



FIERCE[®]

HERBICIDE 999

FOR RESIDUAL CONTROL AND/OR SUPPRESSION OF CERTAIN WEEDS IN COTTON, FIELD CORN, SOYBEAN, FALLOW LAND AND NON-CROP AREAS

Active Ingredients	By Wt
Flumioxazin*	33.5%
Pyroxasulfone**	42.5%
Other Ingredients	24.0%
Total	100.0%

* 2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isindole-1,3(2H)-dione

**3-[[[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]methyl]sulfonyl]-4,5-dihydro-5,5-dimethylisoxazole

Fierce[®] Herbicide is a water dispersible granule containing 76% active ingredient.

EPA Reg. No. 59639-193 EPA Est. 11773-IA-01[®], 62171-MS-03[®], 39578-TX-01[®], 5905-IA-01[®]

Superscript is first letter of lot number.

KEEP OUT OF REACH OF CHILDREN CAUTION

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation.

FIRST AID

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 advice.

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.

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FIRST AID (continued)

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.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.

Do not induce vomiting unless told to do so by the poison control center or doctor.

Do not give anything to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **800-892-0099** for emergency medical treatment information.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some of the 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 any waterproof material such as polyethylene or polyvinyl chloride, shoes and socks.

For aerial application to corn, cotton and soybean mixers and loaders must also wear: PF 5 respirator.

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.

USER SAFETY RECOMMENDATIONS

- Users should wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should 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 non-target plants and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Ground Water Advisory: This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisories: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

The product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a 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 potential loading of pyoxasulfone and its degradation product, 5-difluoromethoxy-1H-pyrazol-4-yl) methanesulfonic acid (M1), from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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

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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 made of waterproof material, 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 Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.

DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such

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factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

LIMITED WARRANTY

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label **and subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

To the fullest extent consistent with applicable law, Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE FULLEST EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR 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

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OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.

Read and follow the entire label of each product to be used in the tank mix with this product.

RESISTANCE MANAGEMENT RECOMMENDATIONS

Fierce Herbicide is a premix of Group 14 and Group 15 herbicides. Any weed population may contain or develop plants naturally resistant to *Fierce* Herbicide and other Group 14 and/or Group 15 herbicides. Weed species with acquired resistance to Group 14 and/or Group 15 herbicides may eventually dominate the weed population if Group 14 plus Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by *Fierce* Herbicide or other Group 14 and/or Group 15 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of *Fierce* Herbicide or other target site of action Group 14 and/or Group 15 herbicides that might have a similar target site of action, on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern.

- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

For further information or to report suspected resistance, you may call the following toll-free number: **800-6-VALENT (682-5368)**.

TABLE OF CONTENTS

Product Information
 Use Precautions and Restrictions
 Burndown Program
 Rainfastness
 Soil Characteristics
 Tank Mixes
 Table 1. Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide
 Directions for Cotton (No-Till and Minimum Till)
 Restrictions and Limitations – Post Directed and Layby Use in Cotton
 Post Directed and Layby Use Directions
 Carrier Volume and Spray Pressure
 Additives
 Application Equipment
 Timing to Cotton
 Timing to Weeds
 Tank Mixes
 Table 2. Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of *Fierce* Herbicide Tank Mixes with Glyphosate or MSMA in Cotton
 Directions for Field Corn (No-Till and Minimum Till)
 Restrictions and Limitations
 Precautions
 Spring Burndown Use Directions – For Pre-plant Applications in Field Corn
 Tank Mixes
 Directions for Soybean (No-Till, Minimum Till and Conventional Till)
 Restrictions and Limitations
 Precautions
 Spring Burndown Use Directions – For Pre-plant Applications in Soybean
 Preemergence Use Directions
 Tank Mixes
 Directions for Use in Fall Burndown and Fallow Land
 Tank Mixes
 Restrictions
 Preemergence Application
 Postemergence Application
 Tank Mixes
 Important

Directions for Use to Maintain Bare Ground on Non-Crop Areas

Crop Rotational Interval Table

Application Information

Sprayer Preparation

Mixing Instructions

Application Method

1. Ground Application

2. Aerial Application

Carrier Volume and Spray Pressure

1. Ground Application

2. Aerial Application

Nozzle Selection and Orientation

Adjuvants and Drift Control Additives

Spray Drift Management

Sprayer Cleanup

Additives

Jar Test to Determine Compatibility of

Adjuvants and *Fierce* Herbicide

Crop Failure

Storage and Disposal

PRODUCT INFORMATION

Fierce Herbicide provides residual control of susceptible weeds in labeled crops and provides additional burndown activity when used as part of a burndown program. In addition, *Fierce* Herbicide can be applied as part of a fall burndown program for control of susceptible winter annuals.

Weeds controlled by *Fierce* Herbicide are listed in Table 1, Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide.

Moisture is necessary to activate *Fierce* Herbicide in soil for residual weed control. Dry weather following applications of *Fierce* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *Fierce* Herbicide will control susceptible germinating weeds. When adequate moisture is not received after soil applied treatments of *Fierce* Herbicide application, weed control may be improved by shallow cultivation or irrigation with at least 1/2 inch of water. If weeds begin to emerge, irrigate (1/4 inch of water) or cultivate uniformly with shallow-tillage equipment such as a rotary hoe that will not damage the crop. Deep cultivation reduces the effectiveness of *Fierce* Herbicide.

Crop injury may occur from applications made to poorly drained soils and/or applications made under cool and/or wet conditions. Risk of crop injury can be minimized by using on well drained soils, planting soybeans at least 1.5 inches deep, using high quality seed and completely covering seeds with soil prior to preemergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

USE PRECAUTIONS AND RESTRICTIONS

- Do not exceed the maximum seasonal rates as listed on this label.

- Do not apply to frozen or snow covered soil.
- Do not apply this product when weather conditions favor spray drift from treated areas.
- Do not apply during low-level inversion conditions, including fog.
- When applying by air, observe drift management restrictions and precautions listed under “Application Information” section.
- Any tillage operation after the application or mechanical incorporation into the soil will reduce residual weed control.
- Observe all rotational intervals as listed in the “Crop Rotational Interval” table.

Burndown program: Apply *Fierce* Herbicide as part of a burndown program to actively growing weeds. Applying *Fierce* Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply *Fierce* Herbicide when weeds are under stress due to drought, excessive water, extremes in temperature, disease or low humid-

ity. Weeds under stress tend to become less susceptible to herbicidal action. *Fierce* Herbicide is most effective when applied under warm sunny conditions.

Rainfastness: *Fierce* Herbicide is rainfast one hour after application. Do not apply *Fierce* Herbicide if rain is expected within one hour of application or postemergence efficacy may be reduced.

Soil Characteristics: Application of *Fierce* Herbicide to soils with high organic matter and/or high clay content may require higher dosages than soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

Tank Mixes: Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. Always confirm that the tank mix partners are registered for use on crop to be treated. The most restrictive labeling of any tank mix product must be followed.

Table 1. Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide

Common Name	Scientific Name	<i>Fierce</i> Herbicide Rates		
		3.0 oz/A	3.75 oz/A	4.5 oz/A
BROADLEAF WEED SPECIES		C = Control or S = Suppression		
Bristly Starbur	<i>Acanthospermum hispidum</i>	S	S	S
Carpetweed	<i>Mollugo verticillata</i>	C	C	C
Chickweeds				
Common	<i>Stellaria media</i>	C	C	C
Mouseear	<i>Cerastium vulgatum</i>	C	C	C
Coffee Senna	<i>Cassia occidentalis</i>	S	C	C
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>	S	S	S
Dandelion	<i>Taraxacum officinale</i>	C	C	C
Eclipta	<i>Eclipta prostrata</i>	C	C	C
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>	C	C	C
Florida Beggarweed	<i>Desmodium tortuosum</i>	S	C	C
Florida Pusley	<i>Richardia scabra</i>	C	C	C
Golden Crownbeard	<i>Verbesina encelioides</i>	S	C	C
Hairy Indigo	<i>Indigofera hirsuta</i>	S	C	C
Hemp Sesbania	<i>Sesbania exaltata</i>	C	C	C
Henbit	<i>Lamium amplexicaule</i>	C	C	C
Jimsonweed	<i>Datura stramonium</i>	C	C	C
Kochia	<i>Kochia scoparia</i>	C	C	C
Lambsquarters, Common	<i>Chenopodium album</i>	C	C	C
Little Mallow	<i>Malva parviflora</i>	C	C	C
Marestail/Horseweed	<i>Conyza canadensis</i>	C	C	C

(continued)

Table 1. Weeds Controlled or Suppressed by Residual Activity of Fierce Herbicide (continued)

Common Name	Scientific Name	Fierce Herbicide Rates		
		3.0 oz/A	3.75 oz/A	4.5 oz/A
BROADLEAF WEED SPECIES (continued)		C = Control or S = Suppression		
Morningglories ¹				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	S	C	C
Ivyleaf	<i>Ipomoea hederacea</i>	S	C	C
Red/Scarlet	<i>Ipomoea coccinea</i>	S	C	C
Tall	<i>Ipomoea purpurea</i>	S	C	C
Mustard, Wild	<i>Brassica kaber</i>	C	C	C
Nightshades				
Black	<i>Solanum nigrum</i>	C	C	C
Eastern Black	<i>Solanum ptycanthum</i>	C	C	C
Hairy	<i>Solanum sarrachoides</i>	C	C	C
Palmer Amaranth	<i>Amaranthus palmeri</i>	C	C	C
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>	C	C	C
Smooth	<i>Amaranthus hybridus</i>	C	C	C
Spiny Amaranth	<i>Amaranthus spinosus</i>	C	C	C
Tumble	<i>Amaranthus albus</i>	C	C	C
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	C	C	C
Puncturevine	<i>Tribulus terrestris</i>	C	C	C
Purslane, Common	<i>Portulaca oleracea</i>	C	C	C
Radish, Wild	<i>Raphanus raphanistrum</i>	C	C	C
Ragweeds ²				
Common	<i>Ambrosia artemisiifolia</i>	S	C	C
Giant	<i>Ambrosia trifida</i>	S	S	S
Redmaids	<i>Calandrinia ciliata</i> var. <i>menziessii</i>	C	C	C
Russian Thistle	<i>Salsola iberica</i>	S	C	C
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	C	C	C
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>	C	C	C
Spotted Spurge	<i>Euphorbia maculata</i>	C	C	C
Smartweeds				
Ladysthumb	<i>Polygonum persicaria</i>	S	S	S
Pennsylvania	<i>Polygonum pennsylvanicum</i>	S	S	S
Spurred Anoda	<i>Anoda cristata</i>	S	C	C
Tropic Croton	<i>Croton glandulosus</i>	S	C	C
Velvetleaf	<i>Abutilon theophrasti</i>	C	C	C
Venice Mallow	<i>Hibiscus trionum</i>	C	C	C

(continued)

Table 1. Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide (continued)

Common Name	Scientific Name	<i>Fierce</i> Herbicide Rates		
		3.0 oz/A	3.75 oz/A	4.5 oz/A
BROADLEAF WEED SPECIES (continued)		C = Control or S = Suppression		
Waterhemp ²				
Common	<i>Amaranthus rudis</i>	C	C	C
Tall	<i>Amaranthus tuberculatus</i>	C	C	C
Wild Buckwheat	<i>Polygonum convolvulus</i>	S	S	S
Wild Poinsettia	<i>Euphorbia heterophylla</i>	S	C	C
Wormwood, Biennial	<i>Artemisia biennis</i>	S	S	S
GRASS WEED SPECIES				
Barnyardgrass	<i>Echinochloa crus-galli</i>	C	C	C
Bluegrass, Annual	<i>Poa annua</i>	C	C	C
Cheat	<i>Bromus secalinus</i>	C	C	C
Crabgrass				
Large	<i>Digitaria sanguinalis</i>	C	C	C
Smooth	<i>Digitaria ischaemum</i>	C	C	C
Cupgrass, Southwestern	<i>Eriochloa gracilis</i>	C	C	C
Downy Brome	<i>Bromus tectorum</i>	C	C	C
Foxtails				
Giant	<i>Setaria faberi</i>	C	C	C
Green	<i>Setaria viridis</i>	C	C	C
Yellow	<i>Setaria glauca</i>	C	C	C
Goosegrass	<i>Eleusine indica</i>	C	C	C
Johnsongrass (seedling)	<i>Sorghum halepense</i>	C	C	C
Lovegrass, California	<i>Eragrostis diffusa</i>	C	C	C
Panicums				
Fall	<i>Panicum dichotomiflorum</i>	C	C	C
Texas	<i>Panicum texanum</i>	C	C	C
Red Rice	<i>Oryza sativa</i>	C	C	C
Ryegrass				
Italian	<i>Lolium multiflorum</i>	C	C	C
Rigid	<i>Lolium rigidum</i>	C	C	C
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>	C	C	C

¹ Morningglory species are not adequately controlled on fine soils or soils with greater than 3% organic matter.

² A postemergence herbicide, such as Cobra[®], Phoenix[™] or glyphosate (Roundup Ready[®] soybeans only) may be needed following a preemergence application of *Fierce* Herbicide to adequately control common ragweed or waterhemp in soybean fields with heavy pressure.

DIRECTIONS FOR COTTON (NO-TILL AND MINIMUM TILL)

RESTRICTIONS AND LIMITATIONS

Post Directed and Layby Use in Cotton

- Do not apply more than 3 oz of *Fierce* Herbicide per acre during a single application.
- Do not apply more than 6 oz of *Fierce* Herbicide per acre during a single growing season.
- Do not make a sequential *Fierce* Herbicide application within 30 days of the first *Fierce* Herbicide application.
- Do not apply within 60 days of harvest.
- If tank mixing, refer to most restrictive label for minimum interval between application and planting.

POST DIRECTED AND LAYBY USE DIRECTIONS

For postemergence weed control, *Fierce* Herbicide should be applied through a hooded or shielded sprayer or at layby, at 3 oz/A, in combinations with MSMA, diuron or glyphosate, to assist in the control of weeds listed in Table 2, Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of *Fierce* Herbicide Tank Mixes with Glyphosate or MSMA in Cotton.

For best results, *Fierce* Herbicide should be applied to actively growing weeds within the growth stages indicated in this label. Applying *Fierce* Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply *Fierce* Herbicide when the crop or weeds are under stress due to drought, excessive water, extremes in temperature, disease or low humidity. Weeds under stress tend to become less susceptible to herbicidal action. *Fierce* Herbicide is most effective when applied under sunny conditions at temperatures above 65°F.

Fierce Herbicide is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or postemergence efficacy may be reduced. Rainfall within one hour of application will not adversely affect residual activity.

Fierce Herbicide also provides residual weed control as listed in Table 1 when applied through hooded, shielded and layby application methods.

CARRIER VOLUME AND SPRAY PRESSURE

To ensure thorough coverage in hooded, shielded and layby applications, use a minimum of 15 gals spray solution per treated acre. Use a minimum of 20 gals per treated acre under heavy weed pressure.

Nozzle selection should meet manufacturer's gallonage and pressure recommendations for application method being used. Do not use "Flood Jet" nozzles, as they tend to increase the chance of crop injury.

ADDITIVES

Weed control from hooded, shielded or layby application of *Fierce* Herbicide in cotton requires the addition of an agronomically approved non-ionic surfactant to the spray mixture. Non-ionic surfactant must contain at least 80% active ingredient. Mixing compatibility qualities should be verified by a jar test. **The use of crop oil concentrates, methylated seed oils, organo-silicant surfactants or products containing these ingredients, may result in severe crop injury and should not be used.**

APPLICATION EQUIPMENT

Apply *Fierce* Herbicide tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. All nozzles must be under the hood or behind the shield to ensure no spray solution comes in contact with the cotton. Application equipment should be clean and in good repair. Nozzles should meet manufacturer's recommendations for spray pattern and placement on spray boom and should be checked frequently for accuracy.

TIMING TO COTTON

Hooded and Shielded Application

Fierce Herbicide tank mixes may be applied with a hooded or shielded sprayer after cotton has reached a minimum of 6 inches in height. **Care must be taken to ensure the spray solution or drift does not come in contact with the cotton or severe crop injury can occur.**

Layby Application

Layby application of *Fierce* Herbicide tank mixes may be made once cotton has reached a minimum of 16 inches in height. Cotton that is smaller than 16 inches in height may be injured by *Fierce* Herbicide applications. *Fierce* Herbicide application must be directed to the lower 2 inches of the cotton stem to avoid crop injury.

TIMING TO WEEDS

Fierce Herbicide tank mix applications must be made to weeds within the height range given in Table 2.

TANK MIXES

Fierce Herbicide must be tank mixed with glyphosate in Roundup Ready cotton, glufosinate in Liberty Link® cotton, and/or diuron and MSMA.

Table 2. Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of Fierce Herbicide Tank Mixes With Glyphosate or MSMA in Cotton

BROADLEAF WEED SPECIES		WEED HEIGHT (inches) 3 oz/A
COMMON NAME	SCIENTIFIC NAME	
Bindweed, Field ¹	<i>Convolvulus arvensis</i>	4
Carpetweed	<i>Mollugo verticillata</i>	4
Chickweed, Common	<i>Stellaria media</i>	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6
Jimsonweed	<i>Datura stramonium</i>	4
Lambsquarters, Common	<i>Chenopodium album</i>	4
Morningglories		
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriscula</i>	4
Ivyleaf	<i>Ipomoea hederacea</i>	4
Pitted	<i>Ipomoea lacunose</i>	4
Red	<i>Ipomoea coccinea</i>	4
Tall	<i>Ipomoea purpurea</i>	2
Mustard, Wild	<i>Brassica kaber</i>	6
Nightshades		
Black	<i>Solanum nigrum</i>	4
Eastern Black	<i>Solanum ptycanthum</i>	4
Hairy	<i>Solanum sarrachoides</i>	4
Pigweeds		
Palmer Amaranth	<i>Amaranthus palmeri</i>	4
Redroot	<i>Amaranthus retroflexus</i>	4
Smooth	<i>Amaranthus hybridus</i>	4
Plantain, Broadleaf	<i>Plantago major</i>	6
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	4
Purslane, Common	<i>Portulaca oleracea</i>	2
Ragweeds		
Common	<i>Ambrosia artemisiifolia</i>	2
Giant	<i>Ambrosia trifida</i>	4
Rice Flatsedge	<i>Cyperus iria</i>	2
Sicklepod	<i>Senna obtusifolia</i>	4
Smartweeds		
Ladysthumb	<i>Polygonum persicaria</i>	4
Pale	<i>Polygonum lapathifolium</i>	4
Pennsylvania	<i>Polygonum pensylvanicum</i>	4
Spotted Spurge	<i>Euphorbia maculata</i>	4
Velvetleaf	<i>Abutilon theophrasti</i>	4

(continued)

BROADLEAF WEED SPECIES (continued)		WEED HEIGHT (inches) 3 oz/A
COMMON NAME	SCIENTIFIC NAME	
Venice Mallow	<i>Hibiscus trionum</i>	2
Waterhemp		
Common	<i>Amaranthus rudis</i>	2
Tall	<i>Amaranthus tuberculatus</i>	2

¹*Fierce* Herbicide tank mixes will control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

DIRECTIONS FOR FIELD CORN (NO-TILL AND MINIMUM TILL)

RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz per acre to field corn during a single growing season.
- Do not use on popcorn, sweet corn or corn grown for seed.
- Do not apply after crop has emerged.

PRECAUTIONS

- Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.
- Use on soils with less than 1% organic matter only after an activation rainfall or irrigation of 1/2 inch or more water has occurred between application and planting.
- In the states of AR, LA, MS, OK or TX, corn may be planted within 30 days of *Fierce* Herbicide application if planting on raised beds. If not planting on raised beds, plant 30 days after *Fierce* Herbicide application.
- In the states of AL, FL and GA, corn may be planted within 30 days of *Fierce* Herbicide application if strip tillage has occurred between application and planting. If strip tillage has not occurred, plant after 30 days.

SPRING BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Field Corn

Use *Fierce* Herbicide as part of a burndown program for residual weed control and to assist in postemergence burndown of many weeds where field corn will be planted directly into the residue of the previous year. See Directions for Use in Fall Burndown and Fallow Land for rates and timing of applications. For control of emerged weeds, apply *Fierce* Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre. Always read and follow label directions for all tank mix products before using.

Apply *Fierce* Herbicide at 3 oz/A early pre-plant. Plant corn between 7 and 30 days after application unless the application is made as part of a fall burndown program.

TANK MIXES

Fierce Herbicide may be tank mixed with 2,4-D LVE, atrazine, Basis®, dicamba, Express®, glyphosate, Hornet®, paraquat, Python® WDG, Resolve® or sima-

zine for pre-plant burndown applications. Refer to tank mix product labels for specific recommendations and weeds controlled.

DIRECTIONS FOR SOYBEAN (NO-TILL, MINIMUM TILL AND CONVENTIONAL TILL)

RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3.75 oz of *Fierce* Herbicide per acre during a single growing season.
- Do not graze treated soybean fields or feed treated forage or hay to livestock.
- Do not irrigate when soybeans are cracking.

PRECAUTIONS

- Soybean injury may occur if *Fierce* Herbicide is used in the same field that flufenacet (Axiom®, Domain®), alachlor (Micro-Tech®), metolachlor (Dual® products or Boundary®) or dimethenamid (Frontier® or Outlook®) will be used preemergence.
- Severe injury will occur if *Fierce* Herbicide is applied when soybeans have begun to crack.

SPRING BURNDOWN USE DIRECTIONS – For Pre-plant Applications in Soybean

Use *Fierce* Herbicide as part of a burndown program, for residual weed control and to assist in postemergence burndown of many annual and perennial weeds where soybeans will be planted directly into the residue of the previous year. See Directions for Use in Fall Burndown and Fallow Land for rates and timing of applications. For control of emerged weeds, apply *Fierce* Herbicide with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre. Always read and follow label directions for all tank mix products before using.

PREEMERGENCE USE DIRECTIONS

Apply *Fierce* Herbicide to soybeans early pre-plant, prior to planting or preemergence. Preemergence application of *Fierce* Herbicide must be made within 3 days after planting and prior to soybean emergence.

Apply *Fierce* Herbicide at 3 to 3.75 oz/A.

TANK MIXES

Fierce Herbicide may be tank mixed with chlorimuron, Command®, Extreme®, Gangster®, metribuzin, Firstrate®, Lorox®, Pursuit Plus®, pendimethalin, Python WDG, Scepter®, Valor® SX or Valor XLT. Refer to tank mix product labels for specific recommendations and weeds controlled.

**DIRECTIONS FOR USE
IN FALL BURNDOWN AND FALLOW LAND**

Apply *Fierce* Herbicide at 3.0 to 4.5 oz/A in the fall to provide residual weed control in fields that will be planted the following spring as identified in the crop rotational interval table. Weeds controlled or suppressed by residual activity are listed in Table 1, Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide. If weeds have emerged at the time of application, use *Fierce* Herbicide in combination with a labeled burndown herbicide. Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

TANK MIXES

Fierce Herbicide, applied as part of a burndown program, may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where crops will be planted directly into a stale seedbed, cover crop or in previous crop residues. Choose the most appropriate tank mix partner for control of emerged weeds. To ensure thorough coverage, use a minimum of 15 gals of spray solution per acre. Refer to tank mix partner's label.

**DIRECTIONS FOR USE TO MAINTAIN BARE
GROUND ON NON-CROP AREAS**

Use *Fierce* Herbicide to maintain bare ground on non-crop areas for non-selective vegetation control in areas such as around farm buildings, along ungrazed fence rows, wind breaks and shelter belts. Follow all directions as outlined in "Use Information" section of this label.

Fierce Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. *Fierce* Herbicide can be tank mixed for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. *Fierce* Herbicide rates of 3 to 4.5 oz/A are required to provide residual control of the weeds listed in Table 1, Weeds Controlled or Suppressed by Residual Activity of *Fierce* Herbicide.

RESTRICTIONS

- Do not apply more than 4.5 oz per acre per season.
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply to ditch banks.

PREEMERGENCE APPLICATION

Apply *Fierce* Herbicide at 3 to 4.5 oz/A per broadcast acre as a preemergence application. Make the preemergence (to weed emergence) applications of *Fierce* Herbicide to a weed-free soil surface. Pre-emergence applications of *Fierce* Herbicide must be completed prior to weed emergence. Moisture is necessary to activate *Fierce* Herbicide on soil for

residual weed control. Dry weather following application of *Fierce* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *Fierce* Herbicide will control susceptible germinating weeds.

POSTEMERGENCE APPLICATION

Apply *Fierce* Herbicide at 3 to 4.5 oz/A per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). The addition of an adjuvant enhances *Fierce* Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of *Fierce* Herbicide. Emerged weeds are controlled postemergence with *Fierce* Herbicide, however, translocation of *Fierce* Herbicide within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with *Fierce* Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. A tank mix partner must not be used in combination with *Fierce* Herbicide for the postemergence control of weeds larger than 2 inches.

TANK MIXES

For control of emerged weeds, apply *Fierce* Herbicide with an appropriate burndown tank mix partner.

IMPORTANT: Completely read and follow the label of any potential tank mix partner with *Fierce* Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

CROP ROTATIONAL INTERVAL

The following rotational crops may be planted after applying <i>Fierce</i> Herbicide at the listed rate. Planting earlier than the recommended rotational interval may result in crop injury.			
	<i>Fierce</i> Herbicide Use Rates Interval Months		
Crops	3 oz/A	3.75 oz/A	4.5 oz/A
Alfalfa	10	10	10
Corn, Field (conventional till)	1	1	1
Corn, Field (reduced till)	7 days	1	1
Cotton (conventional till)	45 days	2	2
Cotton (reduced till)	1	2	2
Edible Peas and other edible beans (except field peas)	11	11	11
Grass grown for seed	18	18	18
Lentils	6	7	7

(continued)

CROP ROTATIONAL INTERVAL (continued)

Crops	<i>Fierce</i> Herbicide Use Rates Interval Months		
	3 oz/A	3.75 oz/A	4.5 oz/A
Peanuts	4	4	4
Peas, Field	6	6	6
Potato	4	4	4
Rice	10	10	12
Small Grains (other than wheat)	11	12	12
Soybean	0	0	0
Sugarbeet	15	15	15
Sunflower	4	4	4
Sweet Potato	4	4	4
Tobacco	12	12	12
Wheat	1	2	2
Other crops not listed above	18	18	18

APPLICATION INFORMATION

SPRAYER PREPARATION

Before applying *Fierce* Herbicide, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonylurea and phenoxy herbicides, (i.e., Classic® and 2,4-D respectively) are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply *Fierce* Herbicide. If two or more products were tank mixed prior to *Fierce* Herbicide application, follow the most restrictive cleanup procedure.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. If a drift retardant is to be used, add 10 lbs of spray grade ammonium sulfate per 100 gallons of spray solution.
3. To ensure a uniform spray mixture, pre-slurry the required amount of *Fierce* Herbicide with water prior to addition to the spray tank. Use a minimum of 1 gallon of water per 10 oz of *Fierce* Herbicide.
4. While agitating, slowly add the pre-slurried *Fierce* Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
5. If tank mixing *Fierce* Herbicide with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable con-

centrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.

6. Add any required adjuvants.
7. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**
8. Mix only the amount of spray solution that can be applied the day of mixing. *Fierce* Herbicide should be applied within 6 hours of mixing.

APPLICATION METHOD

Fierce Herbicide is applied by ground or by air. Application equipment should be clean and in good repair. Nozzles should be uniformly spaced on boom and frequently checked for accuracy.

1. GROUND APPLICATION

Apply *Fierce* Herbicide and *Fierce* Herbicide tank mixes with ground equipment using standard commercial sprayers equipped with flat fan (pre-plant or preemergence applications only) designed to deliver the desired spray pressure and spray volume.

2. AERIAL APPLICATION

Spray drift away from the site of application may cause damage to non-target vegetation. To minimize drift, apply the largest droplet size consistent with uniform coverage and satisfactory weed control.

RESTRICTIONS

- Do not apply during low-level inversion conditions (including fog), when winds are gusty or under other conditions that favor drift.
- Do not spray when wind velocity is less than 2 mph or more than 10 mph.
- Do not apply this product by air within 40 ft of non-target plants including non-target crops.
- Do not apply this product by air within 100 ft of emerged cotton crops.
- Do not apply this product by air within 40 ft of streams, wetlands, marshes, ponds, lakes and reservoirs.

CARRIER VOLUME AND SPRAY PRESSURE

1. GROUND APPLICATION

Preemergence Application (Conventional Tillage): To ensure uniform coverage, use 10 to 30 gals of spray solution per acre for conventional tillage applications. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for preemergence herbicide application.

Burndown Application (Prior to Crop Emergence): To ensure thorough coverage in burndown applications, use 15 to 60 gals spray solution per acre. Use 20 to 60 gals per acre if dense vegetation or heavy crop residue is present. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for post-emergence herbicide application. Do not use flood jet nozzles.

2. AERIAL APPLICATION

When used as part of a burndown weed control program, apply *Fierce* Herbicide in 7 to 10 gallons of water per acre. Application at less than 7 gallons per acre may provide inadequate control. When used for preemergence weed control, apply *Fierce* Herbicide in 5 to 10 gallons of water per acre. The higher gallonage applications generally afford more consistent weed control. Do not exceed the nozzle manufacturer's recommended 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.

NOZZLE SELECTION AND ORIENTATION

Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, such as diaphragm type nozzles, to avoid unwanted discharge of spray solution. The nozzles must be directed toward the rear of the aircraft, at an angle between 0 and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

ADJUVANTS AND DRIFT CONTROL ADDITIVES

Refer to tank mix partner's label for adjuvant recommendation. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Spray Drift Management

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 factors involved in minimizing drift potential.

Importance of Droplet Size

The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Use nozzle types and nozzle arrangements that will provide maximum coverage and minimize the potential for off target movement of spray particles. Droplet size for both ground and air applications must be in the "medium" size category as defined in the August 1999 ASAE S572 publication entitled, "Spray Nozzle Classification by Drop Spectra". Refer to that publication for additional information. Regardless of droplet size, if applications are made improperly or under unfavorable environmental conditions off target movement will occur. (see Wind, Temperature and Humidity, and Temperature Inversion sections in this label).

Controlling Droplet Size

Volume: Use high flow rate nozzles that produce medium droplets to apply the highest practical spray volume.

Pressure: Use the lower spray pressures recommended for the nozzle and do not exceed the manufacturer's recommended pressure. 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. Do not use air inducing or flood type nozzles.

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.

Ground Boom Application Height: Applications should not be made at a height greater than 4 feet above the top of the largest plants. Making applications at the lowest possible height reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a cross wind, 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

Variable wind speeds with changing directions may pose the largest potential for drift damage if crops other than rice are adjacent to the field to be sprayed. Drift potential is lowest between wind speeds of 2 to 8 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided if wind speed is 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, but they still should remain within the medium droplet size category. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Do not spray at times when spray particles may be entrained into a temperature inversion layer. If inversion conditions are suspected, consult with local weather services before making an application. Applications must not occur during 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 must 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 (i.e., when wind is blowing away from the sensitive areas).

SPRAYER CLEANUP

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following *Fierce* Herbicide application. After *Fierce* Herbicide is applied, the following steps must be used to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Top off tank, add 1 gallon of 3% household ammonia (or equivalent) for every 100 gallons of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of *Fierce* Herbicide from the spray system, add a tank cleaner such as "Valent Tank Cleaner", in place of ammonia and allow the cleaning solution to remain in the pressurized spray system (spray tank, hoses and boom) for 8 hours before flushing the system for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Thoroughly clean spray equipment, including all tanks, hoses, booms, screens and nozzles, before it is used to apply postemergence pesticides. Equipment with *Fierce* Herbicide residue remaining in the system may result in crop injury to the subsequently treated crop.

ADDITIVES

When an adjuvant is to be used with *Fierce* Herbicide, Valent USA Corporation recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Either a crop oil concentrate or methylated seed oil which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant at 0.25% v/v, may be used when applying *Fierce* Herbicide as part of a burndown program. Some tank mix partners, such as Roundup PowerMAX®, are formulated with sufficient adjuvants and do not require the addition of a crop oil concentrate, methylated seed oil or non-ionic surfactant when tank mixed with *Fierce* Herbicide. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds such as cutleaf eveningprimrose and Carolina geranium. Verify mixing compatibility qualities by a jar test.

A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with either a crop oil concentrate, methylated seed oil or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for a crop oil concentrate, a methylated seed oil or a non-ionic surfactant.

JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND FIERCE HERBICIDE

When using *Fierce* Herbicide and an adjuvant, such as in stale seed bed or reduced tillage situations, a jar test should be performed before mixing commercial quantities of *Fierce* Herbicide, when using *Fierce* Herbicide for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt of the water to a quart jar. The water should be from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 g of *Fierce* Herbicide to the quart jar for every 3 oz of *Fierce* Herbicide per acre being applied (2 g if 6 oz/A is the desired *Fierce* Herbicide rate), gently mix until product goes into suspension.
3. Add 60 ml (4 Tbsps or 2 fl oz) of the crop oil or methylated seed oil to the quart jar or 1 ml of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp or 0.5 oz) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
 - a) Layer of oil or globules on the mixture's surface.
 - b) Flocculation: fine particles in suspension or

- as a layer on the bottom of the jar.
- c) Clabbering: thickening texture (coagulated) like gelatin.

CROP FAILURE

If the crop treated with *Fierce* Herbicide is lost due to a catastrophe, such as hail or other forms of inclement weather refer to Crop Rotational Interval Table for re-plant intervals.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Keep pesticide in original container.

Store in a cool, dry, secure place.

Do not put formulation or dilute spray solution into food or drink containers.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night (800) 892-0099.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may 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. Clean container promptly after emptying. 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 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Manufactured for

Valent U.S.A. Corporation

P.O. Box 8025

Walnut Creek, CA 94596-8025

Made in U.S.A.

Form 1886-D

EPA Reg. No. 59639-193

EPA Est. 11773-IA-01[®], 62171-MS-03[®], 39578-TX-01[®], 5905-IA-01[®]

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