

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 14, 2015

Tamara Murphy  
Sr. Regulatory Product Manager  
Syngenta Crop Production, LLC  
P.O. Box 18300  
Greensboro, NC 27419

Subject: Label Notification per PRN 98-10 –Label submission to add annual grass species  
Product Name: Fusilade DX Herbicide  
EPA Registration Number: 100-1070  
Application Date: 06/02/2015  
Decision Number: 505708

Dear Ms. Murphy:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

If you have any questions, you may contact Lisa Pahel at 703-347-0459 or via email at Pahel.lisa@epa.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Heather A. Garvie".

(for) Heather A. Garvie, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

**Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.**

<b>GROUP</b>	<b>1</b>	<b>HERBICIDE</b>
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**Fusilade® DX Herbicide**

Postemergence Herbicide for Control of Perennial and Annual Grass Weeds in Agricultural Areas

Active Ingredient:

Fluazifop-P-butyl

Butyl (*R*)-2-[4-[[5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoate\* ..... 24.5%

Other Ingredients: ..... 75.5%

Total: ..... 100.0%

Fusilade DX Herbicide formulation is an emulsifiable concentrate (EC).

\*Fusilade DX Herbicide contains 2 pounds (+) isomer (fluazifop-P-butyl) per gallon.

Contains petroleum distillates.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

EPA Reg. No. 100-1070  
EPA Est.

Product of  
Formulated in the

SCP 1070

1 gallon  
120 gallons  
Net Contents  
\_\_\_\_\_ gallons  
Net Contents

**NOTIFICATION**

100-1070

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

08/14/2015

<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Do not give any liquid to the person.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>NOTE TO PHYSICIAN</b>	
Contains petroleum distillates - vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-888-8372 for emergency medical treatment information.	
<b>HOT LINE NUMBER</b>	
For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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## **PRECAUTIONARY STATEMENTS**

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

#### **CAUTION**

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

## Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical resistance category selection chart.

### Applicators and handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or Viton®
- Shoes plus socks

### Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or Viton
- Shoes plus socks
- Protective eyewear
- Chemical-resistant apron when mixing or loading

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## Engineering Control Statements

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

### User Safety Recommendations

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/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.

## **Environmental Hazards**

This product is toxic to fish and aquatic invertebrates. Do not apply to areas where runoff into water bodies is expected. This product is toxic to grasses and other monocot plants. Minimize exposure to non-target plants and do not apply when weather conditions favor drift from target areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

## **Physical and Chemical Hazards**

Do not use or store near heat or open flame.

## **Ground Water Advisory**

Fluazifop-p-butyl is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

## **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water.

This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of fluazifop-p-butyl from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold Syngenta and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

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

This labeling must be in the possession of the user at the time of application.

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.

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, such as barrier laminate or nitrile rubber or neoprene rubber or Viton
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Do not allow entry into treated areas without protective clothing until sprays have dried.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Warnings must include the following information:

**CAUTION:** Area treated with Fusilade DX Herbicide on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure to pesticide spray, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If irritation persists, get medical attention.

**Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.**

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### PRODUCT INFORMATION

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Read all label directions before using.

Fusilade DX Herbicide is a selective postemergence herbicide for control of annual and perennial grass weeds in apricots, asparagus (except Arizona), bananas, carrots, listed citrus fruits, cherries, coffee (restricted to Hawaii), cotton, dry beans (except cowpeas), garlic, grapes, macadamia nuts, nectarines, onions (dry bulb), peaches, peanuts, pecans, plantains, plums, prunes, rhubarb (restricted to Maryland and New Jersey), soybeans, sugar beets, sweet potatoes, Tabasco peppers (restricted to Louisiana) and yams. Fusilade DX Herbicide can also be used on fallow land, on listed noncrop areas, and on listed nonbearing crops. Fusilade DX Herbicide will provide effective control of grass weeds in conventional tillage, minimum tillage, and no-till plantings. Fusilade DX Herbicide does not control broadleaf weeds or sedges (nutgrass).

Fusilade DX Herbicide is a systemic herbicide which moves from the treated foliage into the shoots, roots, rhizomes, stolons, and growing points (meristematic regions) of treated grass weeds.



Thorough coverage of all weed plant foliage is important for good activity. Optimum weed control is achieved when young actively growing weeds are treated that are not under stress from moisture, temperature, low soil fertility, mechanical, or chemical injury.

### **Control Symptoms**

Growth of treated grass weeds stops soon after application. Symptoms include loss of vigor, yellowing and/or reddening, and eventual death of treated grasses. Symptoms are generally observed within one week after treatment, depending on grass weed species and environmental conditions.

### **Rainfastness**

Fusilade DX Herbicide is rainfast 1 hour after application.

### **Management of Resistant Weeds**

Fusilade DX Herbicide is a Group 1 herbicide (ACCCase-inhibitor mode of action). Some naturally occurring grass weed populations have been identified as resistant to herbicides with the ACCCase-inhibitor mode of action. Selection of resistant biotypes, through repeated use of these herbicides in the same field, may result in control failures. A resistant biotype may be present if poor performance cannot be attributed to adverse weather conditions or improper application methods. If resistance is suspected, contact your local Syngenta representative for assistance.

### **General Principles of Herbicide Resistance Management**

- Ensure that good spray coverage is achieved with proper spray volumes and calibrated equipment.
- Use the full label rate of product.
- Apply integrated weed management practices. Use multiple herbicide mechanisms of action with overlapping weed spectrums in rotation, sequences or mixtures.
- Use a diverse crop/fallow rotation to extend the range of available herbicides and agronomic practices.
- Use cultivation, fertilizer regimens, seeding rates and row widths that enhance crop competitiveness.
- Prevent weed escapes from producing seed either in the crop or during fallow periods.

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## **APPLICATION DIRECTIONS**

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**Tank Mix Requirement:** Fusilade DX Herbicide may be tank mixed with other pesticides. Refer to the label of the tank-mix partner for registered crops, additional pests controlled and directions for use. Observe all precautions and restrictions on the labels of products to be used in tank mixtures. Use in accordance with the most

restrictive label limitations and precautions. This product cannot be mixed with any other product whose label prohibits such a mixture.

**TIMING** - Best control of susceptible grasses is obtained when Fusilade DX Herbicide is applied to actively growing grasses before they exceed the listed growth stages shown on this label. Refer to the grass weed tables for specific recommendations on weed growth stages.

**SPRAY ADDITIVES** - Only spray additives cleared for use on growing crops under 40 CFR 180.1001 may be used in spray mixture.

**Always add one of the following:**

- **Crop Oil Concentrate** - Add a non-phytotoxic crop oil concentrate or a once-refined vegetable oil concentrate containing 15-20% approved emulsifier, at 0.5-1% v/v (0.5-1 gal/100 gal) in the finished spray volume for ground applications. For aerial applications, add 1 pt of crop oil concentrate per acre.
- **Nonionic Surfactant** - Add nonionic surfactant containing at least 75% surface-active agent, at 0.25-0.5% v/v (1-2 qt/100 gal) in the finished spray volume for ground application. For aerial application, add 1 pt of surfactant per acre.
- **Other Adjuvants** - Adjuvants other than COC or NIS may be used providing the product meets the following criteria:
  1. Contains only EPA exempt ingredients.
  2. Is nonphytotoxic to the target crop.
  3. Is compatible in mixture. (May be established through a jar test).
  4. Is supported locally for use with Fusilade DX Herbicide on the target crop through proven field trials and through university and extension recommendations.

Always refer to the product label and follow directions concerning rates, target crops, environmental effect such as drought or weed stress, and use in tank mix with other labeled pesticides.

In addition to crop oil concentrate or nonionic surfactant, liquid nitrogen fertilizer (28% or similar) can be added to the spray mixture and is recommended in soybeans only. This 28% liquid nitrogen fertilizer is water soluble and should be used at a rate of one gallon per acre. Liquid nitrogen fertilizers should not be used as a substitute for crop oil concentrate or nonionic surfactant in the spray mixture.

Diammonium phosphate (aqueous ammonium polyphosphate) commonly sold as a solution (10-34-0) can be added to the spray mixture. This water soluble material should be used at a rate of 2 pt/A. Diammonium phosphate should not be used as a substitute for crop oil concentrate or nonionic surfactant in the spray mixture.

**GROUND APPLICATION** - Use sufficient spray volume and pressure to ensure complete coverage of the target grasses. Apply in 5-40 gal/A of spray mixture with spray pressures of 30-60 psi at the nozzle tip. When grass foliage is dense, use 60 psi and a minimum of 20 gal/A to ensure coverage of weed foliage.

**DO NOT USE FLOOD TYPE OR OTHER SPRAY NOZZLE TIPS WHICH DELIVER COARSE, LARGE DROPLET SPRAYS.**

**DO NOT APPLY FUSILADE DX HERBICIDE WITH RECIRCULATING SPRAYERS, ROPE-WICK APPLICATORS, CONTROLLED DROPLET APPLICATORS (CDA) OR ANY SIMILAR DEVICES.**

**BAND APPLICATIONS** - Thorough weed coverage is important for control. Best coverage is obtained with a minimum of two nozzles, one directed to each side of the planted row. Application with a single nozzle directed over the top of the row is not recommended. Cultivation of untreated areas may be needed following band applications.

When making band applications and cultivating in the same operation, position nozzles in advance of the cultivation device. This will reduce dust in the spray area. Dust can intercept the spray, reducing weed coverage, resulting in less than adequate weed control.

Calculate the amount of herbicide and water volume needed for band treatment by the following formulas:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast rate per acre} = \text{Band herbicide rate per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{broadcast volume per acre} = \text{Band herbicide volume per acre}$$

Band applications to perennial grasses are not recommended as reinfestation of the treated band from the untreated middle may result.

**AERIAL APPLICATION** - Use sufficient spray volume to ensure complete coverage of target grasses. A minimum of 5 gal/A should be applied. When grass foliage is dense, use a minimum of 10 gal/A to ensure coverage of weed foliage. Add 1 pt/A of crop oil concentrate or nonionic surfactant in the spray mixture.

## **SPRAY DRIFT MANAGEMENT**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these

factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer-most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

### **Importance of 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 Inversion section of this label).

### **Controlling Droplet Size**

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. 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 backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the 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 larger droplets than other nozzle types.

- **Boom Length** - For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application** - Applications should not be made 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 downwind. 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. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

### Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided 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 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 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 smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

## **Sensitive Areas**

The pesticide should only be applied 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).

## **CHEMIGATION**

**Sprinkler Irrigation Application:** Apply Fusilade DX Herbicide at rates and timing described elsewhere in this label. Do not use adjuvants in the manner described elsewhere in this label for use in conventional applications. As local recommendations differ, consult your local State Extension Service or other local experts for recommendations on adjuvant or diluent types, rates and mixing instructions. These recommendations should be proven, through university, extension or local expert field trials, to be effective with Fusilade DX Herbicide applied by chemigation.

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the directed rate of Fusilade DX Herbicide into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target areas in 0.1-0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to ensure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the directed rate of Fusilade DX Herbicide for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

It is not recommended that Fusilade DX Herbicide be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

## Use Precautions - Sprinkler Irrigation Application

1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public-water systems are in place.
5. 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.
6. 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.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. 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.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when pressure decreases to the point where pesticide distribution is adversely affected.
11. 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 are capable of being fitted with a system interlock.



12. Any alternatives to the above required safety devices must conform to the list of EPA approved alternative devices.
13. Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

**SPOT TREATMENTS** - Mix Fusilade DX Herbicide and crop oil concentrate or nonionic surfactant with water according to the amounts shown below. Spray to obtain thorough coverage, but do not spray to runoff. Retreat if necessary.

**Table 1. Spot Spray Mixing Recommendations**

To Make This Spray Volume	Add These Amounts			
	Fusilade DX Herbicide	Crop/Vegetable Oil Concentrate	or	Nonionic Surfactant
1 gal	0.75 fl oz	1-1/2 fl oz	or	1/2 fl oz
10 gal	6.5 fl oz	13 fl oz	or	3 fl oz
25 gal	0.5 qt	1 qt	or	1/2 pt
50 gal	1 qt	2 qt	or	1 pt

### MIXING ORDER

1. Fill the spray tank with half the required amount of water and begin agitation. Add dry pesticide formulations.
2. Add Fusilade DX Herbicide.
3. Add liquid pesticide formulations.
4. Add spray adjuvant and fertilizer (if used).
5. Add the remaining water and maintain agitation throughout the spray operation.

**CULTIVATION** - Cultivation of treated grasses is not recommended within 7 days prior to or within 7 days after application of Fusilade DX Herbicide as weeds may be put under stress reducing weed control. Timely cultivation 2-3 weeks after applying Fusilade DX Herbicide may assist weed control.

### USE RESTRICTIONS

- Do not apply to grasses which are stressed due to moisture, temperature, low soil fertility, mechanical or chemical injury.
- Do not apply to grasses which have tillered, formed seed heads, or exceeded listed growth stages.
- Do not plant rotational grass crops such as corn, sorghum, and cereals within 60 days of last application of Fusilade DX Herbicide.
- Do not apply Fusilade DX Herbicide if rainfall is expected within 1 hour.



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## **USE PRECAUTIONS**

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- Apply to actively growing grasses.
- Apply at the directed rate to grasses at the listed growth stages as outlined.
- Apply when the first grass weed species in a mixed grass weed population reaches the specified growth stage for treatment. Use the highest directed rate for grasses in that population.
- Where irrigation is used as part of normal cropping practice, best results are usually obtained when Fusilade DX Herbicide is applied within 7 days after irrigation.
- Best perennial grass control can be obtained if rhizomes or stolons are cut up by preplant tillage practices (discing, plowing, etc.) to stimulate maximum emergence of grass shoots.
- Avoid drift to all other crops and nontarget areas. Grass crops are highly susceptible to Fusilade DX Herbicide.
- Tank mixes of Fusilade DX Herbicide with pesticides, liquid fertilizers or additives not specified on this label or other supplemental labeling may result in unsatisfactory crop injury and/or grass control.
- Sequential applications with herbicides, except as specified on this label or on supplemental labeling, within five days before or after Fusilade DX Herbicide application may result in unsatisfactory crop injury and/or grass control.
- Thoroughly clean spray tank with water and a commercial tank cleaner before and after each use.

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## **CROP SPECIFIC RESTRICTIONS AND LIMITATIONS**

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### **APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS, AND PRUNES**

- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season.
- Do not harvest within 14 days of application.
- Do not graze animals in treated areas.

## **ASPARAGUS**

### **All states except California and Arizona:**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to bearing asparagus.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Do not make sequential applications at less than a 14 day interval.
- Do not harvest asparagus sooner than 1 day after application.

### **California only:**

- Do not apply a total of more than 24 fl oz of Fusilade DX Herbicide per acre per season to bearing asparagus.
- Do not apply more than 12 fl oz of Fusilade DX Herbicide per acre per application.
- Do not make sequential applications at less than a 3 week interval.
- Do not harvest asparagus sooner than 1 day after application.

## **BANANAS AND PLANTAINS**

- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season to bananas or plantains.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 30 days between applications.
- Bananas or plantains may be harvested 0 days after the last application.

## **CARROTS (INCLUDING SEED CARROTS), DRY BULB ONIONS AND GARLIC**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to carrots, dry bulb onions or garlic.
- Do not harvest carrots, dry bulb onions or garlic within 45 days after application.

## **CITRUS FRUITS - Calamondin, Citrus citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, and Satsuma mandarin**

- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season to citrus fruit crops.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 21 days between applications.
- Do not harvest citrus fruit within 14 days of last application.

## **COFFEE (HAWAII ONLY)**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to coffee.
- Do not harvest coffee within 1 day of application.

## **COTTON**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to cotton.
- Do not apply to cotton after boll set.
- Do not harvest cotton within 90 days of Fusilade DX Herbicide application.
- Do not graze or harvest for forage or hay.

## **DRY BEANS**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to dry beans.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 14 days between applications.
- Do not harvest dry beans within 60 days of last application.
- Do not apply to cowpeas.

## **GRAPES**

- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season to grapes.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 14 days between applications.
- Do not harvest grapes within 50 days of last application.

## **MACADAMIA NUTS**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to macadamia nuts.
- Do not harvest within 1 day of application.
- Do not graze animals in treated area or feed cover crops of treated macadamia groves to livestock.

## **PEANUTS**

- Do not apply more than 48 fl oz of Fusilade DX Herbicide per acre per season to peanuts.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 14 days between applications.
- Do not feed green immature growing plants to livestock or harvest for livestock feed.
- Do not harvest peanuts within 40 days of last application.

## **PECANS**

- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season.
- Do not harvest within 30 days of application.
- Do not graze animals in treated areas.

## **RHUBARB (MARYLAND AND NEW JERSEY ONLY)**

- Do not apply a total of more than 36 fl oz of Fusilade DX Herbicide per acre per season to rhubarb.
- Do not exceed 1.2 lb (76 fl oz) per acre over a two-year period.
- Do not harvest rhubarb within 14 days of the spring application.

## **SOYBEANS**

- Do not apply a total of more than 30 fl oz (0.47 lb ai/A) of Fusilade DX Herbicide per acre per season to soybeans.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre to soybeans pre-bloom (up to V5 growth stage).
- Do not apply more than 6 fl oz of Fusilade DX Herbicide per acre to soybeans from bloom through post-bloom (R1 growth stage or later).
- Do not harvest soybeans for 60 days following the last application.

## **SUGAR BEETS**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to sugar beets.
- Do not apply more than 24 fl oz of Fusilade DX Herbicide per acre per application.
- Maintain a minimum of 14 days between applications.
- Do not harvest sugar beets within 90 days of last application.

## **SWEET POTATOES AND YAMS**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to sweet potatoes and yams.

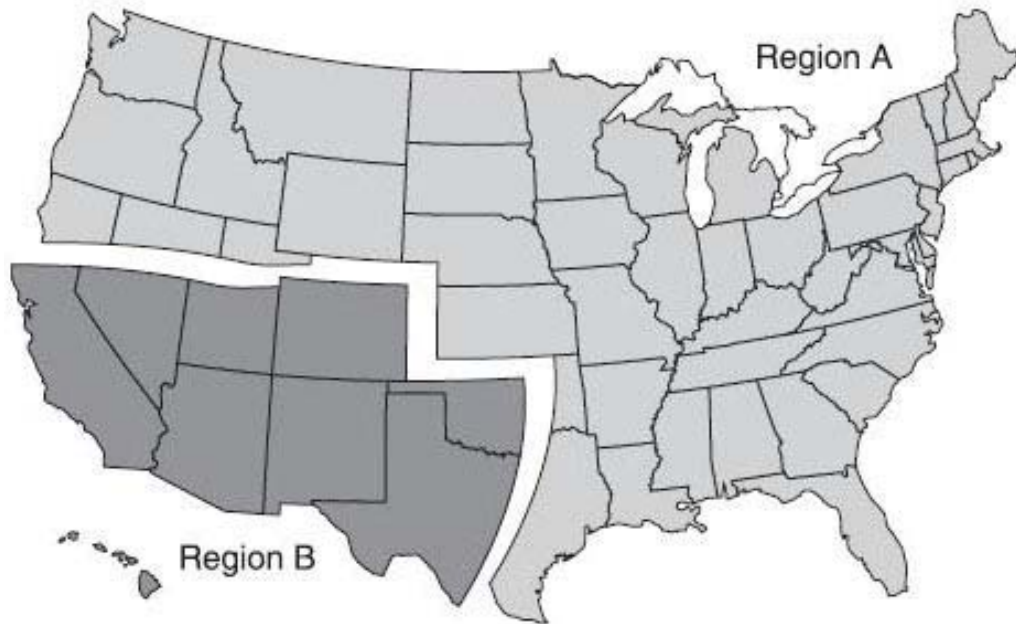
- Do not harvest within 55 days of application.

**TABASCO PEPPERS (LOUISIANA ONLY)**

- Do not apply a total of more than 48 fl oz of Fusilade DX Herbicide per acre per season to Tabasco peppers.
- Do not harvest Tabasco peppers within 45 days of application.

## ANNUAL AND PERENNIAL GRASS WEED CONTROL FOR COTTON, SOYBEANS, AND OTHER REGISTERED CROPS

### REGIONAL USE MAP



Region A - Includes the following states or portions of states where Fusilade DX Herbicide can be applied at directed rates.

Alabama, Alaska, Arkansas, California (Northern; see regional map), Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada (Northern; see regional map), New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma (east of Interstate 35), Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas (east of Interstate 35), Utah (Northern; see regional map), Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Region B - Includes the following states or portions of states where Fusilade DX Herbicide can be applied at specified rates.

Arizona, California (Southern; see regional map), Colorado, Hawaii, Oklahoma (west of Interstate 35), Nevada (Southern; see regional map), New Mexico, Utah (Southern; see regional map), and Texas (west of Interstate 35).

**Table 2. Fusilade DX Herbicide Annual Grass Control Use Rate Directions for All Crops Except Coffee - Region A**

<b>Annual Grass Species<sup>1</sup></b>	<b>Height (In)</b>	<b>No. of Leaves Not to Exceed</b>	<b>Rate(s) fl oz/A</b>	<b>Special<sup>3</sup> Rate(s) fl oz/A</b>
Barnyardgrass	2-3	3	12	10
Broadleaf signalgrass	2-4	5	12	10
Crabgrass				
Large crabgrass	1-2	4	12	10
Smooth crabgrass	1-2	4	12	10
Southern crabgrass	1-2	4	12	10
Tropical crabgrass	1-2	4	12	10
Downy Brome <sup>2</sup>	2-6	4	8	
Fall Panicum	2-6	6	12	10
Field Sandbur	2-4	4	12	10
Foxtails				
Giant foxtail	2-6	4	12	10
Green foxtail	2-4	4	12	10
Yellow foxtail	2-4	4	12	10
Goosegrass	2-4	6	8	
Italian Ryegrass	2-4	4	12	10
Itchgrass	4-24	6	8	
Johnsongrass, seedling	2-8	4	6	
Junglerice	2-3	3	12	10
Red rice	½-1	2	16	10 <sup>4</sup>
Shattercane	6-12	8	6 <sup>6</sup>	
Sorghum alnum	6-12	8	8	
Southern sandbur	2-6	6	12	10
Texas Panicum	2-8	8	12	10
Volunteer Cereals				
V. Barley	2-6	6	8	
V. Corn <sup>8,9</sup>	12-24	10	6 <sup>6</sup>	4 <sup>5,7</sup>
V. Milo	6-12	4	6 <sup>6</sup>	
V. Oats	2-6	6	8	
V. Rye	2-6	6	8	
V. Wheat	2-6	6	8	
Wild Proso Millet	4-8	6	6 <sup>6</sup>	
Witchgrass	2-4	6	12	10
Wild Oats	2-6	6	8	
Woolly cupgrass	2-4	6	12	10

<sup>1</sup> Retreatment at the directed rate may be needed to control later germinating grasses or if regrowth occurs.

<sup>2</sup> Not registered in California for use on this species.

**<sup>3</sup> Use Directions for Special Rate**

Rates of Fusilade DX Herbicide/acre can be reduced to the rates listed for species indicated under the following conditions:

- Application under favorable soil moisture and humidity conditions, normally within a few days after rainfall or irrigation. Avoid extreme air temperatures.
- Application at earliest growth stages indicated on rate tables.

- Application in highly competitive crop stands such as narrow row or drilled soybeans, or where cultivation is planned.
- Application to light or moderate weed densities.
- Application with 1% v/v crop oil concentrate only.
- Application alone, avoiding tank mixes with other pesticides.

<sup>4</sup> Most infestations require two applications at 10 fl oz/A to achieve satisfactory control.

<sup>5</sup> A second application of 4 fl oz/A may be necessary if infestations of this weed are heavy or to control later germinating plants such as those emerging from buried ears.

<sup>6</sup> Use 6 to 8 fl oz/A when tank mixing with broadleaf herbicides in soybeans. Use the 8 fl oz/A rate under conditions of low soil moisture or low humidity or when weeds have reached the maximum specified growth stage.

<sup>7</sup> Use 4 fl oz/A when tank mixing with Pursuit® herbicide. Apply to actively growing plants less than 18" tall.

<sup>8</sup> Fusilade DX Herbicide will provide suppression of Sethoxydim-resistant volunteer corn.

<sup>9</sup> Includes control of Roundup Ready®, LibertyLink® and IMI-Corn® volunteer corn.

**Table 3. Fusilade DX Herbicide Annual Grass Control Use Rate Directions for All Crops Except Coffee - Region B**

Annual Grass Species <sup>1</sup>	Height (Inches)	No. of Leaves Not to Exceed	Rate(s) fl oz/A
Barnyardgrass <sup>2</sup>	1-2	3	12
Canarygrass, Littleseed <sup>3</sup>	2-4	4	12
Crabgrass, Large <sup>3</sup>	1-2	3	12
Crabgrass, Smooth <sup>3,4</sup>	1-2	4	12
Johnsongrass, seedling	2-4	3	8
Junglerice <sup>3</sup>	2-3	3	12
Panicums			
Fall Panicum <sup>3,4</sup>	2-6	6	12
Texas Panicum <sup>3,4</sup>	8	8	12
Rabbitfootgrass <sup>3</sup>	2-4	4	12
Volunteer Cereals			
V. Barley	2-4	3	12
V. Corn <sup>3,5,6</sup>	12-18	6	12
V. Milo	2-4	4	12
V. Oats	2-4	3	12
V. Wheat	2-4	3	12
Wild Oats <sup>4</sup>	2-4	4	12

<sup>1</sup> Retreatment at the directed rate may be needed to control late germinating grasses or if regrowth occurs.

<sup>2</sup> Use 24 fl oz in California and Arizona.

<sup>3</sup> Not labeled for control of this species in Arizona and California.

<sup>4</sup> For control of these species in Colorado, Oklahoma, and Texas.

<sup>5</sup> Fusilade DX Herbicide will provide suppression of Sethoxydim-resistant volunteer corn.

<sup>6</sup> Includes control of Roundup Ready, LibertyLink and IMI-Corn volunteer corn.



**Table 4. Fusilade DX Herbicide Perennial Grass Control Use Rate Directions for All Crops Except Coffee - Region A**

Perennial Grass Species	Application	Height (Inches)	Rate fl oz/A	Special Rate <sup>6</sup> fl oz/A
Bermudagrass <sup>1/5</sup>	1st	4-8 (runner length)	12	16-24
	2nd	4-8	8	12-24
Quackgrass <sup>2/5</sup>	1st	6-10	12	16-24
	2nd	up to 10	8	12-24
Rhizome johnsongrass <sup>3/5</sup>	1st	8-18	12	16-24
	2nd	6-12	8	12-24
Wirestem muhly <sup>4/5</sup>	1st/2nd	4-12	12	16-24

<sup>1</sup> Make second application to bermudagrass if regrowth occurs (usually about 4 weeks after first application). Bermudagrass control may be improved by directing the spray beneath the crop canopy. To improve coverage, make applications in a minimum of 15 gal/A.

<sup>2</sup> Make second application 2-3 weeks after the first, but before the quackgrass exceeds 10 inches in height. Always use 1% v/v crop oil concentrate. In no-till soybeans, a preplant application of a burndown herbicide (such as Gramoxone Inteon™ or Touchdown®) is recommended. Spot treatment is not recommended.

<sup>3</sup> Make first application before the boot stage. In eastern Oklahoma, the Brazos Bottoms, the Blacklands, Coastal Bend and Rio Grande areas of eastern Texas, make the first application at 8-12 inches. If new shoots emerge or regrowth occurs, make a second application at 4-6 inches.

<sup>4</sup> Make second application if regrowth occurs.

<sup>5</sup> Rates of Fusilade DX Herbicide should be increased to 24 fl oz/A for the first application and 16 fl oz/A for the second application when applied in sodded orchards.

<sup>6</sup> Use the special rate of Fusilade DX Herbicide under heavy grass pressure and/or when grasses are at maximum height. Do not exceed the maximum rate for any individual crop as specified in the **CROP SPECIFIC RESTRICTIONS AND LIMITATIONS** section.

**Table 5. Fusilade DX Herbicide Perennial Grass Control Use Rate Directions for All Crops Except Coffee - Region B**

For best results, apply Fusilade DX Herbicide 3 days before to 7 days after irrigation.			
Perennial Grass Species	Application	Height (Inches)	Rate fl oz/A
Bermudagrass <sup>1/2</sup>	1st	4-8 (runner length)	16-24
	2nd	4-8	16-24
Rhizome johnsongrass <sup>3/4</sup>	1st	12-18	16-24 <sup>5</sup>
	2nd	12-18	16-24 <sup>5</sup>

<sup>1</sup> Make second application to bermudagrass if regrowth occurs (usually about 4 weeks after first application). Bermudagrass control may be improved by directing the spray beneath the crop canopy. To improve coverage, make applications in a minimum of 20 gal/A. Do not exceed the maximum rate for any individual crop as specified in the **CROP SPECIFIC RESTRICTIONS AND LIMITATIONS** section.

<sup>2</sup> In Colorado, Oklahoma (west of Interstate 35), and Texas (west of Interstate 35) under good soil moisture and favorable growing conditions, make applications at reduced rates of 12-16 fl oz/A.

<sup>3</sup> Make first application before the boot stage. If new shoots emerge or regrowth occurs, make a second application (usually about 4 weeks after the first application). Do not exceed the maximum rate for any individual crop as specified in the **CROP SPECIFIC RESTRICTIONS AND LIMITATIONS** section.

<sup>4</sup> In Colorado, Oklahoma (west of Interstate 35) and Texas (west of Interstate 35) under good soil moisture and favorable growing conditions, make the first application to 8-18 inch johnsongrass at a reduced rate of 12 fl oz/A. Make the second application to 6-12 inch johnsongrass at a rate of 12 fl oz/A.

<sup>5</sup> **For California only**, make first application to johnsongrass at 16 fl oz/A; and second application at 12-16 fl oz/A.

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## TANK MIX AND SEQUENTIAL APPLICATIONS FOR SOYBEANS

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**Table 6. Soybean Herbicide Tank Mixes for Region A<sup>1</sup>**

<b>Product<sup>2</sup></b>	<b>Rate/A</b>	<b>Spray Additives (% v/v)</b>
Fusilade DX Herbicide + Flexstar® <sup>3</sup>	12 fl oz + 0.75-1.5 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Flexstar <sup>3</sup> + Basagran®	12 fl oz + 0.75-1.5 pt + 1-2 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Reflex <sup>4</sup>	12 fl oz + 0.75-1.5 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Reflex <sup>4</sup> + Basagran	12 fl oz + 0.75-1.5 pt 1-2 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Basagran	12 fl oz + 1-2 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Ultra Blazer®	12 fl oz + 0.5-1.5 pt	0.25% NIS

<sup>1</sup> Region A - All states except the areas of Arizona, California, Colorado, Hawaii, New Mexico, West Oklahoma, West Texas, and Utah as outlined in the "Directions for Use" section.

<sup>2</sup> Follow the specified rate and growth stages for the grass and broadleaf weeds on the respective product labels.

<sup>3</sup> Refer to Flexstar label for maximum use rate for specified geographic regions.

<sup>4</sup> Refer to Reflex label for maximum use rate for specified geographic regions.

**Table 7. Soybean Herbicide Tank Mixes for Region B<sup>1</sup>**

<b>Product<sup>2</sup></b>	<b>Rate/A</b>	<b>Spray Additives (% v/v)</b>
Fusilade DX Herbicide + Basagran	12-24 fl oz + 1-2 pt	0.5-1% COC or 0.25-0.5% NIS
Fusilade DX Herbicide + Ultra Blazer	12-24 fl oz + 0.5-1.5 pt	0.25-0.5% NIS

<sup>1</sup>Region B - For the areas of Arizona, California, Colorado, Hawaii, New Mexico, West Oklahoma, West Texas, and Utah as outlined in the "Directions for Use" section.

<sup>2</sup>Follow the specified rate and growth stages for the grass and broadleaf weeds on the respective product labels.

### **Additional Soybean Tank Mix Recommendations**

#### **Classic® Herbicide Tank Mix**

Fusilade DX Herbicide and Classic herbicide may be applied as a tank mix for control of volunteer corn, shattercane and broadleaf weeds in soybeans. In Region A, Fusilade DX Herbicide should be added to the tank mix at 6-8 fl oz/A. The 8 fl oz/A rate may be necessary under conditions of low humidity and low soil moisture and should be used when volunteer corn and/or shattercane foliage is dense or has reached the maximum specified growth stage. In Region B, Fusilade DX Herbicide should be added to the tank mix at 12 fl oz/A. Classic herbicide should be added to the tank mix at the directed rates for broadleaf weed growth stages described on the Classic herbicide label. Always add a nonionic surfactant at 0.25% v/v or a crop oil concentrate at 1% v/v to the finished spray volume.

#### **Pursuit Herbicide Tank Mix - Region A Only**

Fusilade DX Herbicide and Pursuit herbicide may be applied as a tank mix for control of volunteer corn, shattercane and broadleaf weeds in soybeans (Region A only). Fusilade DX Herbicide should be added to the tank mix at 4-6 fl oz/A. The 6 fl oz/A rate may be necessary under conditions of low humidity and low soil moisture and should be used when volunteer corn and/or shattercane foliage is dense or has reached the maximum specified growth stage. Pursuit herbicide should be added to the tank mix at the directed rates for broadleaf weed growth stages described on the Pursuit herbicide label. Always add an adjuvant (approved nonionic surfactant or crop oil concentrate) and liquid fertilizer to the spray mixture. Refer to the Pursuit herbicide label for additive rates.

Under certain conditions, a tank mixture of Fusilade DX Herbicide with one or more of the above-mentioned broadleaf herbicides may cause a reduction in grass activity and possible increase in crop injury as compared to the products used alone. If grass regrowth occurs following an application of the tank mix or an additional flush of grasses emerge, make a second application of Fusilade DX Herbicide to actively growing grass

weeds, as per the label recommendations. When perennial grasses are the predominant grass to be controlled, a sequential application is recommended.

### **Glyphosate-Tolerant Soybeans (including Roundup Ready Soybeans) Tank Mix**

Fusilade DX Herbicide can be tank mixed with glyphosate products (such as Touchdown or Roundup® brands) for control of volunteer corn including volunteer glyphosate-resistant corn in glyphosate-tolerant soybeans (including Roundup Ready soybeans). Apply Fusilade DX Herbicide at 4-6 fl oz/A. Use the 4 fl oz/A rate only under the following conditions:

- Application under favorable soil moisture and humidity conditions which normally occur within a few days after rainfall or irrigation.
- Avoid extreme air temperatures.
- Application when volunteer corn is less than 12 inches tall.
- Application with 0.25% v/v crop oil concentrate (COC). This COC is in addition to the additives required by the glyphosate product.

Use the higher rate if the above conditions do not exist.

Application of this tank mix on soybean varieties that have not been genetically modified to tolerate glyphosate-based products will result in severe injury or plant death.

### **Sequential Applications**

Fusilade DX Herbicide can be used sequentially with other labeled soybean herbicides. For sequential applications, allow 2 to 3 days after the application of Fusilade DX Herbicide before applying a broadleaf herbicide or mixture. In situations where the broadleaf herbicide or mixture is applied first, apply Fusilade DX Herbicide when the grass weeds begin to develop new leaves (generally around 7 days).

### **SOYBEAN TANK MIX AND SEQUENTIAL USE PRECAUTIONS**

- Always read and follow the directions, restrictions and limitations for all products whether used alone, sequentially or in a tank mix. The most restrictive labeling of any product used applies.
- Do not apply less than 12 fl oz/A Fusilade DX Herbicide in a tank mix with broadleaf herbicides in soybeans, except as specified on this label.

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## TANK MIXES AND SEQUENTIAL APPLICATIONS FOR COTTON

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### Glyphosate-Tolerant Cotton (including Roundup Ready Cotton) Tank Mix

Fusilade DX Herbicide can be tank mixed with glyphosate products (such as Touchdown or Roundup brands) for control of volunteer corn including volunteer glyphosate-resistant corn in glyphosate-tolerant cotton (including Roundup Ready cotton). Apply Fusilade DX Herbicide at 4-6 fl oz/A. Use the 4 fl oz/A rate only under the following conditions:

- Application under favorable soil moisture and humidity conditions which normally occur within a few days after rainfall or irrigation.
- Avoid extreme air temperatures.
- Application when volunteer corn is less than 12 inches tall.
- Application with 0.25% v/v crop oil concentrate (COC). This COC is in addition to the additives required by the glyphosate product.

Use the higher rate if the above conditions do not exist.

Application of this tank mix on cotton varieties that have not been genetically modified to tolerate glyphosate based products will result in severe injury or plant death.

### Sequential Applications

Fusilade DX Herbicide can be used sequentially with other labeled cotton herbicides. For sequential applications, allow 2 to 3 days after the application of Fusilade DX Herbicide before applying a broadleaf herbicide or mixture. In situations where the broadleaf herbicide or mixture is applied first, apply Fusilade DX Herbicide when the grass weeds begin to develop new leaves (generally around 7 days).

### Cotton Tank Mix and Sequential Use Precautions

- Always read and follow the directions, restrictions and limitations for all products whether used alone, sequentially or in a tank mix. The most restrictive labeling of any product used applies.

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## SPECIAL INSTRUCTIONS FOR USE IN COFFEE

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Apply Fusilade DX Herbicide as a postemergence ground application. Apply with sufficient spray volume to ensure complete coverage of the target grasses. Applications can be made as a broadcast, strip band, or spot spray application.

Apply Fusilade DX Herbicide at 16-24 fl oz/A for control of annual and perennial grasses at the listed growth stages in the following tables. Add crop oil concentrate at 1% v/v (1 gal/100 gal) or nonionic surfactant at 0.25-0.5% v/v (1-2 qt/100 gal) in the finished spray volume.

## FUSILADE DX HERBICIDE ANNUAL GRASS CONTROL GROWTH STAGES FOR COFFEE (HAWAII ONLY)

### Annual Grass Species

Make applications when grasses are 2-8 inches tall, but before tillering and/or heading.

Barnyardgrass	Prairie cupgrass
Broadleaf signalgrass	Red Rice
Crabgrass, large	Shattercane/Wildcane/Volunteer milo
Crabgrass, smooth	Sorghum alnum
Crabgrass, southern	Southern sandbur
Crabgrass, tropical	Southwestern cupgrass
Fall panicum	Texas panicum
Field sandbur	Volunteer barley
Foxtail, giant	Volunteer corn
Foxtail, green	Volunteer oats
Foxtail, yellow	Volunteer rye
Goosegrass	Volunteer wheat
Guineagrass, seedling	Wild oats
Itchgrass	Wild proso millet
Italian ryegrass	Witchgrass
Johnsongrass, seedling	Woolly cupgrass
Junglerice	

## FUSILADE DX HERBICIDE PERENNIAL GRASS CONTROL GROWTH STAGES FOR COFFEE (HAWAII ONLY)

Perennial Grass Species	Growth Stage
Bermudagrass	4-8" runners
Kikuyugrass	4-8" runners
Quackgrass	6-10"
Rhizome johnsongrass	8-18" tall and before boot stage
Wirestem muhly	4-12" tall and before seedhead initiation

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### SPECIAL INSTRUCTIONS FOR USE IN BANANAS AND PLANTAINS

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Apply Fusilade DX Herbicide as a directed postemergence application in the interspaces and around the base of banana and plantain plants while avoiding contact of the spray solution or mist with the trunk and foliage. Applications can be made as a broadcast, strip band, or spot spray application at rates and growth stages listed in Tables 2-5. Apply with sufficient spray volume and pressure to ensure complete coverage of target grasses.

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**SPECIAL INSTRUCTIONS FOR USE IN APRICOTS, CHERRIES, CITRUS FRUITS [CALAMONDIN, CITRUS CITRON, CITRUS HYBRIDS, GRAPEFRUIT, KUMQUAT, LEMON, LIME, MANDARIN (TANGERINE), ORANGE (ALL), PUMMELO, AND SATSUMA MANDARIN], GRAPES, MACADAMIA NUTS, NECTARINES, PEACHES, PECANS, PLUMS AND PRUNES**

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Apply Fusilade DX Herbicide as a directed postemergence application in the interspaces and around the base of the trees while avoiding contact of spray with foliage of trees. Apply with sufficient spray volume and pressure to ensure complete coverage of target grasses. Applications can be made as a broadcast, strip band, or spot spray application at rates and growth stages listed in Tables 2-5.

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**NONBEARING CROPS**

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Fusilade DX Herbicide can be used to control annual and perennial grass weeds in nonbearing groves, orchards, vineyards, or tree farms\* or during site preparation prior to transplanting. See the following tables for specific uses.

\*Not applicable in California.

Apply Fusilade DX Herbicide at 16-24 oz/A for control of annual and perennial grasses at the listed growth stages in the following tables. Add crop oil concentrate at 1% v/v (1 gal/100 gal) or nonionic surfactant at 0.25-0.5% v/v (1-2 qt/100 gal) in the finished spray volume.

**FUSILADE DX HERBICIDE ANNUAL GRASS CONTROL GROWTH STAGES FOR NONBEARING CROPS**

**Annual Grass Species**

Make applications when grasses are 2-8 inches tall, but before tillering and/or heading.

Barnyardgrass	Junglerice
Broadleaf signalgrass	Prairie cupgrass
Crabgrass, large	Red Rice
Crabgrass, smooth	Shattercane/Wildcane/Volunteer milo
Crabgrass, southern	Sorghum alnum
Crabgrass, tropical	Southern sandbur
<b>Downy brome*</b>	Southwestern cupgrass
Fall panicum	Texas panicum
Field sandbur	Volunteer barley
Foxtail, giant	Volunteer corn
Foxtail, green	Volunteer oats
Foxtail, yellow	Volunteer rye
Goosegrass	Volunteer wheat
Guineagrass, seedling	Wild Oats



Itchgrass	Wild proso millet
Italian ryegrass	Witchgrass
Johnsongrass, seedling	Woolly cupgrass

**\*Not registered in California for use on this species.**

## **FUSILADE DX HERBICIDE PERENNIAL GRASS CONTROL GROWTH STAGES FOR NONBEARING CROPS**

<b>Perennial Grass Species</b>	<b>Growth Stage</b>
Bermudagrass	4-8" runners
Guineagrass	6-12" tall before seedhead initiation
Kikuyugrass*	4-8" runners
Quackgrass	6-10"
Rhizome johnsongrass	8-18" tall and before boot stage
Torpedograss**	3-6" tall (1st application) 2-3" tall (subsequent application)
Wirestem muhly	4-12" tall and before seedhead initiation

\*Not Registered in California for use on this species.

\*\*Use 24 fl oz per acre per application. Three applications may be needed.

## **FUSILADE DX HERBICIDE CAN BE USED ON THE FOLLOWING NONBEARING CROPS\*\***

Acerola (West Indian Cherry)*	Grapefruit
Almonds	Guava*
Apples	Jojoba
Asparagus	Kiwi*
Avocados	Lemons
Berries	Limes
Conifers*	Macadamia
Christmas tree plantings	Mango*
Nursery beds	Olives
Seedling establishment	Oranges
Dates	Pears
Figs	Pineapple
Filberts	Pistachios
Florigraze rhizoma peanuts*	Pomegranates
(Nursery stock only)	Tangelos
Ginseng*	Tangerines
Grapes	Walnuts

\*Not applicable in California.



\*\*Nonbearing crops not listed should be screened for phytotoxicity prior to widespread use.

## **USE RESTRICTIONS AND PRECAUTIONS - NONBEARING CROPS**

Not for use or storage in or around the home.

- Apply Fusilade DX Herbicide to actively growing grasses before they exceed the specified growth stages.
- Spray to obtain thorough coverage of grass foliage, but not to runoff. Repeat treatments may be necessary to provide full season control.
- Apply Fusilade DX Herbicide when the first grass species in a mixed grass weed population reaches the specified growth stage for treatment.
- Do not apply Fusilade DX Herbicide to grasses which are stressed due to moisture, temperature, low soil fertility, mechanical or chemical injury.
- Do not apply to grasses which have tillered, formed seed heads, or exceeded listed growth stages.
- When treating nonbearing trees and vines, avoid contact of spray with foliage by using directed sprays.
- Do not apply to trees, vines, or other listed crops that will be harvested for food/feed within one year after application.
- Do not apply to asparagus from which spears will be harvested within 1 year of treatment. Refer to the Asparagus section of **CROP SPECIFIC RESTRICTIONS AND LIMITATIONS** for use in asparagus that will be harvested within 1 year.
- Do not graze or harvest Florigraze rhizoma peanuts for 1 year after treatment.
- Do not plant rotational grass crops such as corn, sorghum and cereals within 60 days after the last application of Fusilade DX Herbicide.
- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season.

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## NONFOOD USES: FALLOW AGRICULTURAL LAND AND OTHER NONCROP AREAS OF FARMS

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Fusilade DX Herbicide can be used to control annual and perennial grass weeds in agricultural fallow land and other noncrop areas of farms. Agricultural noncrop areas of farms include areas around farm buildings, farm equipment storage yards and other agricultural noncrop areas of farms.

Apply Fusilade DX Herbicide at 16-24 fl oz/A for control of annual and perennial grasses at the listed growth stages in the following tables. Add crop oil concentrate at 1% v/v (1 gal/100 gal) or nonionic surfactant at 0.25-0.5% v/v (1-2 qt/100 gal) in the finished spray volume.

### FUSILADE DX HERBICIDE ANNUAL GRASS CONTROL GROWTH STAGES FOR FALLOW AGRICULTURAL LAND AND NONCROP AREAS OF FARMS

#### Annual Grass Species

Make applications when grasses are 2-8 inches tall, but before tillering and/or heading.

Barnyardgrass	Junglerice
Broadleaf signalgrass	Prairie cupgrass
Crabgrass, large	Red Rice
Crabgrass, smooth	Shattercane/Wildcane/Volunteer milo
Crabgrass, southern	Sorghum alnum
Crabgrass, tropical	Southern sandbur
<b>Downy brome*</b>	Southwestern cupgrass
Fall panicum	Texas panicum
Field sandbur	Volunteer barley
Foxtail, giant	Volunteer corn
Foxtail, green	Volunteer oats
Foxtail, yellow	Volunteer rye
Goosegrass	Volunteer wheat
Guineagrass, seedling	Wild Oats
Itchgrass	Wild proso millet
Italian ryegrass	Witchgrass
Johnsongrass, seedling	Woolly cupgrass

**\*Not registered in California for use on this species.**

**FUSILADE DX HERBICIDE PERENNIAL GRASS CONTROL GROWTH STAGES FOR FALLOW AGRICULTURAL LAND AND NONCROP AREAS OF FARMS**

<b>Perennial Grass Species</b>	<b>Growth Stage</b>
Bermudagrass	4-8" runners
Guineagrass	6-12" tall before seedhead initiation
Kikuyugrass*	4-8" runners
Quackgrass	6-10"
Rhizome johnsongrass	8-18" tall and before boot stage
Torpedograss**	3-6" tall (1st application) 2-3" tall (subsequent application)
Wirestem muhly	4-12" tall and before seedhead initiation

\*Not Registered in California for use on this species.

\*\*Use 24 fl oz/A per application. Three applications may be needed.

**USE RESTRICTIONS AND PRECAUTIONS - FALLOW AGRICULTURAL LAND AND NONCROP AREAS OF FARMS**

Not for use or storage in or around the home.

- Spray to obtain thorough coverage of grass foliage, but not to runoff. Repeat treatments may be necessary to provide full season control.
- Apply Fusilade DX Herbicide when the first grass species in a mixed grass weed population reaches the specified growth stage for treatment.
- Do not apply Fusilade DX Herbicide to grasses which are stressed due to moisture, temperature, low soil fertility, mechanical or chemical injury.
- Do not apply to grasses which have tillered, formed seed heads, or exceeded listed growth stages.
- Do not apply a total of more than 72 fl oz of Fusilade DX Herbicide per acre per season.

**CONVERSION TABLE  
FUSILADE DX HERBICIDE RATE TO BE APPLIED**

<b>Lb ai/A</b>	<b>Pt/A</b>	<b>Fl oz/A</b>	<b>Acres/Gal</b>
0.094	$\frac{3}{8}$	6	21.3
0.125	$\frac{1}{2}$	8	16
0.156	$\frac{5}{8}$	10	12.8
0.188	$\frac{3}{4}$	12	10.7
0.250	1	16	8
0.375	1- $\frac{1}{2}$	24	5.3

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## APPENDIX

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Scientific names are listed for those weeds referred to in the Fusilade DX Herbicide label.

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bermudagrass	<i>Cynodon dactylon</i>
Broadleaf signalgrass	<i>Brachiaria platyphylla</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>
Crabgrass, Smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Crabgrass, Tropical	<i>Digitaria bicornis</i>
Downy brome	<i>Bromus tectorum</i>
Fall Panicum	<i>Panicum dichotomiflorum</i>
Field Sandbur	<i>Cenchrus incertus</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria pumila</i>
Goosegrass	<i>Eleusine indica</i>
Guineagrass, seedling	<i>Panicum maximum</i>
Italian Ryegrass	<i>Lolium multiflorum</i>
Itchgrass	<i>Rottboellia exaltata</i>
Johnsongrass, Rhizome	<i>Sorghum halepense</i>
Johnsongrass, Seedling	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colonum</i>
Kikuyugrass	<i>Rennisetum clandestinum</i>
Prairie cupgrass	<i>Eriochloa contracta</i>
Quackgrass	<i>Elymus repens</i>
Rabbitfootgrass	<i>Polypogon monspeliensis</i>
Red Rice	<i>Oryza sativa</i>
Shattercane	<i>Sorghum bicolor</i>
Sorghum alnum	<i>Sorghum alnum</i>
Southern Sandbur	<i>Cenchrus echinatus</i>
Southwestern cupgrass	<i>Eriochloa gracilis</i>
Texas Panicum	<i>Panicum texanum</i>
Volunteer Cereals	
V. Barley	<i>Hordeum vulgare</i>
V. Corn	<i>Zea mays</i>
V. Milo	<i>Sorghum bicolor</i>
V. Oats	<i>Avena sativa</i>
V. Rye	<i>Secale cereale</i>
V. Wheat	<i>Triticum aestivum</i>
Wild Proso Millet	<i>Panicum miliaceum</i>
Wild Oats	<i>Avena fatua</i>

**COMMON NAME**

**SCIENTIFIC NAME**

Wirestem Muhly  
Witchgrass  
Woolly cupgrass

*Muhlenbergia frondosa*  
*Panicum capillare*  
*Eriochloa villosa*

**STORAGE AND DISPOSAL**

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

**Pesticide Storage**

Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

**Pesticide Disposal**

Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**Container Handling [less than or equal to 5 gallons]**

Non-refillable container. Do not reuse or refill this container. Triple 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 ¼ 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Container Handling [greater than 5 gallons] or [bulk/mini-bulk]**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other

procedures approved by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

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