times 20 = 113,038 \text{ square feet}$

- Total area, in acres, wetted by system = D  
 $D = C = 113,038 = 2.595 \text{ acres}$   
 43,560 43,560
- The amount of Aceto trifluralin 4 E Herbicide to be injected into the irrigation system = D x rate per acre

*Example:* If the desired rate is 4.0 pints/acre, then:  
 $2.595 \times 4.0 = 10.4 \text{ pints of Aceto trifluralin 4 E Herbicide injected into the irrigation system over a time period not to exceed 4 hours.}$

## Control of Annual Grasses and Broadleaf Weeds in Nursery Stock, Ornamental Trees, Ornamental Woody Shrubs, Ornamental Groundcovers, Roses, Established Flowers, Vegetable Gardens and Under Paved Surfaces

Aceto trifluralin 4 E Herbicide will not control DNA-resistant green foxtail.

For the uses in this section, do not aerially apply Aceto trifluralin 4 E Herbicide or apply Aceto trifluralin 4 E Herbicide through any type of irrigation system.

### Ornamentals

Aceto trifluralin 4 E Herbicide may be used on the following non-bearing, ornamental species:

Common Name	Scientific Name
<b>Woody Shrubs</b>	
andromeda,	Japanese <i>Pieris japonica</i>
arborvitae,	American <i>Thuja occidentalis</i>
azalea	<i>Rhododendron</i> spp.
barberry,	Japanese <i>Berberis thunbergii</i>
barberry, mento	<i>Berberis mentorensis</i>
boxwood, common	<i>Buxus sempervirens</i>
boxwood, harlands	<i>Buxus harlandi</i>
boxwood, littleleaf	<i>Buxus microphylla</i>
camellia, Japanese	<i>Camellia japonica</i>
camellia, sasanqua	<i>Camellia sasanqua</i>
cherrylaurel, American	<i>Prunus caroliniana</i>
cinquefoil	<i>Potentilla</i> spp.
cleyera, Japanese	<i>Cleyera japonica</i>
cotoneaster, cranberry	<i>Cotoneaster apiculata</i>
cotoneaster, zabel	<i>Cotoneaster zabelii</i>
deutzia	<i>Deutzia</i> spp.
elaegnus, silverberry	<i>Elaeagnus pungens</i>
euonymus, spreading	<i>Euonymus kiautschovica</i>
euonymus, winged	<i>Euonymus alatus</i>
euonymus, wintercreeper	<i>Euonymus fortunei</i>
firethorn	<i>Pyracantha</i> spp.
forsythia	<i>Forsythia</i> spp.

guava, pineapple	<i>Feijoa sellowiana</i>
hawthorn, India	<i>Raphiolepis indica</i>
holly	<i>Ilex</i> spp.
honeysuckle	<i>Lonicera</i> spp.
juniper	<i>Juniperus</i> spp.
laurel, mountain	<i>Kalmia latifolia</i>
lilac, common	<i>Syringa vulgaris</i>
mockorange	<i>Philadelphus</i> spp.
pittosporum, Japanese	<i>Pittosporum tobira</i>
privet	<i>Ligustrum</i> spp.
redcedar, eastern	<i>Juniperus virginiana</i>
rhododendron	<i>Rhododendron</i> spp.
spiraea, vanhoutte	<i>Spiraea vanhouttei</i>
viburnum	<i>Viburnum</i> spp.
weigela	<i>Weigela</i> spp.
willow	<i>Salix</i> spp.
yew, anglojap	<i>Taxus media</i>
yew, Japanese	<i>Taxus cuspidata</i>
yewpine	<i>Podocarpus macrophyllus</i>

**Trees**

almond	<i>Prunus dulcis</i>
apple, crabapple	<i>Malus</i> spp.
apricot	<i>Prunus armeniaca</i>
ash, white	<i>Fraxinus americana</i>
baldcypress	<i>Taxodium distichum</i>
birch, European white	<i>Betula pendula</i>
blackgum	<i>Nyssa sylvatica</i>
cherry	<i>Prunus</i> spp.
chestnut, Chinese	<i>Castanea mollissima</i>
cottonwood	<i>Populus deltoides</i>
dogwood, flowering	<i>Cornus florida</i>
dogwood, kousa	<i>Cornus kousa</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
fir, balsam	<i>Abies balsamea</i>
hemlock, Canada	<i>Tsuga canadensis</i>
honey locust	<i>Gleditsia triacanthos</i>
larch, Japanese	<i>Larix kaempferi</i>
locust, black	<i>Robinia pseudoacacia</i>
maple, Norway	<i>Acer platanoides</i>
maple, red	<i>Acer rubrum</i>
maple, silver	<i>Acer saccharinum</i>
maple, sugar	<i>Acer saccharum</i>
oak, pin	<i>Quercus palustris</i>
oak, red	<i>Quercus rubra</i>
oak, scarlet	<i>Quercus coccinea</i>
peach	<i>Prunus persica</i>
pine, Austrian	<i>Pinus nigra</i>
pine, eastern white	<i>Pinus strobus</i>
pine, Japanese black	<i>Pinus thunbergiana</i>
pine, loblolly	<i>Pinus taeda</i>
pine, red	<i>Pinus resinosa</i>
pine, Scotch	<i>Pinus sylvestris</i>
planetree, London	<i>Platanus acerifolia</i>

plum	<i>Prunus</i> spp.
redbud, eastern	<i>Cercis canadensis</i>
spruce, Colorado	<i>Picea pungens</i>
spruce, Norway	<i>Picea abies</i>
spruce, white	<i>Picea glauca</i>
sweetgum	<i>Liquidambar styraciflua</i>
sycamore	<i>Platanus occidentalis</i>
tuliptree	<i>Liriodendron tulipifera</i>
walnut, black	<i>Juglans nigra</i>

**Groundcover Plantings**

Aaronsbeard	<i>Hypericum calycinum</i>
bellflower, adriatic	<i>Campanula elatines</i>
bellflower, poscharsky	<i>Campanula poscharskyana</i>
ceanothus	<i>Ceanothus</i> spp.
coreopsis	<i>Coreopsis</i> spp.
cotoneaster	<i>Cotoneaster</i> spp.
coyote brush	<i>Baccharis pilularis</i>
crown vetch	<i>Coronilla vana</i>
daisy, trailing African	<i>Osteospermum fruticosum</i>
fern, asparagus	<i>Asparagus densiflorus</i>
gazania	<i>Gazania</i> spp.
germander	<i>Teucrium chamaedrys</i>
ice plant, largeleaf	<i>Carpobrotus edulis</i>
ivy, Algerian	<i>Hedera canariensis</i>
ivy, English	<i>Hedera helix</i>
lily-of-the-Nile	<i>Agapanthus</i> spp.
lilyturf, bigblue	<i>Liriope muscari</i>
marigold	<i>Tagetes</i> spp.
myoporum	<i>Myoporum laetum</i>
plumbago, dwarf	<i>Ceratostigma plumbaginoides</i>
rockrose	<i>Cistus</i> spp.
rosemary	<i>Rosmarinus officinalis</i>
rupturewort	<i>Herniaria glabra</i>
snow-in-summer	<i>Cerastium tomentosum</i>
speedwell	<i>Veronica</i> spp.
St. Johnswort	<i>Hypericum coris</i>
stonecrop (sedum)	<i>Sedum</i> spp.
strawberry, beach	<i>Fragaria chiloensis</i>
thrift	<i>Armeria maritima</i>
verbena	<i>Verbena</i> spp.
wirevine, creeping	<i>Muehlenbeckia axillaris</i>
yarrow, woolly	<i>Achillea tomentosa</i>
zoysiagrass	<i>Zoysia tenuifolia</i>

**Roses and Other Established Flowers**

African daisy marigold  
 aster (perennial) marigold, cape  
 balsam morningglory  
 blackeyed susan nasturtium  
 calendula nicotiana  
 carnation petunia  
 centaurea, velvet phlox  
 chrysanthemum pincushion flower

coreopsis poppy, California  
 cornflower portulaca  
 cosmos rose  
 dahlia salvia  
 dianthus shasta daisy  
 dusty miller snapdragon  
 floss flower snow-on-the-mountain  
 forget-me-not stock  
 four o'clock sunflower  
 gaillardia sweet alyssum  
 gladiolus sweet pea  
 golden glow sweet sultan  
 impatiens sweet william  
 ixora vinca  
 lobelia yarrow  
 lupine zinnia

**Incorporation Directions**

Apply and incorporate Aceto trifluralin 4 E Herbicide prior to planting new nursery stock liners, ornamentals, trees and woody shrubs, and gladioli. (Gladioli corms less than 1 inch in diameter may be injured by preplant applications of Aceto trifluralin 4 E Herbicide.) Aceto trifluralin 4 E Herbicide may also be applied to established plantings by using a directed spray to the soil between the rows and beneath the plants.

**Broadcast Application Rates for Soil Incorporation Only**

Soil Texture	Soil Texture to be Treated	Aceto trifluralin 4 E Herbicide (pints / Acre)
coarse	sand, sandy loam	1 (0.5 lb. active)
medium	loam, silt loam, silt	1.5 (0.75 lb. active)
fine	clay loam silty clay, clay	2 (1 lb. active)

**Restrictions:**

- Do not use Aceto trifluralin 4 E Herbicide on muck soils.

**Ornamental Groundcover Plantings**

**Application Rate**

Apply 1 gallon of Aceto trifluralin 4 E Herbicide per acre or 3 fl. oz. per 1000 sq. ft. of groundcover area.

**Field Grown Roses**

Apply Aceto trifluralin 4 E Herbicide as an incorporated treatment at a rate of 2 quarts per acre to field grown roses to control annual weeds listed on the product label. Apply to the soil surface in 5 to 40 gallons of finished spray and incorporate within 24 hours. Use a directed spray if application is made when roses are actively growing. Set incorporation equipment to avoid damage to root systems of established roses. Do not apply more than 2 quarts of Aceto trifluralin 4 E Herbicide (2 lb. active ingredient) per acre per year.

## Under Paved Surfaces

### Application Directions

Use Aceto trifluralin 4 E Herbicide only where the soil to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with a grader blade to a depth sufficient to ensure their complete removal. Apply Aceto trifluralin 4 E Herbicide after the final road bed is established or after the base rock has been added. Do not move soil after applying Aceto trifluralin 4 E Herbicide; do not apply Aceto trifluralin 4 E Herbicide to soil where asphalt is to be applied directly on top of the treated soil. Paving should occur as soon as possible after application of Aceto trifluralin 4 E Herbicide.

**Large Areas:** Apply Aceto trifluralin 4 E Herbicide uniformly with a ground sprayer in sufficient water to ensure thorough wetting of the soil surface or penetration of the spray solution through the base rock layer. A minimum of 150 gallons per acre is suggested. Add Aceto trifluralin 4 E Herbicide to clean water during filling of spray tank. Agitate before spraying.

**Small Areas:** For treating small areas, a hand sprayer or sprinkling can may be used. Before application determine the amount of water and Aceto trifluralin 4 E Herbicide necessary to uniformly cover the area to be treated. Shake or stir the spray solution prior to application.

Area Size	Amount of Aceto trifluralin 4 E Herbicide
small	9 12 fl. oz./1000 sq. ft.
large	3 – 4 gal/acre

## Vegetable Gardens

### Application Directions

Beginning with a clean spray tank, fill the sprayer one-half full with clean water. Add correct quantity of Aceto trifluralin 4 E Herbicide, close the sprayer and shake well to mix. Finish filling sprayer and shake occasionally to keep Aceto trifluralin 4 E Herbicide mixed in the tank. Apply Aceto trifluralin 4 E Herbicide in 1 to 5 gallons of water per 1000 square feet on a broadcast basis. Spray uniformly over the top of the soil surface to ensure satisfactory weed control.

Crop residues or existing weeds can interfere with the mixing of Aceto trifluralin 4 E Herbicide into the soil. A manageable level of such residues allows Aceto trifluralin 4 E Herbicide to be uniformly mixed into the top 2 to 3 inches of soil. If the level of the crop residue is such that this cannot be done, till the soil prior to application.

### Soil Texture Guide:

The amount of Aceto trifluralin 4 E Herbicide applied varies with the soil texture to be treated. A fine textured soil requires more Aceto trifluralin 4 E Herbicide than a coarse soil. Choose the proper rate for each application based upon the following soil texture group and specific crop details. Do not exceed listed rates.

### Soil Texture Soil Classification

Soil Texture	Soil Classification
coarse (light)	sands, loamy sands, sandy loams
medium	silt, loam
fine (heavy)	clay loams, silty clay loams, clays, silty clays

## Rate Conversion Chart:

Aceto trifluralin 4 E Herbicide	
Rate per 1000 sq. ft. (teaspoon)	Rate per acre (pint)
2.25	1
3.33	1.5
4.5	2

**Small Sprayer Calibration Technique:** Small sprayer calibration can be achieved by following these five steps:

1. Fill the sprayer full of clean water.
2. Spray over the area to be treated.
3. When the sprayer is empty, measure the area treated to determine the number of square feet per sprayer load.
4. After calculating the number of square feet per sprayer load, calculate the amount of Aceto trifluralin 4 E Herbicide needed to treat that size area.
5. Refer to the mixing directions on the product label for Aceto trifluralin 4 E Herbicide.

### Incorporation Directions

Thoroughly mix Aceto trifluralin 4 E Herbicide into the top 2 to 3 inches of the final seedbed (when the garden is ready for planting) or erratic weed control and/or crop injury may result. Equipment such as a rototiller or rake should be used to mix Aceto trifluralin 4 E Herbicide to the desired 2 to 3-inch depth.

The machinery used for incorporation should break up large clods and mix Aceto trifluralin 4 E Herbicide thoroughly with the soil. The more thoroughly Aceto trifluralin 4 E Herbicide is mixed within the soil, the more consistent the weed control.

**Preplant Incorporation:** Aceto trifluralin 4 E Herbicide must be mixed into the top 2 to 3 inches of the final seedbed within 24 hours after application.

**Postplant Incorporation:** Check specific crop incorporation directions after planting.

### Cultivation After Planting

Soil treated with Aceto trifluralin 4 E Herbicide may be shallow cultivated without reducing the weed control activity of Aceto trifluralin 4 E Herbicide. Do not cultivate deeper than the treated soil since this may bring untreated soil to the surface and poor weed control may result.

### 48 Hour Incorporation Delay

**(For use only in Texas, Oklahoma and New Mexico)**

Aceto trifluralin 4 E Herbicide may be applied as a preplant incorporated treatment for weed control in registered crops. The incorporation delay for Aceto trifluralin 4 E Herbicide is extended from 24 to 48 hours when applied in the states of Texas, Oklahoma and New Mexico. If Aceto trifluralin 4 E Herbicide is applied to a warm wet soil surface or the wind velocity is 10 mph or greater, variable weed control may result if the first incorporation is delayed more than 24 hours.

Follow soil incorporation procedures listed on the label for Aceto trifluralin 4 E Herbicide Where two incorporation passes are required, the first pass must be accomplished within 48 hours after application. The second incorporation pass may occur any time before planting.

## **72 Hour Incorporation Delay** (For use only in Arizona and California)

When Aceto trifluralin 4 E Herbicide is applied as a preplant incorporated treatment, the first incorporation pass must be accomplished within 24 hours after application. In Arizona and California, the incorporation delay has been extended from 24 to 72 hours when applied to dry soils. However, when Aceto trifluralin 4 E Herbicide is applied to warm soil or if wind velocity is 10 mph or higher, variable weed control may result from delaying the first incorporation beyond 24 hours.

Where two incorporation passes are required, the second incorporation may occur any time prior to planting. Follow other incorporation directions on the label for Aceto trifluralin 4 E Herbicide.

### **WARRANTY DISCLAIMER AND NOTICE**

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#### **IMPORTANT: READ BEFORE USE**

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Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Aceto Agricultural Chemicals Corporation. To the extent consistent with applicable law all such risks shall be assumed by the user or buyer.

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