

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 29, 2016

William R. Berti, Ph.D. Manager of Regulatory Affairs Nichino America, Inc. 4550 New Linden Hill Road, Suite 501 Wilmington, DE 19808

Subject: PRIA Label Amendment: Increase the Number of Yearly Applications and

Seasonal Rates

Product Name: ET 2%SC Herbicide / Defoliant

EPA Registration Number: 71711-25 Application Date: February 26, 2016

Decision Number: 514590

Dear Mr. Berti:

The application referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable under FIFRA Section 3(c)(7)(B), subject to the following conditions:

- 1. You must submit and/or cite all data required for registration/registration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.
- 2. You are required to comply with the data requirements described in the DCI Order identified below:
  - a. Pyraflufen-ethyl GDCI-030090-1468

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) 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

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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 you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). If you have any questions, please contact Driss Benmhend by phone at (703) 308-9525, or via email at Benmhend.driss@epa.gov.

Sincerely;

Shaja B. Joyner, Product Manager 20 Fungicide and Herbicide Branch Registration Division (7505P)

Zuchuns for,

Office of Pesticide Programs

Enclosure



# ACCEPTED

# 11/29/2016

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71711-25

GROUP 14 HERBICIDE

# ET® 2%SC Herbicide/Defoliant

A Nonselective Contact Herbicide for Broadleaf Weed Control

Alternate brand name: Venue® Herbicide

A Nonselective Contact Herbicide for Tree, Nut, and Vine Crops

Alternate brand name: Octane® 2%SC Herbicide

**Octane Herbicide** 

For Use In Nurseries and Ornamental Plantings; Sod farms; Christmas

Trees; and Established Ornamental Turf

Alternate brand name: Edict® 2%SC IVM Herbicide

**Edict 2SC IVM Herbicide** 

For Noncrop Weed Control and Industrial Vegetation Management

# **ACTIVE INGREDIENT:**

Pyraflufen-ethyl: Acetic acid,

[2-chloro-5-[4-chloro-5-(difluoromethoxy)-1-methyl-1H-pyrazol-3-yl]-4

Contains 0.17 lb pyraflufen-ethyl per gallon

EPA Reg. No. 71711-25

EPA Est. No.

# KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID						
If on skin	If on skin    Take off contaminated clothing.					
or clothing	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>					
	Call a poison control center or doctor for treatment advice.					
HOTLINE NUMBER						
Have the product container or label with you when calling a poison control center or doctor, or going for						
treatment. For additional information on this pesticide product, including human health concerns and						
medical emergen	cies, call 1-800-348-5832. In case of fire or spills, information may be obtained by					
calling 1-800-424-0200						

Not	Contents:	
INET	Comems:	

[Manufactured in \_\_\_\_,] [formulated in \_\_\_\_,] [and] [packaged in \_\_] for:

Nichino America, Inc.

4550 New Linden Hill Road

Wilmington, DE 19808

888-740-7700

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

# **User Safety Requirements**

Follow the 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 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.

# **ENGINEERING CONTROLS**

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

# **ENVIRONMENTAL HAZARDS**

This product is toxic to fish and aquatic invertebrates. This product may contaminate water through drift of spray in wind or via runoff events. Use care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from treated areas.

# **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 state or tribal agency responsible for pesticide regulation.

# AGRICULTURAL USE REQUIREMENTS

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

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

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, wear:

- Coveralls
- Chemical resistant gloves
- Shoes plus socks

### NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For other uses, including interiorscapes and other nonagricultural uses, do not enter treated areas without protective clothing until sprays have dried.

# **USE INFORMATION**

ET 2%SC Herbicide/Defoliant is a contact herbicide, and requires thorough coverage for complete broadleaf weed control.

ET 2%SC Herbicide/Defoliant must be tank mixed with another foliar active broadleaf herbicide for complete control of most broadleaf weeds.

Do not apply ET 2%SC Herbicide/Defoliant through any type of irrigation system.

ET 2%SC Herbicide/Defoliant is rainfast one hour after application.

# **ROTATIONAL CROP RESTRICTIONS**

Crop/Crop Group	Rotational/Plantback Intervals
Corn	
Cotton	
Grape	
Olive	
Pome Fruits (Crop Group 11-10)	
Pomegranate	0 days following application
Potato	
Soybean	
Stone Fruits (Crop Group 12)	
Tree Nuts (Crop Group 14) Plus Pistachio	
Triticale; Wheat	
Bulb Vegetables (Crop Group 3)	
Cereal Grains (Crop Group 15, except corn,	
wheat, and triticale; see 0-day plantback interval	
above)	
Brassica (Cole) Leafy Vegetables (Crop Group 5)	
Cucurbit Vegetables (Crop Group 9)	
Fruiting Vegetables (Crop Group 8) (Except	
Cucurbits)	1 day following preplant burndown application
Leafy Vegetables (Crop Group 4) (Except Brassica Vegetables)	
,	
Legume Vegetables, Succulent or Dried (Crop Group 6)	
Oilseed Group (Crop Group 20)	
Root and Tuber Vegetables (Crop Group 1,	
except potato; see 0-day plantback interval above)	
Sugarcane	
All other rotational crops	Do not plant for 30 days following the last
The same relational property	application of ET 2%SC Herbicide/Defoliant.

#### **WEEDS CONTROLLED**

The following broadleaf weed species can be controlled or suppressed up to 4 inches in height or less or rosettes of 3 inches in diameter or less. Tank mixtures of ET 2%SC Herbicide/Defoliant with other labeled broadleaf herbicides may be needed for control of some weed species. Control may be reduced with weeds larger than 4 inches in height or 3 inches in diameter.

Alkaliweed*	Ladysthumb	Redmaid
Amaranth, Palmer*	Lambsquarters, common	Rocket, London
Bedstraw	Lettuce, prickly	Sesbania, hemp
Beggartick, hairy	Mallow, common	Shepherd's-purse
Beggarweed, Florida	Malva spp.	Smartweed, Pennsylvania
Bindweed, field	Marestail*	Smellmelon
Buckwheat, wild	Milkthistle	Sowthistle, annual
Canola	Morningglory, species	Spurge, leafy
Carpetweed	Mustard, wild*	Sunflower, common
Celery, wild	Nettle, stinging	Tansymustard, western
Chickweed	Nightshade, black	Thistle, Canada
Clover, white	Nightshade, silverleaf	Thistle, Russian
Cocklebur	Panicle willowweed	Toadflax, Dalmatian
Cotton, volunteer (conventional,	Pigweed, redroot	Velvetleaf
GMO varieties)	Pigweed, smooth	Virginia-creeper
Dandelion, common	Pineapple-weed	Waterhemp, common
Dock, curly	Poinsettia, wild	Waterhemp, tall
Dollarweed	Poison-ivy	•
Eclipta	Potato, volunteer	
Eveningprimrose, cutleaf	Prickly sida (teaweed)	
Fleabane*	Purslane, common	
Geranium, Carolina	Radish, wild	
Henbit	Ragweed, common	
Horsenettle*	Ragweed, giant	
Kochia	_	
*		

<sup>\*</sup>suppression

# **WEED RESISTANCE**

Pyraflufen-ethyl, the active ingredient in this product, is a Group 14 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 14 herbicides. Such resistant weed plants may not be effectively managed using Group 14 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different Group and/or by using cultural or mechanical practices. However, a herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

# **BEST MANAGEMENT PRACTICES**

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. Scouting after a herbicide application is important because it can facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

#### **TANK MIXTURES**

ET 2%SC Herbicide/Defoliant may be applied as a tankmix or in sequential application with other [harvest aid,] herbicide, fungicide, or insecticide products. Weather, crop conditions, or the presence of certain weeds, crop damaging insects, or diseases will indicate the inclusion of other pesticides in the application.

**Note:** It is recommended that the compatibility of ET 2%SC Herbicide/Defoliant in any tankmix combination be tested before use. To determine the physical compatibility with other products, use a jar test, as described below:

Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Read and follow all label directions for each tankmix product. Always use in accordance with the most restrictive of label precautions and limitations.

# **MIXING DIRECTIONS**

ET 2%SC Herbicide/Defoliant Alone: Fill spray tank with ¾ of the amount of water needed for the intended application and then turn on agitation. Pour the specified amount of product on the surface of the water in the spray tank. Add the remaining water volume to the spray tank with agitation running. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

**ET 2%SC Herbicide/Defoliant in Tank Mixtures:** Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with ¾ amount of water. Add the recommended amount of tankmix products in the following order while maintaining agitation:

- 1) products in water-soluble packets
- 2) wettable powders
- 3) water-dispersible granulars and/or soluble powders
- 4) flowable liquids (including ET 2% herbicide/defoliant)
- 5) emulsifiable concentrates
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

Always follow the labeled mixing instructions of any partner products. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

Use an approved agricultural buffering agent, buffering to pH 7.5 or less if using ET 2%SC Herbicide/Defoliant in a water source greater than or equal to pH 7.5. Always buffer the water source BEFORE adding ET 2%SC Herbicide/Defoliant to the spray tank.

#### **SPRAY DRIFT**

Avoid spray drift to all other crops and nontarget areas. Do not apply when weather conditions may cause drift. Do not allow this product to drift onto nontarget areas. Drift may result in illegal residues or injury to adjacent crops and vegetation in the form of leaf yellowing and defoliation. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet size will also reduce spray drift.

# AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. Droplet size, boom height, temperature inversions, and wind speed are the primary factors determining drift. The specific application conditions required for the use of this product are described below.

# Information on Droplet Size

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

# **Controlling Droplet Size**

- **Volume** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** 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.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream
  produces larger droplets than other orientations and is the recommended practice. Significant
  deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle
  types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid
  stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Maintenance of Nozzles** Periodic inspection and subsequent replacement of nozzles to ensure proper chemical application is recommended.

#### Boom Length

For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

# **Application Height**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **Swath Adjustment**

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

#### Wind

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

### **Temperature and Humidity**

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

### **Temperature Inversions**

Applications should not occur during a 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 and 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 concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

#### **EQUIPMENT CLEANING**

Do not allow the spray solution to dry in the application equipment. After application and before using the sprayer equipment for any other applications, the sprayer must be thoroughly cleaned. Applicators must ensure proper equipment clean-out for any other products mixed with ET 2%SC Herbicide/Defoliant as provided on the other product label(s). Immediately following application, clean all equipment thoroughly with detergent or a spray tank cleaner and water as described below. Should residues of ET 2%SC Herbicide/Defoliant remain in inadequately cleaned equipment, they may be released in subsequent applications and cause injury to crops.

- 1. Drain sprayer tank, hoses, and spray boom, and thoroughly rinse with clean water the inside of the spray tank, sprayer hoses, boom, and nozzles to remove any sediment or residues.
- 2. Fill the tank ½ full with clean water, add the appropriate detergent (follow manufacturer's directions for use). Fill tank to capacity and operate the sprayer with agitation for 15 minutes to flush hoses, boom, and nozzles.
- 3. Drain the sprayer tank, lines, and booms. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray nozzles, tips, and screens.
- 4. Dispose of all cleaning solutions, rinsate, and washwaters in accordance with federal, state, and local regulations.

# **APPLICATION AND DOSAGE**

Corn field corn, popcorn, seed corn, corn silage, corn stover					
Application	Pest	Rate/Acre	Directions for Use		
Preplant Burndown	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per season for preplant burndown uses.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>		
After Planting Before Crop Emergence	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per season after planting prior to crop emergence.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>		
Postemergence	Listed Broadleaf Weeds	0.7 to 1.4 fl oz/acre (0.0009 to 0.0019 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>ET 2%SC Herbicide/Defoliant can be applied from crop emergence to the V4 growth stage.</li> <li>Do not apply postemergence to sweet corn.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz/acre (0.0019 lb ai/acre) per season for all postemergence applications to corn.</li> <li>Do not use crop oils or crop oil concentrates for postemergence applications.</li> <li>Some temporary herbicidal leaf speckling may appear on the crop. This effect is transient and will NOT appear on new growth.</li> </ul>		

Postemergence Directed	Listed Broadleaf Weeds	0.7 to 1.4 fl oz/acre (0.0009 to 0.0019 lb ai/acre)	<ul> <li>ET 2%SC Herbicide/Defoliant can be applied from crop emergence to the V8 growth stage using directed spray or a drop nozzle application technique.</li> <li>Directed or drop nozzle applications should only be made when the corn has achieved a sufficient height for the spray to be directed beneath the</li> </ul>
			<ul> <li>corn leaves.</li> <li>Do not apply directly into the whorl when making a directed or drop nozzle application.</li> <li>Do not apply postemergence to sweet corn.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz/acre (0.0019 lb ai/acre) per season for all postemergence applications to corn.</li> <li>Do not use crop oils or crop oil concentrates for postemergence applications.</li> <li>Some temporary herbicidal leaf speckling may</li> </ul>
			appear on the crop. This effect is transient and will NOT appear on new growth.
Corn (all uses)			<ul> <li>Do not apply more than 6.8 fl oz/acre (0.0090 lb ai/acre) per growing season for all preplant burndown applications.</li> <li>Do not apply more than 3.8 fl oz/acre (0.0050 lb ai/acre) per growing season for all after planting, prior to crop emergence, and postemergence uses.</li> </ul>
			<ul> <li>Do not harvest corn for silage within 50 days after last application of ET 2%SC Herbicide/Defoliant.</li> <li>Do not harvest corn for grain or stover within 90 days after last application of ET 2%SC Herbicide/Defoliant.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the listed higher rates for hard-to-control weeds.</li> </ul>

Cotton			
Application	Pest	Rate/Acre	Directions for Use
Preplant Burndown, After Planting Before Crop Emergence	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per season for this use.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>
Postemergence (Hooded)	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Do not apply by air for this use.</li> <li>Apply to cotton having less than 3 inches of stem bark using hooded ground equipment only.</li> <li>Avoid contact with desirable vegetation.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per season for this use.</li> <li>Allow a minimum of 30 days between applications for this use.</li> </ul>
Postemergence (Layby)	Listed Broadleaf Weeds	0.7 to 1.4 fl oz/acre (0.0009 to 0.0019 lb ai/acre)	<ul> <li>Do not apply by air for this use.</li> <li>Apply when the cotton has attained an average height of 18 inches or more and having at least 3 inches of stem bark using hooded or post-directed ground spray equipment only.</li> <li>Avoid contact with desirable vegetation.</li> <li>Do not apply more than 1.4 fl oz/acre (0.0019 lb ai/acre) per season for this use.</li> <li>Allow a minimum of 30 days between applications for this use.</li> </ul>

Cotton (continu	ied)		
Application	Pest	Rate/Acre	Directions for Use
Preconditioning		0.42 to 1.12 fl oz/acre (0.0006 to 0.0014 lb ai/acre)	<ul> <li>ET 2%SC Herbicide/Defoliant may be used as a preconditioner to enhance the activity of a subsequent defoliant application.</li> <li>Apply using 15 to 30 gallons of water per acre by ground or 5 gallons of water per acre by air.</li> <li>Timing of application is recommended 7 to 14 days prior to a defoliation application of ET 2%SC Herbicide/Defoliant or the use of another defoliant. Refer to the defoliation section below prior to use for complete recommendations.</li> <li>Do not make more than 2 applications or exceed 7.7 fl oz/acre (0.0102 lb ai/acre) per season for all defoliation applications to cotton.</li> </ul>
Defoliation	Defoliation of Cotton	1.8 to 3.85 fl oz/acre (0.0024 to 0.0051 lb ai/acre)	<ul> <li>Apply when sufficient mature bolls have developed to produce desired yield; generally greater than 60%.</li> <li>Adequate defoliation is generally achieved within 7 to 14 days, depending upon weather and crop conditions.</li> <li>Apply using 15 to 30 gallons of water per acre by ground or 5 gallons of water per acre by air.</li> <li>Do not make more than 2 applications or exceed 7.7 fl oz/acre (0.0102 lb ai/acre) for all defoliation applications.</li> <li>Applications must be a minimum of 7 days apart.</li> <li>ET 2%SC Herbicide/Defoliant may be tank mixed or applied in sequence with other defoliant products such as, but not limited to, CottonQuik®, Cyclone®, Dropp®, Finish®, Folex®, Ginstar®, Gramoxone®, Prep™, and/or Roundup®.</li> </ul>
Cotton (all uses)			<ul> <li>Do not apply more than 11.9 fl oz/acre (0.0158 lb ai/acre) per growing season to cotton.</li> <li>Preharvest Interval (PHI): 7 days</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the listed higher rates for hard-to-control weeds.</li> </ul>

Potato			
Application	Pest	Rate/Acre	Directions for Use
Pre-plant Burndown	Listed Broadleaf Weeds	0.6 to 2.4 fl oz/acre (0.0008 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 10 gallons spray solution per acre by ground or 5 gallons water per acre by air.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per growing season for all preplant burndown applications.</li> <li>Allow a minimum of 30 days between applications for this use.</li> </ul>
After Planting Before Crop Emergence	Listed Broadleaf Weeds	0.6 to 2.4 fl oz/acre (0.0008 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per growing season for all after planting before crop emergence applications.</li> </ul>
Desiccation	Potato Foliage and Vines Listed Broadleaf Weeds	2.4 to 6.7 fl oz/acre (0.0032 to 0.0089 lb ai/acre)	<ul> <li>Apply as a foliar spray in the early stage of crop senescence.</li> <li>Apply by air at 5 gallons spray solution per acre or 20 to 50 gallons spray solution per acre by ground equipment.</li> <li>A repeat application of ET 2%SC Herbicide/Defoliant or another desiccant may be needed under certain climatic conditions for complete desiccation.</li> <li>ET 2%SC Herbicide/Defoliant may be tank mixed or applied in sequence with other desiccants such as diquat or glufosinate for improved desiccation. Assure that the most restrictive product label of the tank mix partners is used.</li> <li>Make 1 to 2 applications at a minimum 7-day interval.</li> <li>Do not make more than 2 applications or exceed 13.5 fl oz/acre (0.0179 lb ai/acre) per season for desiccation. NOTE: The seasonal maximum is 13.5 fl oz/acre (0.0179 lb ai/acre) for all applications (preplant burndown + after planting before crop emergence + dessication),</li> <li>Higher water volumes should be used in dense canopy conditions.</li> </ul>
Potato (all uses)			<ul> <li>Do not apply more than 13.5 fl oz/acre (0.0179 lb ai/acre) per growing season for all preplant burndown, after planting prior to emergence, and desiccation applications combined.</li> <li>Preharvest Interval (PHI): 7 days</li> </ul>

Refer to Rotational Crop Restrictions table.
Use the listed higher rates for hard-to-control weeds.

Soybean				
Application	Pest	Rate/Acre	Directions for Use	
Preplant Burndown, After Planting Before Crop Emergence	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre0	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per season for all preplant burndown and after planting before emergence applications.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>	
Postemergence	Listed Broadleaf Weeds	0.56 to 1.4 fl oz/acre (0.0007 to 0.0019 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>ET 2%SC Herbicide/Defoliant can be applied from crop emergence to the V6 growth stage.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz/acre (0.0019 lb ai/acre) per season for this use.</li> <li>Do not use crop oils or crop oil concentrates for postemergence applications.</li> <li>Some temporary herbicidal leaf speckling may appear on the crop. This effect is transient and will NOT appear on new growth.</li> </ul>	
Soybean (all uses	(i)		<ul> <li>Do not apply more than 3.8 fl oz/acre (0.0050 lb ai/acre) per growing season to soybeans.</li> <li>Do not graze soybean forage or cut for hay within 7 days of last ET 2%SC Herbicide/Defoliant application.</li> <li>Do not harvest soybeans for grain within 70 days after last application of ET 2%SC Herbicide/Defoliant.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the listed higher rates for hard-to-control weeds.</li> </ul>	

Triticale; Whea	at		
Application	Pest	Rate/Acre	Directions for Use
Preplant Burndown	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz per acre (0.0090 lb ai/acre) per season for preplant burndown uses.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>
After Planting Before Crop Emergence	Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not apply more than 2.4 fl oz/acre (0.0032 lb ai/acre) per season after planting prior to emergence of crop.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> </ul>
Postemergence	Listed Broadleaf Weeds	0.7 to 1.4 fl oz/acre (0.0009 to 0.0019 lb ai/acre)	<ul> <li>ET 2%SC Herbicide/Defoliant can be applied from crop emergence to the appearance of the flag leaf. DO NOT apply ET 2%SC Herbicide/Defoliant to flag leaf foliage.</li> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz/acre (0.0019 lb ai/acre) per season for this use.</li> <li>The addition of a NIS adjuvant at a concentration of 0.25% is recommended for optimum weed control.</li> <li>Some temporary herbicidal leaf speckling may appear on the crop. This effect is transient and will NOT appear on new growth.</li> </ul>
Triticale; Wheat	(all uses)		<ul> <li>Do not apply more than 6.8 fl oz/acre (0.0090 lb ai/acre) per growing season for all preplant burndown applications.</li> <li>Do not apply more than 4.4 fl oz/acre (0.0058 lb ai/acre) per growing season for all after planting prior to crop emergence and postemergence uses.</li> <li>Do not harvest wheat or triticale for hay within 21 days of last ET 2%SC Herbicide/Defoliant application.</li> <li>Do not harvest wheat or triticale for grain within 60 days after last application of ET 2%SC Herbicide/Defoliant.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the listed higher rates for hard-to-control weeds.</li> </ul>

# Bearing and Nonbearing

# Grape

Olive

# Pome Fruits (Crop Group 11-10)

apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these

# **Pomegranate**

# **Stone Fruits (Crop Group 12)**

apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune (fresh)

# Tree Nuts (Crop Group 14) Plus Pistachio

almond; beechnut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pecan; walnut, black and English

nut; pecan; walnut, black and English							
Application	Pest	Rate/	Maximum	Directions for Use			
		Acre	Applications Per Year				
Postharvest, Dormant, Prebloom	Listed Broadleaf Weeds	1.0 to 4.0 fl oz/acre (0.0013 to 0.0053 lb ai/acre)	Do not exceed 3 applications per season for this use.	<ul> <li>Do not apply by air for this use.</li> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other</li> </ul>			
	Sucker Management	3.0 to 4.0 fl oz/acre (0.0040 to 0.0053 lb ai/acre)	Do not exceed 2 applications per season for this use.	<ul> <li>adjuvants may be used.</li> <li>Use the higher rate for hard-to-control weeds.</li> <li>Do not exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per season for all postharvest, dormant, and prebloom applications combined.</li> <li>Do not exceed 12.0 fl oz/acre (0.0159 lb ai/acre)</li> </ul>			
In-Season	Listed Broadleaf Weeds	1.0 to 4.0 fl oz/acre (0.0013 to 0.0053 lb ai/acre)	Do not exceed a combined total of 3 applications per season for these uses.	<ul> <li>per season for all in season applications combined.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>For the management of undesirable sucker growth on the basal portion of trunks, root</li> </ul>			
	Sucker Management	3.0 to 4.0 fl oz/acre (0.0040 to 0.0053 lb ai/acre)		<ul> <li>sprouts and vine trunks, growth must be controlled when the tissue is young, immature and/or not hardened off.</li> <li>Avoid contact with green, uncallused bark of young trees or vines established less than one year unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees as damage will occur.</li> <li>Preharvest Interval (PHI): 0 days</li> </ul>			

# Bearing and Nonbearing

Date; Feijoa; Fig; Kiwifruit; Mango; Persimmon							
Application	Pest	Rate/ Acre	Maximum Applications Per Year	Directions for Use			
Postharvest Dormant Prebloom	Listed Broadleaf Weeds	1.0 to 4.0 fl oz/acre (0.0013 to 0.0053 lb ai/acre)	Do not exceed 3 applications per season for this use	<ul> <li>Do not apply by air for this use.</li> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> </ul>			
	Sucker Management	3.0 to 4.0 fl oz/acre (0.0040 to 0.0053 lb ai/acre)	Do not exceed 2 applications per season for this use	<ul> <li>COC adjuvants are recommended though other adjuvants may be used.</li> <li>Use the higher rate for hard-to-control weeds.</li> <li>Do not exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per season for all postharvest, dormant, and prebloom applications combined.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>For the management of undesirable sucker growth on the basal portion of trunks, root sprouts and tree/vine trunks, growth must be controlled when the tissue is young, immature, and/or not hardened off.</li> <li>Avoid contact with green, uncallused bark of young trees or vines established less than one year unless protected from spray contact by non-porous wraps, grow tubes, or waxed containers.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees, as damage will occur.</li> </ul>			

# Nonbearing Only

Date; Feijoa;	Date; Feijoa; Fig; Kiwifruit; Mango; Persimmon						
Application	Pest	Rate/ Acre	Maximum Applications Rate/Year	Directions for Use			
In-Season	Listed Broadleaf Weeds	1.0 to 4.0 fl oz/acre (0.0013 to 0.0053 lb ai/acre)	Do not exceed a combined total of 2 applications per season for these uses.	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Do not apply by air for this use.</li> <li>Do not exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per season for all in season applications combined.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control.</li> </ul>			
	Sucker Management	3.0 to 4.0 fl oz/acre  (0.0040 to 0.0053 lb ai/acre)		<ul> <li>Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees, as damage will occur.</li> <li>Avoid contact with green, uncallused bark of young trees or vines, established less than one year, unless protected from spray contact by non-porous wraps, grow tubes, or waxed containers.</li> <li>Use the higher rate for hard-to-control weeds.</li> <li>For the management of undesirable sucker growth on the basal portion of trunks, root sprouts and tree/vine trunks growth must be controlled when the tissue is young, immature and/or not hardened off.</li> </ul>			

**Bulb Vegetables (Crop Group 3)** – garlic, bulb; garlic, great-headed; leek; onion, dry bulb and green; onion, Welsh; shallot

**Cereal Grains (Crop Group 15)** - barley; buckwheat; corn; millet, pearl; millet, proso; oats; popcorn; rice; rye; sorghum (milo); teosinte; triticale; wheat; wild rice

**Brassica (Cole) Leafy Vegetables (Crop Group 5)** - broccoli; broccoli, Chinese (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens

Cucurbit Vegetables (Crop Group 9) — chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (including hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp. (including balsam apple, balsam pear, bitter melon, Chinese cucumber); muskmelon (including true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); pumpkin; squash, summer; squash, winter (including butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon

**Fruiting Vegetables (Except Cucurbits) (Crop Group 8)** - eggplant; groundcherry (*Physalis* spp.); pepino; pepper (including bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); tomatillo; tomato

**Leafy Vegetables (Except Brassica Vegetables) (Crop Group 4)** - amaranth (leafy, Chinese spinach, tampala); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard

Legume Vegetables, Succulent or Dried (Crop Group 6) – bean (*Lupinus* spp.) (including grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (*Phaseolus* spp.) (including field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (*Vigna* spp.) (including adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava bean); chickpea (garbanzo bean); guar; jackbean; lablab bean; lentil; pea (*Pisum* spp.) (including dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean

**Oilseed Group (Crop Group 20)** - borage; calendula; castor oil plant; Chinese tallowtree; cottonseed; crambe; cuphea; echium; euphorbia; evening primrose; flax seed; gold of pleasure; hare's ear mustard; jojoba; lesquerella; lunaria; meadowfoam; milkweed; mustard seed; niger seed; oil radish; poppy seed; rapeseed [canola]; rose hip; safflower; sesame; stokes aster; sunflower; sweet rocket; tallowwood; tea oil plant; vernonia; cultivars, varieties, and/or hybrids of these

Root and Tuber Vegetables (Crop Group 1) - arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; beet, garden; beet, sugar; burdock, edible; canna, edible; carrot; cassava, bitter and sweet; celeriac; chayote (root); chervil, turnip-rooted; chicory; chufa; dasheen (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; sweet potato; tanier; turmeric; turnip; yam bean; yam, true

# Sugarcane

Application	Pest	Rate/Acre	Directions for Use
Preplant	Listed	0.7 to 2.4	Apply in a minimum of 5 gallons water per acre by air or 10
Burndown	Broadleaf	fl oz/acre	gallons spray solution per acre by ground.
	Weeds		The addition of a COC adjuvant at a concentration of 1% to
		(0.0009 to	2% is recommended for optimum weed control. Use the
		0.0032 lb	higher COC rate for larger labeled weed species or in low
		ai/acre)	moisture conditions.
			COC adjuvants are recommended, though other adjuvants
			may be used.
			Use the higher rate for hard-to-control weeds.

	Refer to Rotational Crop Restrictions table.
	<ul> <li>Do not make more than 3 applications or exceed 6.8 fl oz/acre</li> </ul>
	(0.0090 lb ai/acre) per season.
	<ul> <li>Allow a minimum of 30 days between applications for this use.</li> </ul>

# **SPOT TREATMENT**

For spot treatment to listed broadleaf weeds or for sucker management, refer to the information below to determine the amount of ET 2%SC Herbicide/Defoliant to add to a tank. Spray using a pressure (pumpup) sprayer (or similar application equipment) until wet but prior to runoff. Use information for rates, concentrations, water volumes, and timing and frequency of application can be found in the Rate/Acre and Directions for Use columns in the APPLICATION AND DOSAGE tables. Please refer to and follow all precautions and restrictions under Directions for Use for the crop to be treated.

# Fluid oz of ET 2%SC to add to sprayer tank

Sprayer tank capacity (gallons)	Spray volume (gallons/A)	fluid oz ET 2%SC to add per tank for a rate of 1.0 fl oz/A (0.0013 lb ai/A)	fluid oz ET 2%SC to add per tank for a rate of 4.0 fl oz/A (0.0053 lb ai/A)
	20	0.05	0.20
1	30	0.03	0.13
	40	0.03	0.10
	20	0.15	0.60
3	30	0.10	0.40
	40	0.08	0.30
	20	0.25	1.00
5	30	0.17	0.67
	40	0.13	0.50
	20	0.50	2.00
10	30	0.33	1.33
	40	0.25	1.00

# **Formula**

Fluid oz Venue to add to sprayer tank =  $\frac{\text{Application rate} \times \text{Sprayer tank capacity}}{\text{Spray volume}}$ 

# Example Calculation for 1 gallon sprayer tank capacity

Fluid oz Venue to add to sprayer tank =  $\frac{4.0 \text{ fl oz /A} \times 1 \text{ gallon}}{40 \text{ gallons/A}}$ 

= 0.10 fl oz

where: Application rate = 4.0 fl oz/A

Sprayer tank capacity = 1 gallon Spray volume = 40 gallons/A

# **Example Calculation for 5 gallon sprayer tank capacity**

Fluid oz Venue to add to sprayer tank =  $\frac{4.0 \text{ fl oz /A} \times 5 \text{ gallons}}{40 \text{ gallons/A}}$ 

= 0.50 fl oz

where: Application rate = 4.0 fl oz/A

Sprayer tank capacity = 5 gallons Spray volume = 40 gallons/A

Pasture and Rangeland				
Pest	Rate/Acre	Directions for Use		
Listed Broadleaf Weeds	1.0 to 3.5 fl oz/acre (0.0013 to 0.0046 lb ai/acre)	<ul> <li>Apply in a minimum of 2 gallons water per acre by air or 10 gallons water per acre by ground for this application.</li> <li>The addition of a crop oil or spray tank adjuvant at a concentration of 0.5% to 1.0% is recommended for optimum weed control.</li> <li>Allow a minimum of 14 days between applications for this use.</li> <li>Do not make more than 2 applications or exceed 7.0 fl oz/acre (0.0093 lb ai/acre) per season for this use.</li> <li>Livestock may graze treated areas as soon as the spray solution has dried on the foliage.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the higher rate for hard-to-control weeds.</li> </ul>		

Fallow Bed a	Fallow Bed and Crop Stubble					
Application	Pest	Rate/	Directions for Use			
		Acre				
Preplant Burndown	Listed Broadleaf Weeds	0.7 to 4.0 fl oz/acre (0.0009 to 0.0053 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per year.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the higher rate for hard-to-control weeds.</li> </ul>			

	Non-Cropland, Uncultivated Agricultural Areas, Conservation Reserve Program Land/Federal Set-Aside Acreage* (Non Food Producing)						
Pest	Rate/Acre	Directions for Use					
Listed Broadleaf Weeds	0.7 to 4.0 fl oz/acre (0.0009 to 0.0053 lb ai/acre)	<ul> <li>Apply in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz/acre (0.0090 lb ai/acre) per year.</li> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is recommended for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are recommended, though other adjuvants may be used.</li> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the higher rate for hard-to-control weeds.</li> <li>Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.</li> </ul>					

<sup>\*</sup>Follow federal, state and local rules for use on grass and hay.

# **Noncrop Weed Control:**

Airports and Airfields, Commercial Plants, Storage and Lumber Yards, Fence Lines and Fence Rows, Farmyards and Farm Buildings, Barrier Strips and Firebreaks, Equipment Areas, Railroads, Roadside and Utility Rights-Of-Way, Fuel Tank Farms and Pumping Stations, Dry Ditches and Ditchbanks, Vacant Lots, and Similar Agricultural and Industrial Non-Crop Sites

Pest	Rate/Acre	Directions for Use
rest	RaterAcre	
Listed	0.7 to 4.0	<ul> <li>Apply in a minimum of 20 to 40 gallons spray solution per acre by</li> </ul>
Broadleaf	fl oz/acre	ground.
Weeds		Avoid contact with desirable vegetation.
	(0.0009 to	<ul> <li>The addition of a COC adjuvant at a concentration of 1% to 2% is</li> </ul>
	0.0053 lb	recommended for optimum weed control. Use the higher COC rate for
	ai/acre)	larger labeled weed species or in low moisture conditions.
		COC adjuvants are recommended, though other adjuvants may be used.
		Do not make more than 3 applications or exceed 12.0 fl oz/acre (0.0159)
		lb ai/acre) per year.
		Use the higher rate for hard-to-control weeds.
		For applications to ornamental plantings, do not allow people (other than
		the applicator) or pets on treatment area during the application and until
		sprays have dried.

# ESTABLISHED ORNAMENTAL TURF LAWNS (RESIDENTIAL, INDUSTRIAL, AND INSTITUTIONAL), PARKS, CEMETERIES, ATHLETIC FIELDS, GOLF COURSES (FAIRWAYS, APRONS, TEES, AND ROUGHS), SOD FARMS, AND SIMILAR TURF AREAS

For applications to ornamental turf, do not allow people (other than the applicator) or pets on treatment area during the application and until sprays have dried. Do not make more than 3 applications or exceed 13.6 fl oz/A (0.0181 lb ai/A) per year. Allow a minimum of 30 days between applications.

# **Spray Concentrate**

Make an appropriate amount of spray concentrate for the area to be treated by adding 10 fl oz of ET 2%SC Herbicide/Defoliant to 120 fl oz of water (e.g., 1.25 fl oz ET 2%SC Herbicide/Defoliant to 15 fl oz water). Use the appropriate amount of concentrate as specified in the dosage tables below for application by pressure (pump-up) sprayer, hose-end applicator, or similar application equipment.

# **Spot treatment: Pressure sprayer (Pump-up Sprayer)**

Adjust spray nozzle to give coarse spray. Aim at center of weed and spray to wet. A repeat application may be required for hard-to-kill broadleaf weeds. Do not use a hose-end sprayer for spot treatments.

Turf Species	Rate/Acre	Amount of Spray Concentrate (fluid ounces)	Amount of water to be applied (gallons)	Area treated (square feet)
Cool season grasses: bluegrass, fescue, ryegrass Warm season grasses:	3.4 fl oz/acre	1.0	4	1000
bahiagrass, common bermudagrass, centipedegrass, St. Augustine grass, zoysia grass	(0.0045 lb ai/acre)	0.5	2	500

# Entire lawn: Dial Type Hose-End Sprayer

Spray lawn using coarse spray. Apply evenly over area to be treated. One application should be sufficient. Effects begin to show after 24 to 48 hours with plant death occurring within 7 to 14 days.

- 1) Measure the total square footage area to be sprayed. To determine the total square foot area, multiply the length by the width of the lawn area to be treated. Subtract square footage of non-treatment areas including flower beds, shrub beds, driveways and sidewalks.
- 2) The application rate of this product is indicated in the following table. Add the appropriate amount of this product to the spray bottle, [jar], [reservoir], as indicated in the table depending on the lawn area to be treated.
- 3) Set the dial to the correct fluid ounce setting mix rate indicated in the following table.
- 4) Connect the hose, turn on water and spray evenly over the lawn treatment area.
- 5) Monitor the spray solution level in the spray bottle, [jar], [reservoir], to gauge coverage.

Turf Species	Rate/Acre	Area to be Treated (square feet)	Amount of spray concentrate (fluid ounces)	Dial-type Hose-end sprayer mix setting (fl oz per gallon)
Cool season grasses:	3.4 fl oz/acre	1000	1.0	
bluegrass, fescue,	(0.0045 lb	5000	5.0	2.0 fl oz
ryegrass	a.i./acre)	8000	8.0	

Broadcast Application: Spray using coarse spray. Apply evenly over area to be treated.

Turf Species	Rate/Acre	Amount of Spray Concentrate (fluid ounces)	Area treated (square feet)
Cool season grasses:		1.0	1000
bluegrass, fescue, ryegrass;	3.4 fl oz/acre (0.0045 lb a.i./acre)	5.0	5000
Warm season grasses: bahiagrass, common bermudagrass, centipedegrass, St Augustine grass, zoysia grass		8.0	8000

# PRECAUTIONS FOR USE IN NURSERIES AND ORNAMENTAL PLANTINGS; SOD FARMS; CHRISTMAS TREES AND CONIFER PLANTATION SITE PREPARATION; ESTABLISHED ORNAMENTAL TURF

# **Turfgrass Tolerance**

Established turfgrasses tolerant to application of ET 2%SC Herbicide/Defoliant at labeled rates are listed below. For turfgrass species not listed on this label, the user should apply ET 2%SC Herbicide/Defoliant to a small test area to assure tolerance. A slight transitory yellowing or discoloration may occur on some sensitive turfgrass species under stress 3 to 5 days following application of ET 2%SC Herbicide/Defoliant at labeled rates. Recovery is typically 4 to 7 days from application.

Cool Season Turfgrasses (creeping bentgrass, Kentucky bluegrass, Rough bluegrass, tall fescue, perennial ryegrass). Cool season grasses, both newly seeded and established, are generally tolerant to application of ET 2%SC Herbicide/Defoliant at labeled rates. To evaluate tolerance of certain species, apply to a small test area before treating large areas to assure tolerance. Be aware and observe all label restrictions regarding turfgrass tolerance when ET 2%SC Herbicide/Defoliant is tank mixed with another product.

Warm Season Turfgrasses (common and hybrid bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass). Warm season turfgrasses listed above are generally tolerant to applications of ET 2%SC Herbicide/Defoliant at labeled rates. Centipedegrass may exhibit a slight

yellowing 3 to 7 days after application, however complete recovery is expected. To evaluate tolerance of certain species, apply to a small test area before treating large areas to assure tolerance. Be aware and observe all label restrictions regarding turfgrass tolerance when ET 2%SC Herbicide/Defoliant is tank mixed with another product.

# Newly Seeded, Sodded, or Sprigged Turfgrass

ET 2%SC Herbicide/Defoliant may be applied to newly seeded, sodded, or sprigged turfgrass that is established and not subject to impending stress due to moisture, temperature, or other cultural practices. Areas treated with ET 2%SC Herbicide/Defoliant may be seeded or overseeded one day following application.

# **Dormant Turfgrass**

Applications of ET 2%SC Herbicide/Defoliant to dormant warm season turfgrasses are permitted. Avoid applications when warm season turfgrasses are transitioning into or out of dormancy.

For applications to ornamental turf and plantings, do not allow people (other than the applicator) or pets on treatment area during application and until sprays have dried (refer to Nonagricultural Use Requirements box). Apply ET 2%SC Herbicide/Defoliant at rates specified in the dosage table below for control of broadleaf weeds. ET 2%SC Herbicide/Defoliant is a broadleaf contact herbicide. ET 2%SC Herbicide/Defoliant may be tank mixed with other registered grass herbicides for control of grassy weeds. **Avoid contact with desirable vegetation.** 

# **Spray Volume**

ET 2%SC Herbicide/Defoliant is a contact herbicide that causes herbicidal symptoms only to plant parts that come into contact with spray applications. Therefore, proper spray volume and uniform coverage are important to maximize efficacy of ET 2%SC Herbicide/Defoliant. Uniform sprays should be applied at 20 to 200 gallons/A (0.5 to 4.5 gallons per 1000 sq. ft). Higher spray volumes should be used to target high weed populations and/or weeds contained in dense turfgrass canopies.

# **Use of Adjuvants**

Addition of surfactants (spreaders/stickers) to the spray solution will improve efficacy and contact activity of ET 2%SC Herbicide/Defoliant. Follow manufacturer's recommended use rates for specific sites.

Use	Rate/Acre	Directions for Use
Nursery and ornamental plantings Sod farms	When not tank mixing with other herbicides: Apply ET 2%SC Herbicide/Defoliant at rates of 1.0 to 4.0 fluid ounces per acre (0.0013 to 0.0053 lb ai/acre) in 20 to 40 GPA for control of seedling, non-mature winter and summer annual weeds and/or for temporary burndown of weeds listed in <i>Weeds Controlled</i> . Tank mixes including other broadleaf herbicides with ET 2%SC Herbicide/Defoliant may be needed for control of larger winter and summer annual weeds.	<ul> <li>Do not make more than 3 applications or exceed 13.6 fl oz/A (0.0181 lb ai/A) per year using ground equipment.</li> <li>Allow a minimum of 30 days between applications.</li> <li>Do not apply by air.</li> <li>Do not apply when environmental conditions favor spray drift or poor spray coverage.</li> <li>Avoid spray drift onto nontarget susceptible plants such as vegetables, flowers, ornamental, trees, shrubs, and other desirable plants.</li> <li>Do not apply to lawns or turf where clovers and carpetgrass are desirable.</li> </ul>
Christmas trees and conifer plantation site preparation Established Ornamental turf	When tank mixing with other herbicides: Apply ET 2%SC Herbicide/Defoliant at rates of 0.7 to 1.5 fluid ounces per acre (0.0009 to 0.0020 lb ai/acre) in tank mix combinations with herbicides registered for use such as amines, esters, and salts of 2,4-D, chloroprop, dicamba, mecoprop, MCPA, triclopyr, fluroxypyr, and various combination of these products for control of annual weeds and perennial weeds listed in <i>Weeds Controlled</i> . Residual, long-term control of the target weeds is as defined by the labeling of the companion product. For tank mixing with herbicides follow the tank mix directions.	

# **Backpack Sprayer Dosage Chart**

For use in backpack sprayers having tank capacity of 3 to 5 gallons, accurate calibration and measurement of the appropriate amount of product is important to deliver the desired rate of ET 2%SC Herbicide/Defoliant. Use the chart below to determine the quantity of ET 2%SC Herbicide/Defoliant to be added to a backpack sprayer having a capacity of 3 to 5 gallons to equal a 1.5 fl oz/A (0.0020 lb ai/A) rate.

Backpack tank capacity (gallons)	Spray volume (gallons/A)	fluid oz product per tank for 1.5 fl oz/A	ml product per tank for 1.5 fl oz/A
3	20	0.23	6.6
	30	0.15	4.4
	40	0.11	3.3
4	20	0.30	8.9
	30	0.20	5.9
	40	0.15	4.4
5	20	0.38	11.1
	30	0.25	7.4
	40	0.19	5.5

For smaller volume sprayers less than three (3) gallons in size, measure 0.03 to 0.07 fl. oz. (1 to 2.1 ml) of ET 2%SC Herbicide/Defoliant per one (1) gallon of water when tank mixing with other herbicides to equal a 1.5 fl oz/A (0.0020 lb ai/A) rate. For specific measurements based on spray volume (gallons/A), see the table below.

Spray Volume (gallons/A)	fluid oz product per gallon water for 1.5 fl. oz/A	ml product per gallon water for 1.5 fl. oz/A
20	0.07	2.1
30	0.05	1.4
40	0.03	1.0

# STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original container, and keep tightly closed when not in use. Store in a cool, dry place.

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

# **Container Handling:**

# [Nonrefillable plastic container (Less than 5 gallons)]

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 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

# [Nonrefillable plastic container (Greater than 5 gallons)]

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. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

# [Nonrefillable metal container (Greater than 5 gallons)]

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. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

# [Refillable plastic container]

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

# [Refillable metal container]

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

# IMPORTANT: READ BEFORE USE

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