

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

June 14, 2016

Cheryl Wagner Agent RedEagle International. LLC c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707

Subject: Label Amendment – Removing the word "recommended" from various places in

the label

Product Name: Acifluorfen 2

EPA Registration Number: 85678-18 Application Date: February 25, 2016

Decision Number: 514637

# Dear Ms. Wagner:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Shanta Adeeb by phone at 703-347-0502, or via email at adeeb.shanta@epa.gov.

Sincerely,

Kathryn Montague, Product Manager 23

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Herbicide Branch

Registration Division (7505P) Office of Pesticide Programs

Enclosure

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GROUP 14 HERBICIDE

# **ACCEPTED** 06/14/2016

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 85678-18

# **ACIFLUORFEN 2**

For use on peanuts, rice, soybeans, and strawberries

20.1%
79.9%
100.0%
•

# KEEP OUT OF REACH OF CHILDREN DANGER/PELIGRO

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

	FIRST AID						
If In Eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.						
• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing ey							
	Call a poison control center or doctor for treatment advice.						
If On Skin or	Take off contaminated clothing.						
<b>Clothing:</b>	• Rinse skin immediately with plenty of water for 15-20 minutes.						
	Call a poison control center or doctor for 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 by mouth to an unconscious person.						
If Inhaled:	Move person to fresh air.						
	• If person is not breathing, call 911 or an ambulance, then give artificial						
	respiration, preferably mouth-to-mouth, if possible.						
	Call a poison control center or doctor for treatment advice.						

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at **1-800-858-7378**, Mon. - Fri., 8:00 a.m. to 12:00 p.m. Pacific Time (NPIC Web site: www.npic.orst.edu).

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. **ANTIDOTE** – No specific antidote is available. Treat symptomatically.

Optional referral statements when booklets and container labels are used:

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal. See label booklet for additional Precautionary Statements Directions For Use, and Storage and Disposal. See label booklet for complete Directions For Use.]

# **Manufactured in China For:**

RedEagle International LLC 5143 S. Lakeland Dr., Suite 3 Lakeland, FL 33813

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NET CONTENTS: _	(Gal./L)
PRECAUTIONARY S	STATEMENTS

<sup>\*</sup>Equivalent to 2 pounds of active ingredient per gallon.

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# HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through the skin, or inhaled. Do not get in eyes or on clothing. Avoid contact with skin and breathing vapor or spray mist.

# PERSONAL PROTECTION EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material.

# Mixers, Loaders and Applicators must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Goggles or face shield

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not re-use them.

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 CONTROLS STATEMENT

When handlers use closed systems, enclosed cabs, or cockpits 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**

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark, except as specified on this label for application to rice. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from target area.

#### GROUND WATER ADVISORY

Sodium acifluorfen is known to leach through soil to groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable (sandy or sandy/loamy soils) and water tables are shallow could result in contamination of groundwater. Use of irrigated water in such areas will increase the likelihood of groundwater contamination.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other people, either directly or through drift. Only handlers wearing PPE may be in the treatment area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. This pesticide is toxic to vascular plants and should be used strictly in accordance with the drift and run-off precautions on this label to minimize off-site exposures. All applicable directions, restrictions, precautions and Conditions of Sale and Warranty are to be followed. This labeling must be in the user's possession during application.

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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 48 hours.

The following PPE is required for early entry into 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:

- Coveralls over long sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear if overhead exposure
- Protective eyewear

Notify workers of pesticide application by warning them orally and by posting warning signs at entrances to treated areas.

#### PRODUCT INFORMATION

**Acifluorfen 2** is intended for selective post-emergence control of certain broadleaf weeds and grasses in peanuts, soybeans, strawberries, and rice.

#### WEED RESISTANCE

Acifluorfen 2 contains the active ingredient acifluorfen, a Group 14 herbicide as classified by the Weed Science Society of America. Applying herbicides that affect the same biological site of action and are used repeatedly over several years to control the same weed species in the same field can result in naturally-occurring resistant biotypes to develop and survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be anticipated. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product that affects a different site of action.

Changing cultural practices within and between crop seasons by using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different mode of action can help better manage herbicide resistance by delaying the proliferation and possible dominance of herbicide resistant weed biotypes. Do not allow weed escapes to go to seed to prevent the spread of resistant biotypes.

Keep accurate records of pesticides applications to individual fields to help obtain information on the possible spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

# **Crop Tolerance**

All listed crops are tolerant to **Acifluorfen 2** at all stages of growth listed. Leaf speckling may occur, but plants generally outgrow this condition within 10 days. New growth is normal and crop vigor is not reduced.

# **Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

# APPLICATION INSTRUCTIONS

Apply specified rates of **Acifluorfen 2** as follows unless instructed differently in **SPECIFIC CROP INFORMATION** section. Applications can be made to actively growing weeds as aerial banding or broadcast applications at the rates and growth stages listed in **Table 1 - Application Rates for Acifluorfen 2 - Peanuts and Soybeans** and in **SPECIFIC CROP INFORMATION**, for rice and strawberries. The most effective control will result from making post-emergence applications of **Acifluorfen 2** early, when weeds are small. Early application to weeds results in improved weed control, allows use of the lower rate (depending on weed species),

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and makes thorough spray coverage easier to obtain. Delaying application permits weeds to exceed the maximum size stated and will prevent adequate control.

# **Irrigation**

In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth. Weeds growing under drought conditions usually are not adequately controlled.

# **Spray Coverage**

Weeds must be thoroughly covered with spray. Always use an adequate volume of spray solution to ensure thorough coverage. Dense leaf canopies shelter smaller weeds and can prevent adequate spray coverage.

# **Cultivation**

Do not cultivate within 5 days before or 7 days after applying **Acifluorfen 2**.

# AERIAL APPLICATION METHODS AND EQUIPMENT

**Water Volume:** Use a minimum of 10 gallons of water per acre. A minimum of 5 gallons of water per acre has been effective where adequate coverage can be achieved.

**Spray Pressure:** Use up to 40 psi.

**Application Equipment:** Use only diaphragm-type nozzles that produce cone or fan-spray spray patterns.

# **Special Directions for Aerial Application**

To obtain uniform coverage and to avoid drift hazards, consult the Spray Drift Management section below.

# **GROUND APPLICATION (BANDING)**

Follow **Ground Application (Broadcast)** instructions for band applications. When row banding equipment is used, it to provide maximum coverage of weeds in the row. Thorough coverage of the weeds can be obtained with two nozzles directed from either side of the crop row toward the weeds in the center rows. The minimum band width is 15 inches with a minimum of 15 gallons of water per acre on the band. Do not make application with a single nozzle over the row.

# **Ground Application Methods and Equipment (Broadcast)**

**Water Volume:** Use 10 - 20 gallons of spray solution per broadcast acre for optimal performance. Increase water volume up to 50 gallons if crop or weed foliage is dense. For strawberries, use 20 - 40 gallons of spray solution per broadcast acre.

**Spray Pressure:** Use a minimum of 40 psi (measured at the boom, not at the pump or in the line).

**Note:** When using the lower water volume (i.e., 10 gallons per acre) or when crop and weed foliage is dense, use a minimum of 60 psi for best results.

**Application Equipment:** Use standard high-pressure pesticide flat fan or hollow cone nozzles spaced up to 20 inches apart. Do not use flood, whirl chamber, or controlled droplet applicator (CDA) nozzles as erratic coverage can cause inconsistent weed control. Do not use selective application equipment such as recirculating sprayers or wiper applicators.

# SPRAY DRIFT MANAGEMENT

Use best practices to avoid drift to all other crops and non-target areas. Do not apply when conditions favor drift from target areas. The interaction of many equipment and weather-related factors determine the potential for spray drift. Avoiding spray drift at the application site is the responsibility of the applicator. The applicator must follow the most restrictive use directions to avoid drift, including those found in this labeling as well as applicable state and local regulations and ordinances. A drift control agent may reduce drift, however, it may also decrease weed control.

#### **Requirements for Ground Applications:**

For ground applications, adjust nozzle height and droplet size with wind speed according to the following table:

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Wind Speed	Nozzle Height	Droplet Size for Standard Nozzles (ASAE standard 572)
	Up to 2 feet	medium or coarser
Less than 10 mph	2 - 4 feet	coarse or coarser
	4 - 6 feet	very coarse or coarser
	0 - 2 feet	coarse or coarser
10 to 15 mph	2 - 4 feet	very coarse or coarser
	4 - 6 feet	extremely coarse

Do not apply when the wind speed exceeds 15 miles per hour. Do not apply at a nozzle height of greater than 6 feet above the ground or crop canopy. Apply as a medium or coarser spray (ASAE standard 572).

# **Requirements for Aerial Applications:**

For aerial applications, apply only when the wind speed is less than or equal to 15 miles per hour using a release height of no more than 10 feet above the ground or crop canopy. If the wind speed is less than 10 mph, apply as a medium or coarser spray (ASAE standard 572). If the wind speed is between 10 mph and 15 mph, apply as a coarse or coarser spray (ASAE standard 572). The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Do not make aerial applications into temperature inversions. When aerial applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Table 1 - Application Rates for Acifluorfen 2 - Peanuts and Soybeans Refer to SPECIFIC CROP INFORMATION for rate and timing details for rice.

**Note:** Weed height will vary depending on environmental conditions and is only given as a guide. Emphasis should be placed on leaf stages. Refer to Additives section for more information.

Weeds Controlled	0.5 Pint per Acre		1.0 Pint	1.0 Pint per Acre		1.5 Pints per Acre	
(including triazine and ALS-resistant biotypes)	Leaf Stage <sup>a</sup> (up to)	Maximum Height	Leaf Stage <sup>a</sup> (up to)	Maximum Height	Leaf Stage <sup>a</sup> (up to)	Maximum Height	
Balloonvine	-	-	-	-	2	2"	
Beggarweed, Florida	-	-	-	-	2	<2" b	
Buckwheat, Wild	-	-	-	-	2	2" b	
Buffalobur	-	-	-	-	2	2", b	
Bur Gherkin	-	-	-	-	2	2" b	
Carpetweed	-	1	Multi 3" dia.	<2"	Multi 6" dia.	2"	
Citron (Wild Watermelon)	-	-	-	-	2	2" b	
Cocklebur b	-	1	-	1	2	2"	
Copperleaf, Hophorn beam	-	1	2	2"	4	4"	
Virginia	-	-	-	-	2	2"	
Crotalaria, Showy	-	1	6	6" <sup>b</sup>	6	6" b	
Croton, Tropic	-	-	1 - 2	<2"	2	2"	
Wooly	-	-	1 - 2	<2"	2	2"	
Crownbeard, Golden	-	1	-	-	2	<2"	
Eclipta	-	-	-	-	6	<2"	
Galinsoga, Hairy Smallflower	-	-	-	-	4 4	<2" <2"	
Groundcherry, Cutleaf	_	_	_	_	2	1"	
Lanceleaf	-	-	-	-	2	1"	
Indigo, Hairy	-	-	-	-	3	<2"	
Jimsonweed	-	_	4	4"	6	6"	
Ladysthumb	-	-	4	4"	6	6"	
Lambsquarters, Common <sup>c</sup>	-	-	-	-	2	2"	
Morningglory, Cypressvine	-	-	2	2"	4	4"	
Entireleaf	-	-	2	2"	4	4"	
Ivyleaf	-	-	2	2"	4	4"	
Purple Moonflower	-	-	2	2"	4	4"	
Scarlet	-	-	2	2"	4	4"	

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					<u>.</u>		1 450 0 01 10	
l	Smallflower			2	2"	4	4"	
l	Small White (pitted)	-	-	2	2"	4	4"	
l	Tall (common)	-	-	2	2"	4	4"	
l	Willowleaf (Palmleaf)	-	-	2	2"	4	4"	

<sup>&</sup>lt;sup>a</sup> Do not count leaves as pairs; count each leaf separately. Do not count cotyledon leaves. Spraying weeds in the cotyledon growth stage is not recommended.

(continued)

**Table 1 - Application Rates for Acifluorfen 2 - Peanuts and Soybeans (continued)** 

Weeds Controlled	0.5 Pint			per Acre		1.5 Pints per Acre	
(including triazine and	Leaf Stage <sup>a</sup>	Maximum	Leaf Stage <sup>a</sup>	Maximum	Leaf Stage <sup>a</sup>	Maximum	
<b>ALS-resistant biotypes</b> )	(up to)	Height	(up to)	Height	(up to)	Height	
Mustard, Wild	2	2"	4	<4"	4	4"	
Nightshade, Eastern Black	-	-	2 - 3	<2"	6	2"	
Black	-	-	2 - 3	<2"	6	2"	
Pigweed, Palmer	4	<2"	6	<4"	6	4"	
Prostrate	-	-	-	-	4	4"	
Redroot	4	<2"	6	<4"	6	4"	
Smooth	4	<2"	6	<4"	6	4"	
Spiny	-	-	2	<2"	2	2"	
Poinsettia, Wild	-	-	-	-	2	2" b	
Poorjoe	-	-	-	-	2	2"	
Purslane, Common	-	-	-	-	Multi 6" dia.	1"	
Pusley, Florida	-	-	2	2"	4	4"	
Ragweed, Common	-	-	2	2"	4	3"	
Giant	-	-	2	<2"	2	3"	
Senna, Coffee	-	-	-	-	2	2" b	
Sesbania, Hemp	-	-	4	4" b	6	6" b	
Smartweed, Pennsylvania	-	-	4	4"	6	6"	
Smellmelon	-	-	-	-	2	2" b	
Spurge, Prostrate	-	-	-	-	Multi .5" dia.	-	
Spotted	-	-	-	-	Multi .5" dia.	-	
Starbur, Bristly	-	-	-	-	2	2" b	
Waterhemp, Common	4	2"	6	<4"	6	4"	
Tall	4	2"	6	<4"	6	4"	
Annual Grasses			•				
Foxtail, Giant b	-	-	-	-	2	1"	
Green b	-	-	-	-	2	1"	
Yellow <sup>b</sup>	-	-	-	-	2	1"	
Johnsongrass, Seedling b	-	-	-	-	2	1"	
Panicum, Fall b	-	-	-	-	2	1"	
Shattercane b	-	-	-	-	2	1"	
Volunteer Small Grains b	-	_	_	-	2	1"	

<sup>&</sup>lt;sup>a</sup> Do not count leaves as pairs; count each leaf separately. Do not count cotyledon leaves. Spraying weeds in the cotyledon growth stage is not recommended.

# SPECIAL USE DIRECTIONS FOR ADDITIONAL WEED PROBLEMS IN PEANUTS AND SOYBEANS

For the following weeds, use 1.5 pints of **Acifluorfen 2** per acre and 2 pints of spray surfactant per 100 gallons of spray mix unless otherwise stated. Activity depends on good soil moisture during and after the spray applications.

# Beggarweed, Florida

Controlling Florida beggarweed is difficult because of the weed's long germination season: Apply **Acifluorfen 2** when beggarweed seedlings have no more than 2 young expanding true leaves. Weeds at this time will not be

<sup>&</sup>lt;sup>b</sup> Refer to Special Use Directions.

<sup>&</sup>lt;sup>c</sup> Suppression or partial control.

<sup>&</sup>lt;sup>b</sup> Refer to Special Use Directions.

<sup>&</sup>lt;sup>c</sup> Suppression or partial control.

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more than 1.5" high. It is important to obtain maximum control of the earliest weed flush. Time the cultivation to give maximum control of regrowth or secondary weed flushes. **Acifluorfen 2** will suppress or partially control weeds growing under conditions of high soil moisture and high relative humidity.

# **Buckwheat**, Wild

# **Buffalobur**

Partial control of wild buckwheat and buffalobur can usually be obtained when the seedlings have fewer than 2 true leaves. Use **Acifluorfen 2** in 30 gallons of water per acre.

# Cucurbits: Bur Gherkin Citron (Wild Watermelon)

#### **Smell Melon**

Members of the cucumber family germinate over an extended period of time. Therefore, control is difficult to obtain with a single spray. For **Acifluorfen 2** to be effective, the initial application should be made to weeds no later than the 2-leaf growth stage.

# Morningglories

More consistent control of morningglories can be achieved by using sequential applications of 1 pint of **Acifluorfen 2**.

# Poinsettia, Wild

The specified application of **Acifluorfen 2** will usually kill or severely stunt wild poinsettia. Apply before the third true leaf has formed. This treatment will usually cause a height differential between soybeans and surviving wild poinsettia which will allow directed applications and even greater control.

# Sesbania, Hemp Crotalaria, Showy

Sesbania and crotalaria are very sensitive to **Acifluorfen 2**. Apply 1 pint of **Acifluorfen 2** per acre. Effective control can be obtained at just about all plant heights; however, it is important that **Acifluorfen 2** be applied prior to bloom. Applications after bloom are usually not effective. To control these weeds, time the application to occur after maximum weed emergence has taken place. Care must be exercised to make certain that crop canopies do not shade this weed from spray deposits. Waiting for the sesbania to break through the crop canopy may be advisable to control late season infestations.

# Starbur, Bristly Senna, Coffee

The specified application of **Acifluorfen 2** will kill or suppress seedlings that are not past the 2-leaf stage. Applications after the 2-leaf stage are usually ineffective.

#### **Perennial Weeds:**

Bindweed, Field and Hedge

Milkweed, Climbing and Common

# Redvine, Trumpetcreeper

Growth of perennial weeds from underground rootstocks is very difficult to control. Apply **Acifluorfen 2** as specified above with 2 - 4 pints of spray surfactant per 100 gallons of spray mix to burn back the above-ground plant parts and retard regrowth. **Acifluorfen 2** will not kill the underground rootstocks of these weeds.

#### **Annual Grasses:**

Foxtail, Giant, Green, and Yellow Johnsongrass, Seedling Panicum, Fall Shattercane

Acifluorfen 2 must not be the basic component of a grass management program. Rather, Acifluorfen 2 can be used for additional control of escaped grasses following a preplant incorporated or pre-emergence herbicide.

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Grasses not exceeding the 2-leaf stage will be stunted or killed.

# **Volunteer Small Grains:**

Barley

Oats

Rye

Wheat

**Acifluorfen 2** applied to emerging volunteer small grains in the 1-2 leaf stage will kill or stunt many plants.

#### **ADDITIVES**

To achieve consistent weed control, one of the following additives is needed: ammonium sulfate, crop oil concentrate, nonionic surfactant, or urea ammonium nitrate. AMS (or UAN) should be used when velvetleaf is a target weed. Additives may cause some leaf burn, but new growth is normal and crop vigor is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. Consult your local RedEagle International LLC representative for your area. See **Table 3 - Additive Rates per Acre** for additive rates and **Table 2 - Additive Options for Acifluorfen 2 Tank Mixes**.

# **Ammonium Sulfate (AMS)**

AMS is a dry, granular nitrogen-source fertilizer. Use only fine feed-grade or spray-grade AMS because inferior grades of AMS do not dissolve adequately and can plug spray nozzles. Do not apply AMS if applied in less than 10 gallons per acre because of potential problems with precipitation in reduced volumes. Use AMS only if it has been demonstrated to be successful in local experience.

# **Nonionic Surfactant**

The standard label rate is 1 - 2 pints of an 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, use the higher rate within the specified rate range of spray surfactant.

#### Oil Concentrate

The oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the compatibility test, and
- be successful in local experience.

The exact composition of suitable products will vary, however, vegetable and petroleum oil concentrates must contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see **Compatibility Test for Mix Components**.

Some oil concentrates cause excessive leaf burn. Refer to your supplier for information concerning successful local experience before purchasing any oil concentrate.

# **Urea Ammonium Nitrate (UAN)**

Commonly referred to as 28%, 30%, or 32% nitrogen solution, UAN may be added in place of other spray additives to improve weed control. Because most nitrogen solutions are mildly corrosive to galvanized, mild steel, and brass spray equipment, rinse the entire spray system with water soon after. Do not use brass or aluminum nozzles when spraying UAN.

# **Temperature and Relative Humidity Effects**

The following standard will help determine the optimum adjuvant rate to use. If the temperature and relative humidity exceed 150 (e.g., temperature of 85°F plus 70% relative humidity = 155), use the lower adjuvant rates.

Additive Options	Nonionic Surfactant (1-2 pints per 100 gallons)	AMS (2.5 pounds) or UAN (4-8 pints per acre)	Crop Oil Concentrate (1-2 pints per acre)	Nonionic Surfactant (1-2 pints per 100 gallons) + AMS (1-2 pounds per acre) or UAN (2-4 pints per acre)	Crop Oil Concentrate (1 pint per acre) + AMS (1-2 pounds per acre) or UAN (2-4 pints per acre)
Option A	X				
Option B		X			
<b>Option C</b>			X		
<b>Option D</b>				X	
<b>Option E</b>					X

**Table 3 - Additive Rate per Acre** 

Additive	Ground Application	Air Application
Nonionic Surfactant	1 - 2 pints per 100 gallons	1 - 2 pints per 100 gallons
AMS	2.5 pounds	2.5 pounds
Oil Concentrate	1 - 2 pints	1 - 2 pints
UAN Solution	4 - 8 pints	4 pints

# MIXING INFORMATION

# Tank Mix Partners/Components

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

The following products may be tank mixed with **Acifluorfen 2**:

Alachlor

Bentazon

Cloransulam-methyl

Chlorimuron ethyl

Clethodim

Dimethenamid

Fluazifop-p-butyl

Fluazifop-p-butyl + fenoxaprop-p-ethyl

Flumiclorac

Glyphosate

Imazethapyr

Imazamox

Imazaquin

Metolachlor

Ouinclorac

Quizalofop

Propanil

Sethoxydim

Thifensulfuron methyl

Thifensulfuron methyl + chlorimuron ethyl

2.4-DB

2,4-DB (preplant burndown only)

See SPECIFIC CROP INFORMATION for more details. Read and follow the applicable Restrictions and Limitations and Directions for Use on all products involved in tank mixing. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Physical incompatibility, reduced weed control, or crop injury may result from mixing Acifluorfen 2 with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Local agricultural authorities may be a source of information when using other than RedEagle International LLC specified tank mixes.

# **Compatibility Test for Mix Components**

Before mixing components, always perform a compatibility jar test. For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre. Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, do not mix the ingredients in the same tank.

# **Mixing Order**

- 1. **Water**. Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2. **Agitation**. Maintain constant agitation throughout mixing and application.
- 3. **Products in PVA Bags**. Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 4. **Water dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions). If an inductor is used, rinse it thoroughly after the component has been added.
- 5. Water-soluble products (such as Acifluorfen 2). If an inductor is used, rinse it thoroughly after the component has been added.
- 6. **Emulsifiable concentrates** (such as oil concentrate when applicable). If an inductor is used, rinse it thoroughly after the component has been added.
- 7. **Water-soluble additives** (such as AMS or UAN when applicable). If an inductor is used, rinse it thoroughly after the component has been added.
- 8. **Remaining quantity of water**. Maintain constant agitation during application.

# RESTRICTIONS AND LIMITATIONS

- Maximum Seasonal Use Rate: Do not apply more than a total of 2 pints (0.5 lb. AI) of Acifluorfen 2 per acre per season for peanuts, and soybeans, no more than a total of 3 pints (0.75 lb. AI) of Acifluorfen 2 per acre per season for strawberries, and no more than a total of 1 pint (0.25 lb. AI) of Acifluorfen 2 per acre per season for rice.
- Maximum Application Use Rate: Do not apply more than 1.5 pints (0.375 lb. AI) of Acifluorfen 2 per acre, per application in peanuts, soybeans and strawberries. Do not apply more than 1 pint (0.25 lb. AI) of Acifluorfen 2 per acre, per application in rice.
- **Pre-Harvest Interval (PHI):** See Table 4.
- **Restricted-Entry Interval (REI):** 48 hours.
- Allow a minimum of 15 days between sequential applications of **Acifluorfen 2**.
- Do not use treated plants for feed or forage.
- Crop Rotation Restriction: In case of crop failure, only peanuts, soybeans, strawberries or rice may be immediately replanted. Small grains must not be planted in fields treated with Acifluorfen 2 for 40 days following treatment. All other rotated crops must not be planted in fields treated with Acifluorfen 2 for 100 days following treatment.
- Stress: Do not apply to weeds or crops under stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, as unsatisfactory control may result.
- Do not apply **Acifluorfen 2** to crops that show injury (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced or prolonged.
- Rainfast Period: Rainfall or overhead irrigation within 4 hours after application may reduce the

effectiveness of **Acifluorfen 2**.

• Do not apply through any type of irrigation system.

**Table 4 - Crop-Specific Restrictions and Limitations** 

Crop	Minimum Time from Application to Harvest (PHI)		Maximum Rate per Acre per Season	Livestock Grazing or Feeding	Aircraft Application
Peanuts	75 days	1.5 pints	2 pints	No	Yes
Rice	50 days	1 pint	1 pint	No	Yes
Soybeans	50 days	1.5 pints	2 pints	No	Yes
Strawberries	60 days	1.5 pints	3 pints	No	Yes

# SPECIFIC CROP INFORMATION

# **PEANUTS**

Apply the rates of **Acifluorfen 2** specified in **Table 1** to peanuts pre-emergence, at cracking stage (initiation of soil cracking, but before peanut emergence from the soil), or post-emergence to peanuts to control susceptible weeds.

#### **Peanut Tank Mixes**

**Acifluorfen 2** may be applied in a tank mix with one of the following herbicides:

Tank Mix Partner	Additive Option
Bentazon	A or C
Imazethapyr	A
Metolachlor	A
Dimethenamid	A
Alachlor	A
Sethoxydim	C
2,4-DB*	A or C

<sup>\*</sup>Do not apply this tank mix after pod-filling stage begins. Refer to **Table 2** for the additive option appropriate to each tank mix.

#### **RICE**

**Acifluorfen 2** may be applied when rice is at the late tillering stage up to the early boot stage, which normally occurs in June or July. Rice must be past the 3-leaf stage. Apply **Acifluorfen 2** to hemp sesbania plants before sesbania is in the flowering stage. Best results are obtained when the sesbania growth extends above the rice.

Apply 0.5 pint of **Acifluorfen 2** per acre to hemp sesbania plants. A second application of 0.5 pint of **Acifluorfen 2** per acre can be made to control later germinating sesbania. To achieve consistent weed control, add 1-2 pints of an 80% active nonionic spray surfactant per 100 gallons of water. Using a spray adjuvant is important for effective control of hemp sesbania.

# **Specific Restrictions and Limitations**

- Do not apply **Acifluorfen 2** after the rice reaches the boot stage.
- The maximum application rate for rice is 1 pint per acre, per season and must only be used to control hemp sesbania.
- Do not apply more than 2 applications to rice per season nor exceed 1 pint per acre per season.
- Do not use water from treated rice fields for irrigation purposes for other than those labeled for use with **Acifluorfen 2.**
- Do not harvest crayfish from treated rice areas for food.

**Acifluorfen 2** may be applied in a tank mix with one of the following herbicides:

Tank Mix Partner	<b>Additive Option</b>
Bentazon	A
Quinclorac	A
Propanil	A

Refer to **Table 2** for the additive option appropriate for each tank mix.

#### **SOYBEANS**

To ensure optimum spray coverage of weeds, apply **Acifluorfen 2** to small actively growing weeds. Refer to section **APPLICATION INSTRUCTIONS** and **Table 1** for more information. A sequential application of 1 pint of **Acifluorfen 2** following 1 pint of **Acifluorfen 2** can be used to control subsequent weed flushes or escaped weeds before they reach the maximum weed size listed in **Table 1**.

# **Soybean Tank Mixes**

**Acifluorfen 2** may be applied in a tank mix with one of the following herbicides:

Tank Mix Partner	Additive Option
Quizalofop	A
Bentazon	A or C
Chlorimuron	A
Thifensulfuron methyl + chlorimuron ethyl) Metolachlor (up to 0.25 ounce)	D
Cloransulam-methyl	D
Dimethenamid	A
Fluazifop-p-butyl <sup>1</sup>	A
Fluazifop-p-butyl + fenoxaprop-p-ethyl <sup>1</sup>	A
Glyphosate	8.5 - 17 pounds of AMS per 100
	gallons
Quizalofop <sup>1</sup>	A
Thifensulfuron methyl (up to 0.25 ounce)	A or D
Sethoxydim <sup>1</sup>	С
Imazethapyr	D
Imazamox	D
Thifensulfuron methyl + chlorimuron ethyl <sup>2</sup> (up to 0.25 ounce)	D
Flumiclorac	C
Imazaquin	A
Clethodim	С
Chlorimuron ethyl	D
Thifensulfuron methyl + chlorimuron ethyl <sup>2</sup> (up to 0.5 ounce)	Е
2,4-DB	A
Sethoxydim <sup>1</sup> Imazethapyr Imazamox Thifensulfuron methyl + chlorimuron ethyl <sup>2</sup> (up to 0.25 ounce) Flumiclorac Imazaquin Clethodim Chlorimuron ethyl Thifensulfuron methyl + chlorimuron ethyl <sup>2</sup> (up to 0.5 ounce)	C D D D C A C D E A

<sup>&</sup>lt;sup>1</sup>For best results if applying as part of a weed control program with **Acifluorfen 2**, follow these guidelines:

- If the partner is applied prior to the **Acifluorfen 2** application, wait 24 hours before applying **Acifluorfen 2**.
- If the partner is applied following the **Acifluorfen 2** application, wait 7 days before applying.

Refer to **Table 2** for the additive option appropriate for each tank mix.

# **Burndown Treatment Before Planting Soybeans**

**Acifluorfen 2** alone can be applied any time before planting soybeans to control susceptible weed species present (See **Table 1**). This application is not intended to replace a full-season weed control program, but is intended to control susceptible weed species present before soybeans are planted. Use a spray additive to enhance burndown activity before planting soybeans.

<sup>&</sup>lt;sup>2</sup>When applying this tank mix to soybean varieties other than those designated as STS, do not add oil concentrate. Application to soybean varieties not designated as STS will result in severe crop injury or yield loss.

#### **Burndown Tank Mixes**

**Acifluorfen 2** may be applied in a tank mix with one of the following herbicides:

Tank Mix Partner	<b>Additive Option</b>
Sethoxydim	C or E
2,4-D LVE	С

Refer to **Table 2** for the additive option appropriate for each tank mix.

#### **STRAWBERRIES**

For control of many broadleaf weeds, **Acifluorfen 2** may be applied up to the maximum application rate of 0.375 lb. a.i. per acre [1.5 pints **Acifluorfen 2** per acre per season] using ground equipment. Make broadcast applications of the mixture in 20 to 40 gallons of water per acre. Reduce rates proportionately for band or strip treatment. Do not apply more than 0.75 lb. a.i. per acre per season [3 pints **Acifluorfen 2** per acre per season].

# For Annual Strawberries grown on plastic mulch on plant beds:

Make one banded application before laying plastic mulch and after final land preparation, and prior to transplanting the crop. For best results, avoid soil disturbance during laying of plastic and planting of crop.

For application between rows of plastic mulch, apply as a direct-shielded application to strawberry row middles between mulched beds. Do not allow **Acifluorfen 2** to contact strawberry plants.

# For Perennial Strawberries:

Make two applications. The first application can be made after the last harvest or following bed renovation. The second application can be made when the plants are dormant during late fall to early spring. Do not apply the last application within 120 days of strawberry harvest. For application to row middles, **Acifluorfen 2** may be applied up to the maximum rate of 0.375 lb. a.i. per acre per season [1.5 pints **Acifluorfen 2** per acre per season].

Weeds Listed in this Label Broadleaves		
Common Name	Scientific Name	
Artichoke, Jerusalem	Helianthus tuberosus	
Balloonvine	Cardiospermum halicacabum	
Beggarweed, Florida	Desmodium tortuosum	
Beggarticks	Bidens frondosa	
Bindweed, Field	Convolvulus arvensis	
, Hedge	Convolvulus sepium	
Buckwheat, Wild	Polygonum convolvulus	
Buffalobur	Solanum rostratum	
Bur Gherkin	Cucumis anguria	
Carpetweed	Mollugo verticillata	
Citron (Wild Watermelon)	Citrullus vulgaris	
Cocklebur, Common	Xanthium pensylvanicum	
, Heartleaf	Xanthium strumarium	
Copperleaf, Hophornbeam	Acalypha ostryaefolia	
, Virginia	Acalypha virginica	
Crotalaria, Showy	Crotalaria spectabilis	
Croton, Tropic	Croton glandulosus	
,Wooly	Croton capitatus	
Crownbeard, Golden	Verbesina encelioides	
Cucumber, Wild Spiny	Cucumis dipsaceus	
Eclipta	Eclipta alba	
Galinsoga, Hairy	Galinsoga ciliata	
, Smallflower	Galinsoga parviflora	
Groundcherry, Cutleaf	Physalis angulata	
, Lanceleaf	Physalis lanceifolia	
Indigo, Hairy	Indigo fera hirsuta	
Jimsonweed	Datura stramonium	
Ladysthumb	Polygonum persicaria	
Lambsquarters, Common	Chenopodium album	
Milkweed, Climbing	Sarcostemma cynanchoides	
, Common	Asclepias syriaca	
Morningglory, Cypressvine	Ipomoea quamoclit	
, Entireleaf	Ipomoea hederacea var. integriuscula	
, Ivyleaf	Ipomoea hederacea var. hederacea	
, Purple Moonflower	Ipomoea muricata	
Scarlet	İpomoea coccinea	
, Smallflower	Jacquemontia tamnifolia	
, Small White (pitted)	Ipomoea lacunosa	
, Tall, Common	Ipomoea purpurea	
, Willowleaf (Palmleaf)	Ipomoea wrightii	
Mustard, Wild	Brassica kaber	
Nightshade, Black	Solanum nigrum	
, Eastern Black	Solanum ptycanthum	
Pigweed, Palmer	Amaranthus palmeri	
, Prostrate	Amaranthus blitoides	
, Redroot	Amaranthus retroflexus	
, Smooth	Amaranthus hybridus	
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, Spiny	Amaranthus spinosus
Poinsettia, Wild	Euphorbia heterophylla
Poorjoe	Diodia teres
Purslane, Common	Portulaca oleracea
Pusley, Florida	Richardia scabra
Ragweed, Common	Ambrosia artemisiifolia
, Giant	Ambrosia trifida -
Redvine	Brunnichia cirrhosa
Senna, Coffee	Cassia occidentalis
Sesbania, Hemp	Sesbania exaltata
Smartweed, Pennsylvania	Polygonum pensylvanicum
Smellmelon	Cucumis melo
Spurge, Prostrate	Euphorbia supina
, Spotted	Euphorbia maculata
Starbur, Bristly	Acanthospermum hispidum
Teaweed (See Sida, Prickly)	Sida spinosa
Trumpetcreeper	Campsis radicans
Velvetleaf	Abutilon theophrasti
Waterhemp, Common	Amaranthus rudis
, Tall	Amaranthus tuberculatus

Weeds Listed in This Label Grasses		
Common Name	Scientific Name	
Foxtail, Giant	Setaria faberi	
, Green	Setaria viridis	
, Yellow	Setaria lutescens	
Johnsongrass, Seedling	Sorghum halepense	
, Rhizome	Sorghum halepense	
Panicum, Fall	Panicum dichotomiflorum	
, Texas	Panicum texanum	
Shattercane	Sorghum bicolor	
Volunteer, Barley	Hordeum vulgare	
, Corn	Tea mays	
, Oats	Avena saliva	
, Rye	Secale cereale	
, Wheat	Triticum aestivum	

Crops	
This product can be used on the following crops:	
Peanut	
Rice	
Soybeans	
Strawberries	
Read label for complete Restrictions and Limitations and Application Instructions.	

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# STORAGE AND DISPOSAL

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

**Pesticide Storage:** Do not store below 32°F.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container 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 lager 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 other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide disposal instructions.

# Steps to be taken in case material is released or spilled:

Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

# IMPORTANT INFORMATION READ BEFORE USING PRODUCT CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**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 reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as 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 RedEagle International LLC or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of RedEagle International LLC and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold RedEagle International LLC and Seller harmless for any claims relating to such factors.

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