



04/02/2008

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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2 APR 2008

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Mr. Takuro Shinohara  
President  
K-I Chemical U.S.A., Inc.  
11 Martine Avenue, Suite 970  
White Plains, NY 10606

Dear Mr. Shinohara:

Subject: Appeal@ EC Herbicide  
EPA Registration No. 63588-8  
Your Letter Dated January 23, 2008, Response To  
Conditions of Registration and Request for  
an Extension of Registrations To Allow Agency  
To Review of Analytical Methodology for Fluthiacet  
Methyl in Soil and Water (MRID 438300-30 and -31 MRID No  
453763-02 and -03)); and Ecological Effects Data Gaps  
Identified in the April 13, 1999 Notice of Registration of  
Fluthiacet-methyl Technical (Submitted and assigned EPA MRD  
Nos. 453763-04,-05,-06,-07); and Resubmission of Revised  
Labeling: Letter Dated March 31, 2008

Based on the information stated in the subject letters  
the subject pesticide product registration is extended  
for 24 months, to February 1, 2010 with the same conditions as was  
stated in this Agency's letter dated February 6, 2002; under the  
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as  
amended, provided:

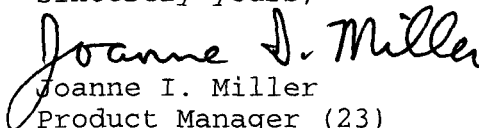
1. That you submit the requested information on the proximity of endangered species to the use-sites for soybeans, sweet corn, field corn, and popcorn and **cotton** as required by the Endangered Species Act and described in this Agency's review dated November 1, 2001. (Note Cotton is added to that comment to address the new food use site).
2. Submit one final printed labeling for Appeal™ EC Herbicide reflecting the final printed labeling submitted March 31 2008.

If these conditions are not complied with, this registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment under this labeling constitutes acceptance of these conditions. A stamped copy of the label that is to be revised is enclosed for your records. Your response to the above

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comments must conform with the EPA "General Information on Applying for Registration of Pesticides in the United States", Second Edition, August 1992. Please use EPA Application Form 8570-1 completed in required detail. One copy of 3 revised labels should be highlighted in yellow and described clearly as part of your resubmission application.

Sincerely yours,



Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

ACCEPTED

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

63588-8



### Appeal™ EC Herbicide

Herbicide for postemergence control of velvetleaf and other broadleaf weeds in soybeans, field corn, sweet corn, and popcorn  
Harvest Aid for defoliating cotton

Active Ingredient:	
fluthiacet-methyl* .....	10.30%
Other Ingredients.....	89.70%
Total	100.00%

\*Acetic acid, [[2-chloro-4-fluoro-5-[(tetrahydro-3-oxo-1H,3H-[1,3,4]thiadiazolo[3,4-d]pyridazin-1-ylideneamino)]phenylthio]-methyl ester (CAS No. 117337-19-6)

Appeal™ EC Herbicide is an emulsifiable concentrate containing 0.91 lb. fluthiacet-methyl per gallon

### KEEP OUT OF REACH OF CHILDREN

#### WARNING/AVISO

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.)

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of soap and water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>NOTE TO PHYSICIAN</b>	
Contains petroleum distillate – vomiting may cause aspiration pneumonia.	
<b>HOT LINE NUMBER</b>	
<p><b>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</b></p> <p>For 24-Hour Medical Emergency Assistance (Human or Animal): Call 1-888-454-3801          For Chemical Emergency Assistance (Spill, Leak, Fire or Accident): Call 1-800-424-9300</p>	

EPA Reg. No. 63588-8

EPA Est. No.

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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING / AVISOC**

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Causes substantial, but temporary, eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Harmful if swallowed or absorbed through skin. Avoid contact with skin. Remove contaminated clothing and wash before reuse. Discard clothing and/or other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Wash thoroughly with soap and water after handling.

**Applicators and other handlers must wear:**

- long-sleeved shirt and long pants
- chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq$  14 mils, or viton  $\geq$  14 mils
- shoes plus socks
- protective eyewear (goggles or face shield)
- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash all PPE separately from other laundry.

**Engineering Control Statements**

When handlers use closed systems or enclosed cabs 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.

**IMPORTANT**

When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

**User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates, and to some plants at very low concentrations. Do not discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**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 persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry interval.

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

PPE 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 is:

- Coveralls
- chemical-resistant gloves such as barrier laminate, butyl rubber ≥14 mils, or viton ≥14 mils
- shoes plus socks

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

**\*\*\*\*\* FOR HERBICIDE USE IN CORN AND SOYBEANS \*\*\*\*\***

**GENERAL INFORMATION**

Appeal™ EC Herbicide is a postemergence herbicide for control of velvetleaf and other broadleaf weeds in soybeans, field corn, sweet corn, and popcorn (includes field corn, sweet corn, and popcorn grown for seed). Appeal™ EC Herbicide must be applied after emergence of the crop and broadleaf weeds. There is a wide application timing window for use in soybean and corn. For use in soybean the application window ranges from first trifoliolate to the full flowering stage. For use in corn, the application window ranges from the 2-leaf stage (2 visible collars) until the corn is 48 inches tall or prior to tasseling, whichever comes first. Refer to Table 2 for a list of the broadleaf weeds controlled.

Appeal™ EC Herbicide will control velvetleaf up to 36 inches tall. Appeal™ EC Herbicide will also control or partially control certain other annual broadleaf weeds. Partial control means significant activity but not always at a level generally considered acceptable for commercial weed control. When tank mixed, Appeal™ EC Herbicide may enhance the performance of other herbicides in the control of certain broadleaf weeds (see Table 2). Appeal™ EC Herbicide does not control grasses. Therefore, if grasses are present at the time of application, Appeal™ EC Herbicide should be mixed with an appropriate postemergence herbicide registered for grass control.

The amount of Appeal™ EC Herbicide to apply and the degree of weed control resulting from an Appeal™ EC Herbicide application depend upon a variety of factors such as weeds present, stage of growth of the weeds, environmental conditions, and growing conditions. Weeds under stress because of lack of moisture, low soil fertility, mechanical or chemical injury, may not be controlled as well as actively growing weeds. Weed death or inhibition can be expected quickly – normally within 48 hours after application.

To be effective, Appeal™ EC Herbicide must contact the weed foliage. Thorough coverage with the spray solution gives the most effective weed control. A large crop and/or weed canopy as well as a dense crop and/or weed canopy can prevent the spray from reaching smaller weeds resulting in reduced control of these smaller weeds.

Soybean and corn are tolerant of Appeal™ EC Herbicide when applied according to label directions. Some bronzing, crinkling, or spotting of crop leaves may occur. Soybean and corn rapidly outgrow these effects and develop normally with no reduction in yield.

Cotton is very sensitive to Appeal™ EC Herbicide. Do not allow spray to contact cotton unless the application is for cotton defoliation (see FOR USE IN COTTON DEFOLIATION below).

#### **Grazing/Feeding and Harvesting Restrictions**

Do not graze or feed treated soybean forage or hay to livestock.

Do not harvest or feed corn grain or stover (fodder) until 90 days after the last application of Appeal™ EC Herbicide.

Do not harvest or feed field corn forage until 30 days after the last application of Appeal™ EC Herbicide.

Do not harvest or feed sweet corn forage or ears until 40 days after the last application of Appeal™ EC Herbicide.

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### **MIXING INSTRUCTIONS**

#### **Spray Additives**

An adjuvant approved for use on growing crops is required with Appeal™ EC Herbicide for maximum consistent performance.

#### **1. Adjuvants for Appeal™ EC Herbicide Alone**

Use a spray adjuvant from one of these classes for optimum performance:

**Non-ionic surfactant (NIS)** – with a minimum of 80% of the constituents effective as spray adjuvant at the rate of 1 quart/100 gals. of spray volume (concentration of 0.25%)

**Crop Oil Concentrate (COC)** – petroleum or vegetable-based containing not less than 12% emulsifier at 1-2 pts./A. The concentration should not exceed 2.5% volume/volume. COC is recommended under conditions of dry soil and low relative humidity.

**Silicone-based surfactant** – at a rate of 1 qt./100 gals. or a spray volume concentration of 0.25% or as specified on the adjuvant label.

In addition to an adjuvant, urea ammonium nitrate (UAN) at 1-2 qts./A or spray grade ammonium sulfate (AMS) at 1.5-2.5 lbs./A may also be added to the spray solution. Do not use liquid fertilizer as the total carrier solution.

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## 2. Adjuvants for Appeal™ EC Herbicide in Tank Mixtures with Other Herbicides

When tank mixing with other herbicides, use the adjuvant recommended for use with the tank mix partner. Follow all restrictions and precautions on the tank mix partner's label.

### Compatibility Test

A jar test is recommended before mixing to ensure Appeal™ EC Herbicide compatibility with tank mix partners and adjuvants. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredient rates.

1. Add 1.0 pt. of water to each of 2 one-quart jars with tight lids.

**Note:** Use the same source of water and the other components in the compatibility test that will actually be tank mixed and applied. It is important that all components are mixed at a temperature similar to the temperature of those used for the actual application.

2. To one of the jars, add ¼ tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. is equivalent to 2 pt./100 gals. spray). Shake or stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. Finally, add the appropriate amount of any adjuvants that will be used. After **each** addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

**Dry Herbicides and Adjuvants:** For each pound to be applied per acre, add 1.4 tsp. to each jar.

**Liquid Herbicides and Adjuvants:** For each pint to be applied per acre, add 0.5 tsp. or 2.5 milliliters to each jar.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15-30 minutes and look for separation, large flakes, precipitates, gels, heavy oil film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility.
  - a. Slurry the dry pesticide(s) in water before addition, or
  - b. Add ½ the compatibility agent to the water and the other ½ to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

After compatibility testing is complete, dispose of any pesticide wastes according to the **Storage and Disposal** section of this label.

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### How to Mix

1. The spray equipment must be clean before using this product. If it is contaminated with other materials, mixing problems and/or clogging may occur or crop injury may occur.
2. Prepare no more spray mixture than is needed for the immediate application, and do not let the spray mixture stand in the spray tank overnight.
3. Maintain maximum agitation throughout the spraying operation.
4. Water-soluble packets must always be the first material put into the spray tank after water. Water-soluble packets must be completely dissolved and dispersed in clean water only before any other tank mix partners, including adjuvants, micronutrients, or other fertilizers are added to the spray solution. Boron, especially in the form of a micronutrient additive, such as Solubor®, etc., may prevent water-soluble packets from dissolving.
5. Flush the spray equipment thoroughly after each use and apply rinsate to a previously-treated area.

### Mixing Appeal™ EC Herbicide Alone

1. Add ¼-½ of the required amount of **clean** water to the spray or mixing tank.
2. With the agitator running, add the required amount of Appeal™ EC Herbicide to the spray tank. Continue agitation in the spray tank and allow product to fully and uniformly disperse.
3. Add the spray adjuvant and continue agitation while adding the rest of the water.
4. Maintain agitation until all of the mixture has been applied.

### Mixing Appeal™ EC Herbicide in Tank Mixtures with Other Herbicides

Appeal™ EC Herbicide is compatible with most commonly used herbicides, insecticides, fungicides, and spray adjuvants. BEFORE MIXING APPEAL™ EC HERBICIDE WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR THE USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF APPEAL™ EC HERBICIDE. When using Appeal™ EC Herbicide in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions for the products being used.

Mixing Appeal™ EC Herbicide with acifluorfen or lactofen-containing products (such as Blazer®, Galaxy®, Cobra®, or Storm®) can improve the control of velvetleaf by these products. However, these tank mixes will not control velvetleaf as well as Appeal™ EC Herbicide applied alone.

### Tank Mixing Steps

1. Add ¼ -½ of the required amount of clean water to the spray or mixing tank.
2. With the agitator running, drop the required number of packets of any products packaged in water-soluble packets into the tank all at once. Continue agitation in the spray tank and allow the packets to completely dissolve and the contents of the packets to fully and uniformly disperse.
3. While maintaining agitation, continue filling the spray tank. When the tank is ¾ full, add any dry formulation tank mix partners and allow them to completely and uniformly disperse.



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4. Add the required amount of Appeal™ EC Herbicide to the spray tank while maintaining agitation. After the product has completely and uniformly dispersed into the tank mix, add any other liquid tank mix partners and allow them to completely and uniformly disperse.
5. Add the proper amount of spray adjuvant and continue agitation while adding the remaining water.
6. Complete filling the tank with clean water and maintain sufficient agitation at all times to insure surface action until the mixture is uniform.
7. To avoid product degradation, apply the Appeal™ EC Herbicide spray mixture within 48 hours of mixing, and do not leave the spray mixture in the tank without continuous agitation.
8. After use, thoroughly clean the sprayer according to this label (see Cleaning Spray Equipment) and any tank mix partner labels.

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## APPLICATION PROCEDURES AND PRECAUTIONS

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### Chemigation

Do not apply this product through any type of irrigation equipment.

### Aerial Application

Do not apply this product by air as a herbicide in corn and soybeans.

### Ground Application

Apply Appeal™ EC Herbicide in a minimum of 15 gals. of water/A with 20-40 psi pressure at the nozzles. If a dense crop and/or weed canopy is present, use up to 40 gals. of water per acre and 50-70 psi pressure at the nozzles.

**Note: When using higher nozzle pressures, use extreme caution to avoid spray drift to nearby crops.**

Use a pump with enough capacity to maintain a rippling or rolling action in the spray tank. For a uniform spray mixture, agitation during mixing and application is required.

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## HOW MUCH TO APPLY

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**Table 1. Rates of Application of Appeal™ EC Herbicide in Soybean, Field Corn, Sweet Corn, and Popcorn**

Tank Mixed with Another Labeled Broadleaf Herbicide		Applied Alone or with a Grass Control Herbicide*	
Touchdown® Roundup® Original, or Roundup® Ultra (for use in glyphosate tolerant crops)	Other postemergence broadleaf herbicides (see Table 3)	Standard Rate	Enhanced Rate for Improved Control of Difficult Weeds
0.4 fl. oz./A	0.5 fl. oz./A	0.6 fl. oz./A	0.9 fl. oz./A

\*See Table 2 for list of weeds controlled.

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## **WHEN TO APPLY**

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### **Weed Stage of Growth**

Apply Appeal™ EC Herbicide after weeds have emerged and are actively growing, but before the weeds have reached the maximum height listed in Table 2. Application after weeds have reached the listed maximum height for control could result in commercially unacceptable weed control.

Avoid applying Appeal™ EC Herbicide if weeds cannot be evenly covered with the spray or when spray drift is possible. To reduce spray drift, do not apply if wind speed is 10 mph or greater. Avoid overlapping the spray pattern since this may increase chances for crop injury.

### **Soybean Stage of Growth**

Appeal™ EC Herbicide may be applied to soybeans from the first trifoliolate through the full flowering stage of development. To avoid possible illegal residues, the last application should be made no later than 60 days before harvest. This product requires a pre-harvest interval (PHI) of 60 days.

### **Field Corn, Sweet Corn, and Popcorn Stages of Growth**

Appeal™ EC Herbicide may be applied to corn from the 2-leaf stage (2 visible collars) to 48 inches tall, but before tasseling.

### **Cultivation**

Do not cultivate within 2 days before or 2 days after applying this product.

### **Application Precautions**

1. Do not apply more than 1.25 fl. oz./A of Appeal™ EC Herbicide per cropping season.
2. Do not apply if crop is under severe stress due to drought, cold weather, hail, flooding, water-logged or compacted soil, disease, insect damage, nutrient deficiency (especially low nitrogen levels), or other causes.
3. Appeal™ EC Herbicide can be applied in tank mixtures to weeds taller than the maximum heights listed in Table 2 provided the application follows all timing and rate precautions on the tank mix partner's label.
4. Application to weeds that are under severe stress due to drought or to weeds that are taller than the optimum heights listed in Table 2 may result in reduced weed control.
5. Do not irrigate within 4 hours of application of Appeal™ EC Herbicide. Rainfall or irrigation may wash Appeal™ EC Herbicide off of the weeds during this period and reduce performance.
6. Observe all precautions and limitations on the label of each product used in tank mixture with Appeal™ EC Herbicide.

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**WEEDS CONTROLLED / APPLICATION RATES**

**1. Appeal™ EC Herbicide Alone**

At the rates and timings listed, Appeal™ EC Herbicide controls the weeds listed in Table 2 when the product is applied alone after emergence of soybean, field corn, sweet corn, or popcorn, and weeds. Appeal™ EC Herbicide only controls certain broadleaf weeds after they emerge and does not provide residual control of weeds that emerge later. Weeds larger than the size indicated in Table 2 may only be partially controlled.

**Table 2. Broadleaf Weeds – Application Rate for Appeal™ EC Herbicide Applied Alone with an Adjuvant**

Weed Species	(0.6 fl. oz./A)		(0.9 fl. oz./A)	
	Leaf Stage*	Maximum Height (in.)	Leaf Stage*	Maximum Height (in.)
Anoda, spurred ( <i>Anoda cristata</i> )	2	2	3	4
Burcucumber ( <i>Sicyos angulatus</i> )	2	2	2	2
Jimsonweed ( <i>Datura stramonium</i> )	2**	2**	4	2
Nightshade, black ( <i>Solanum nigrum</i> )	2**	2**	2**	2**
Nightshade, eastern black ( <i>S.ptycanthum</i> )	2**	2**	2**	2**
Lambsquarters, common ( <i>Chenopodium album</i> )	4**	2**	4-6	2
Pigweed, redroot ( <i>Amaranthus retroflexus</i> )	4**	2**	4-6	4
Pigweed, smooth ( <i>A. hybridus</i> )	2**	2**	2-4	4
Velvetleaf ( <i>Abutilon theophrasti</i> )	--	36	--	36
Waterhemp, common ( <i>Amaranthus rudius</i> )	--	--	2	2
Waterhemp, tall ( <i>A. tuberculatus</i> )	--	--	2	2

\*Count individual leaves except the cotyledons.

\*\*Partial control or suppression.

**2. Appeal™ EC Herbicide in Tank Mixtures with Other Postemergence Herbicides to Improve Broadleaf Weed Control**

Appeal™ EC Herbicide may be applied postemergence with Touchdown®, Roundup® Original or Roundup® Ultra or other postemergence broadleaf herbicides approved for use on soybeans. Tank mixing Appeal™ EC Herbicide with other postemergence herbicides may increase the speed of activity and/or level of control of the weeds listed in Table 2. When mixed with any of the tank mix partners listed in Table 3, Appeal™ EC Herbicide will control velvetleaf up to 36 inches tall.

Refer to Table 3 for the amount of Appeal™ EC Herbicide to apply per acre and a list of tank mix partners. Follow all directions, restrictions and precautions on the EPA-approved label for each product in the tank mixture.

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Table 3. Appeal™ EC Herbicide Tank Mix Partners – Broadleaf Control

Amount of Appeal™ EC Herbicide/Acre*	Tank Mix Partner	
0.5 fl. oz./A	<u>Soybean</u> Basagran® Blazer® Classic® Cobra® Concert® SP Flexstar® HL Galaxy® Manifest® Pinnacle® Pursuit® Raptor® Reflex® Reliance™ STS® SP Scepter® O.T.® Status® Storm®	<u>Corn</u> 2,4-D AAtrex® Accent® Banvel® Basagran® Basis™ Basis Gold® Beacon® Buctril® Clarity® Exceed® Headline® Hornet® Laddok® S-12 Lightning® Marksman® Permit® Poast Plus® Poast® HC Pursuit® Spirit™ Stinger® Tough®
	0.4 fl. oz./A	Roundup® Original Roundup® Ultra Touchdown®

\*If a second application is needed, do not apply more than a total of 1.25 oz. of Appeal™ EC Herbicide per acre per season.

### 3. Appeal™ EC Herbicide in Tank Mixtures for Grass Weed Control

Appeal™ EC Herbicide does **not** provide grass control, but it can be tank mixed with any postemergence grass herbicide registered for control of grasses in soybeans, field corn, sweet corn, or popcorn. The tank mixture will provide control / partial control of the weeds listed in Table 2 and the grasses listed on the tank mix partner's label. See Table 1. for use rates in mixture with a grass control herbicide.

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### CROP FAILURE -- IMMEDIATE REPLANTING

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If soybeans or corn treated with Appeal™ EC Herbicide is lost due to a natural catastrophe such as hail or frost, soybeans or corn can be replanted immediately, provided this is not restricted on the label of a product used previously or by a product applied in a tank mixture with Appeal™ EC Herbicide.

For control of weeds in the replanted crop, Appeal™ EC Herbicide may be applied postemergence a second time but the total amount of Appeal™ EC Herbicide applied during the cropping season must not exceed 1.25 fl.oz./A.

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\*\*\*\*\* FOR USE IN COTTON DEFOLIATION \*\*\*\*\*

**GENERAL INFORMATION**

Appeal™ EC Herbicide may be used as a harvest aid to defoliate cotton. As with all cotton defoliant, proper application timing and coverage is critical for good performance and should be based on local Extension Service recommendations.

**WHEN TO APPLY**

In general, Appeal™ EC Herbicide should be applied **ONLY**

1. after all bolls to be harvested have matured,
2. when 60% of the bolls are open, AND
3. there are no more than four nodes between the highest first position cracked boll and the highest first position harvestable boll.

**DO NOT APPLY ANY LATER THAN 3 DAYS (72 Hours) PRIOR TO HARVEST.** This product requires a pre-harvest interval (PHI) of 3 days.

**CONDITIONS THAT AFFECT LEAF DROP**

<b>GROWING CONDITIONS</b>	<b>EFFECT</b>
Favorable	Leaf drop typically 4-7 days after application
Drought or other crop stress conditions  Cool Temperatures (below 55° F)	Can reduce the number of leaves dropped or increase time required for leaf drop to 9-14 days
Rank cotton with 60% or fewer open bolls	A second application of Appeal™ EC Herbicide may be needed
Rain	Appeal™ EC Herbicide is rainfast 1 hour after application provided that the spray has dried on the leaf

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**APPEAL™ EC HERBICIDE USE RATES FOR COTTON DEFOLIATION**

Appeal™ EC Herbicide may be applied alone or in combination with other harvest aids labeled for use on cotton.

AMOUNT OF APPEAL™ EC HERBICIDE TO APPLY	APPLICATION INTERVAL	MAXIMUM AMOUNT PER SEASON
0.5 to 0.6 fl. oz. / A	If necessary, repeat application 6-10 days later with Appeal™ EC Herbicide alone or in combination with other harvest aids.	Do not apply more than 1.25 fl. oz. Appeal™ EC Herbicide per Acre per season.

Use the higher rate only when the crop is more vigorous and robust, or when adverse conditions are expected to affect performance of this product. Such conditions include, but are not limited to, when daytime temperature is below 55°F, prolonged periods of cloudy or wet weather, or plants are under drought or other stress conditions.

**MIXING INSTRUCTIONS**

**Spray Additives**

An adjuvant approved for use on growing crops is required with Appeal™ EC Herbicide.

**1. Appeal™ EC Herbicide Alone**

For best performance, apply Appeal™ EC Herbicide with:

Adjuvant/Description	Rate
<b>Crop oil concentration (COC)</b>  Petroleum or vegetable based containing not less than 10% emulsifier	1 pt. per acre  <b>Note:</b> the concentration should not exceed 2.5% volume/volume.

The following adjuvants may also be used:

Adjuvant/Description	Rate
<b>Non-ionic surfactant (NIS)</b>  With a minimum of 80% of the constituents effective as a spray adjuvant	1 qt. per 100 gals.  or  a spray volume concentration of 0.25%
<b>Silicone based surfactant</b>	1 qt. per 100 gals  or  a spray volume concentration of 0.25% or as specified on the adjuvant label.

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## 2. Appeal™ EC Herbicide in Tank Mixtures with Other Harvest Aids

When tank mixing Appeal™ EC Herbicide with other harvest aids, use the adjuvant recommended for use with the tank mix partner. Follow all restrictions and precautions on the tank mix partner's label.

### Compatibility Test

A jar test is recommended before mixing to ensure Appeal™ EC Herbicide compatibility with tank mix partners and adjuvants. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredient rates.

1. Add 1.0 pt. of water to each of 2 one-quart jars with tight lids.

**Note:** Use the same source of water and the other components in the compatibility test that will actually be tank mixed and applied. It is important that all components are mixed at a temperature similar to the temperature of those used for the actual application.

2. To one of the jars, add ¼ tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (¼ tsp. is equivalent to 2 pt./100 gals. spray). Shake or stir gently to mix.
3. To **both** jars, add the appropriate amount of harvest aid. If more than one harvest aid is used, add them separately with dry harvest aids first, flowables next, and emulsifiable concentrates last. Finally, add the appropriate amount of any adjuvants that will be used. After **each** addition, shake or stir gently to thoroughly mix. The appropriate amount of harvest aids for this test follows:

**Dry Harvest Aids and Adjuvants:** For each pound to be applied per acre, add 1.4 tsp. to each jar.

**Liquid Harvest Aids and Adjuvants:** For each pint to be applied per acre, add 0.5 tsp. or 2.5 milliliters to each jar.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15-30 minutes and look for separation, large flakes, precipitates, gels, heavy oil film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility.
  - a. Slurry the dry harvest aid(s) in water before addition, or
  - b. Add ½ the compatibility agent to the water and the other ½ to the emulsifiable concentrate or flowable harvest aid before addition to the mixture. If incompatibility is still observed, do not use the mixture.

After compatibility testing is complete, dispose of any pesticide wastes according to the **Storage and Disposal** section of this label

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**How to Mix**

1. The spray equipment must be clean before using this product. If it is contaminated with other materials, mixing problems and/or clogging or poor performance may occur.
2. Prepare no more spray mixture than is needed for the immediate application, and do not let the spray mixture stand overnight in the spray tank.
3. Maintain maximum agitation throughout the spraying operation.
4. Water-soluble packets must always be the first material put into the spray tank after water. Water-soluble packets must be completely dissolved and dispersed in **clean** water only before any other tank mix partners, including adjuvants, are added to the spray solution.

Flush the spray equipment thoroughly after each use and apply rinsate to a previously-treated area.

**Mixing Appeal™ EC Herbicide Alone**

1. Add ¼-½ of the required amount of **clean** water to the spray or mixing tank.
2. With the agitator running, add the required amount of Appeal™ EC Herbicide to the spray tank. Continue agitation in the spray tank and allow product to fully and uniformly disperse.
3. Add the spray adjuvant and continue agitation while adding the rest of the water.
4. Maintain agitation until all of the mixture has been applied.

**Mixing Appeal™ EC Herbicide in Tank Mixtures with Other Cotton Harvest Aids**

Appeal™ EC Herbicide is compatible with most commonly used harvest aids. **BEFORE MIXING APPEAL™ EC HERBICIDE WITH OTHER REGISTERED PRODUCTS, READ THE LABEL OF THE TANK-MIX PARTNER TO BE CERTAIN IT IS LABELED FOR THE USE ON COTTON AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF APPEAL™ EC HERBICIDE.** When using Appeal™ EC Herbicide in a tank mixture with other harvest aids, follow the label limitations and precautions of the tank mix partner.

**Cotton Harvest Aids – Tank Mix Partners for Appeal™ EC Herbicide**

<b>TANK MIX PARTNERS</b>	<b>COMMENTS</b>
Prep™ (or other brands of ethephon)	For cotton defoliation, it is not necessary to tank-mix Appeal™ EC Herbicide with other harvest aids. However, at labeled boll opening rates, Prep™ (or other brands of ethephon) can be tank-mixed with Appeal™ EC Herbicide to accelerate opening of mature cotton bolls.
Accelerate®, CottonQuik®, Def®5, Dropp®, Dropp® Ultra™, Finish®, Folex®, Ginstar®, Harvade® 5F, or Roundup® Ultra.	
Paraquat-based products (such as Firestorm®, Cyclone®, or Starfire®), or sodium chlorate	<b>For best results,</b> apply desiccants <b>after</b> the initial Appeal™ EC Herbicide application.



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### **Tank Mixing Steps**

1. Add ¼ to ½ of the required amount of **clean** water to the spray or mixing tank.
2. With the agitator running, drop the required number of packets of any products packaged in water-soluble packets into the tank all at once. Continue agitation in the spray tank and allow any packets to completely dissolve and the contents of any packets to fully and uniformly disperse.
3. While maintaining agitation, continue filling the spray tank. When the tank is ¾ full, add any dry formulation tank mix partners and allow them to completely and uniformly disperse.
4. Add the required amount of Appeal™ EC Herbicide to the spray tank while maintaining agitation. After the product has completely and uniformly dispersed into the tank mix, add any other liquid tank mix partners and allow them to completely and uniformly disperse.
5. Add the proper amount of spray adjuvant and continue agitation while adding the remaining water.
6. Complete filling the tank with clean water and maintain sufficient agitation at all times to ensure surface action until the spray mixture is uniform.
7. To avoid product degradation, apply the Appeal™ EC Herbicide spray mixture within 48 hours of mixing, and do not leave the spray mixture in the tank without continuous agitation.
8. After use, thoroughly clean the sprayer according to this label (See Cleaning Spray Equipment) and any tank mix partner labels.

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## **APPLICATION PROCEDURES AND PRECAUTIONS**

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### **Chemigation**

Do not apply this product through any type of irrigation equipment

### **Aerial Application (for use as a cotton defoliant only)**

1. Use a minimum of 5 gallons of water per acre.
2. Take care to ensure that the application does not drift to non-target areas.

### **Ground Application**

1. Apply Appeal™ EC Herbicide in a minimum of 10 gals of water per acre at 20 to 40 psi pressure at the nozzles.
2. Use a pump with enough capacity to maintain a rippling or rolling action in the spray tank.
3. For a uniform spray mixture, agitation during mixing and application is required.

### **Spray Drift Precautions**

Do not allow spray to drift onto adjacent land or crops. When drift may be probable, do everything possible to reduce spray drift, including:

1. Do not spray if wind speeds are gusty or become 10 mph or greater.
2. Use extreme caution when conditions favor drift (high temperatures, low relative humidity).
3. Do not apply during a temperature inversion. If an inversion is suspected, consult the local weather service before applying Appeal™ EC Herbicide.

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4. These practices can further reduce drift:
  - a. Using nozzles that provide a uniform droplet size. Use spray nozzles that provide medium-coarse droplets (250-400 microns VMD). Nozzles that produce extremely small droplets are more likely to cause spray drift.
  - b. Apply as close to target plants as practical while maintaining a good spray pattern for adequate spray coverage.

#### **CLEANING SPRAY EQUIPMENT**

The sprayer must be cleaned before and after use of Appeal™ EC Herbicide. Failure to do so may result in unsatisfactory results with Appeal™ EC Herbicide or injury to other crops sprayed with the equipment. Refer to the label of the product used previously or tank mixed with Appeal™ EC Herbicide for additional cleaning instructions.

When Appeal™ EC Herbicide has been used alone:

1. Fill the sprayer with clean water.
2. Add a commercial sprayer cleaner.
3. Circulate the mixture through the system.
4. Spray approximately ½ through the hose, boom, and nozzles to an area that has already been treated.
5. Drain the remaining solution.
6. Rinse the entire system with clean water.
7. Spray the rinsate on an area that has already been treated.

When Appeal™ EC Herbicide has been tank mixed:

Refer to the label of the product used previously or tank mixed with Appeal™ EC Herbicide for cleaning instructions.

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#### **ROTATIONAL CROPS**

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Following harvest, any crop may be planted following soybeans, corn or cotton treated with Appeal™ EC Herbicide alone. There are no rotational crop restrictions.

**Note:** For rotational crop restrictions when Appeal™ EC Herbicide is used in tank mixtures or sequentially with other products, refer to the rotation intervals on the other product label for possible additional restrictions.

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## STORAGE AND DISPOSAL

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Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Keep container tightly closed when not in use. This product may be stored in dry, unheated facility.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into formulation equipment. Then dispose of liner in a sanitary landfill, or incinerate if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-424-9300, day and night.

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## CONDITIONS OF SALE AND WARRANTY

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The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of K-I Chemical U.S.A., Inc. or the Seller. All such risks shall be assumed by the Buyer.

To the extent consistent with applicable law, K-I Chemical U.S.A., Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **K-I Chemical U.S.A., Inc. makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall K-I Chemical U.S.A., Inc. or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** K-I Chemical U.S.A., Inc. and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of K-I Chemical U.S.A., Inc.

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