

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 18, 2019

William R. Berti, Manager Regulatory Affairs Nichino America 4550 Linden Hill Road, Suite 501 Wilmington, DE 19808

Subject: PRIA Label Amendment – Adding Cottonseed subgroup 20C; Fruit, small, vine

climbing, except fuzzy kiwi, subgroup 13-07F; Fruit, stone, group 12-12; Nut, Tree, group 14-12; Tropical and subtropical, small fruit, edible peel, subgroup

23A; Vegetable, tuberous and corm, subgroup 1C Product Name: ET 2%SC Herbicide/Defoliant

EPA Registration Number: 71711-25

Application Date: 4/16/18

Decision Number: 541126 and 541127

# Dear Dr 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)(A), 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 identified below:
  - a. Pyraflufen-ethyl GDCI-03009-1468

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

New Use PRIA Conditional v.20150320

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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 Nathan Mellor by phone at 703-347-8562, or via email at <a href="mailto:mellor.nathan@epa.gov">mellor.nathan@epa.gov</a>.

Shaja B. Joyner, Product Manager 20

Fungicide-Herbicide Branch Registration Division 7505P

Enclosure

PYRAFLUFEN-ETHYL GROUP 14 HERBICIDE

# ET® 2%SC Herbicide/Defoliant

<b>Alternate</b>	brand	name:	<b>Venue</b> ®	Herbicide
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Alternate brand name: Octane® 2%SC Herbicide

**Octane Herbicide** 

A Nonselective Contact Herbicide for Broadleaf Weed Control and for

**Control of Silvery Thread Moss** 

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

EPA Reg. No. 71711-25	EPA Est. No.
Contains 0.17 lb pyraflufen-ethyl per gallon	
TOTAL:	100.0%
OTHER INGREDIENTS:	98.0%
-fluorophenoxy]-, ethyl ester	2.0%
[2-chloro-5-[4-chloro-5-(difluoromethoxy)-1-methyl-1H-pyrazol-3-yl]-4	
Pyraflufen-ethyl: Acetic acid,	
ACTIVE INGREDIENT:	

# KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID
If on skin	Take off contaminated clothing.
or clothing	Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.
_	HOTLINE NUMBER
treatment. For a	t container or label with you when calling a poison control center or doctor or going for dditional information on this pesticide product, including human health concerns and noies, call 1-800-348-5832. In case of fire or spills, information may be obtained by I-9300.
	Net Contents:
	[Manufactured in,] [formulated in,] [and] [packaged in] for:  Nichino America, Inc.  4550 Linden Hill Road, Suite 501

Wilmington, DE 19808

888-740-7700

ACCEPTED

09/18/2019

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

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), and/or Viton™)

#### **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.

#### **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.

# **USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

# **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
- Shoes plus socks
- Chemical resistant gloves

#### 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 and bryophitic 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
<ul> <li>Corn</li> <li>Cottonseed Subgroup (Crop Subgroup 20C)</li> <li>Hops</li> <li>Pome Fruit Group (Crop Group 11-10)</li> <li>Pomegranate</li> <li>Small Fruit Vine Climbing Subgroup Except Fuzzy Kiwifruit (Crop Group 13-07F)</li> <li>Soybean</li> <li>Stone Fruit Group (Crop Group 12-12)</li> <li>Tree Nut Group (Crop Group 14-12)</li> <li>Triticale; Wheat</li> <li>Tropical and Subtropical, Small Fruit, Edible Peel Subgroup (Crop Subgroup 23A)</li> <li>Tuberous and Corm Vegetable Subgroup (Crop Subgroup 1C)</li> </ul>	0 days following application
<ul> <li>Brassica (Cole) Leafy Vegetables (Crop Group 5)</li> <li>Bulb Vegetable Group (Crop Group 3)</li> <li>Cereal Grains Group (Crop Group 15) (except Corn, Triticale, Wheat; see 0-day plantback interval above)</li> <li>Cucurbit Vegetables (Crop Group 9)</li> <li>Fruiting Vegetable (Except Cucurbits) (Crop Group 8)</li> <li>Leafy Vegetables (Except Brassica Vegetables) Group (Crop Group 4)</li> <li>Legume Vegetables (Succulent or Dried) (Crop Group 6) (except Soybean; see 0-day plantback interval above)</li> <li>Oilseed Group (Crop Group 20) (except Cottonseed Subgroup 20C; see 0-day plantback interval above)</li> <li>Root and Tuber Vegetables (Crop Group 1) (except Crop Subgroup 1C - see 0-day plantback interval above)</li> <li>Sugarcane</li> </ul>	1 day following preplant burndown application
All other rotational crops	<b>Do not</b> plant for 30 days following the last 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*	Ladvathumb	Redmaid
	Ladysthumb	
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, GMO	Pigweed, redroot	Velvetleaf
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

# **BRYOPHITIC WEEDS CONTROLLED**

Silvery thread moss (non-vascular plant)

# WEED RESISTANCE-MANAGEMENT

For resistance management, ET 2%SC Herbicide/Defoliant is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to ET 2%SC Herbicide/Defoliant and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

Proactively implement diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides. 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 application instructions 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.

To delay herbicide resistance take one or more of the following steps:

- Always apply ET 2%SC Herbicide/Defoliant at a minimum of 0.7 fl oz (0.0009 lb active ingredient) formulated product per acre.
- Rotate the use of ET 2%SC Herbicide/Defoliant or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in [a field] [an area].
- Use tank mixtures with herbicides from a different group if such use is permitted; where
  information on resistance in target weed species is available, use the less resistance-prone
  partner at a rate that will control the target weed(s) equally as well as the more resistance-prone
  partner. Consult your local extension service or certified crop advisor if you are unsure as to
  which active ingredient is currently less prone to resistance.
- [Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.] {OR for non-crop and permanent crop uses}
- [Adopt an integrated weed-management program for herbicide use that includes scouting and
  uses historical information related to herbicide use, and that considers tillage (or other
  mechanical control methods), cultural (e.g., higher plant seeding rates; precision fertilizer
  application method and timing to favor desirable plants and not the weeds), biological (weedcompetitive plant varieties) and other management practices]
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method [such as hoeing or tillage]. Prevent movement of resistant weed seeds to other [fields] [areas] by cleaning [harvesting and tillage] equipment when moving between [fields] [areas] [and planting clean seed].
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or [certified crop] [pest control] advisors for additional
  pesticide resistance-management and/or integrated weed-management recommendations for
  specific [crops] [types of plants] and weed biotypes.
- Report lack of performance to registrant or their representative

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Contact your local sales representative, [certified crop] [pest control] advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.

#### **TANK MIXTURES**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and application instructions on all product labels involved in tank mixing. Users must follow the most restrictive application nstructions and precautionary statements of each product in the tank mixture.

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:** Test compatibility of ET 2%SC Herbicide/Defoliant in any tankmix combination 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 specified 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%SC 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.

# MANDATORY SPRAY DRIFT DIRECTIONS

# [Aerial Applications

- **Do not** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a fine or coarser spray (ASABE S572.1).
- The boom length must not exceed 75% of the wingspan for airplanes or 90% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.]

# **Ground Applications**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use fine or coarser spray quality (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

# **Boom-less Ground Applications**

- Applicators are required to use fine or coarser spray quality (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

# **Spray Drift Advisories**

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

# Controlling Droplet Size - Ground Boom

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift.
   Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- o Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

# [Controlling Droplet Size - Aircraft

 Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.]

# • BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

# • [RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.]

# • SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### • TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

# • TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

# WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY

#### WIND CONDITIONS

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

- Boom-less Ground Applications:
  - Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.
- Handheld Technology Applications:
  - o Take precautions to minimize spray drift.

#### **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. Residues of ET 2%SC Herbicide/Defoliant remaining in inadequately cleaned equipment and released in subsequent applications can 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.
- Dispose of all cleaning solutions, rinsate, and washwaters in accordance with federal, state, and local regulations.

# **CROP USE DIRECTIONS**

**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

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

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

**Cucurbit Vegetables (Crop Group 9)** – chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); muskmelon (includes 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 (includes crookneck squash, scallop squash, straightneck squash, vegetable marron, zucchini); squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); watermelon

Fruiting Vegetables (Except Cucurbits) (Crop Group 8) - eggplant; groundcherry; pepino; pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); tomatillo; tomato

**Leafy Vegetables (Except Brassica Vegetables) Group (Crop Group 4)** - amaranth (leafy amaranth, Chinese spinach, tampala); arugula (Roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland (yellow rocket, winter cress); dandelion; dock (sorrel); endive (escarole); fennel, Florence (finochio); lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine (Malabar spinach, Indian spinach); 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 (hacyinth bean); lentil; pea (*Pisum* spp.) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); pigeon pea; 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 (celery root); chayote (root); chervil, turnip-rooted; chicory; chufa; dasheen (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; radish; radish, oriental (daikon); rutabaga; salsify (oyster plant); salsify, black; salsify, Spanish; skirret; sweet potato; tanier (cocoyan); turmeric; turnip; yam bean (jicama, manioc pea); yam, true

Sugarcane

Application	Pest	Rate/Acre	Application Instructions
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 water per acre by air or 10 gallons spray solution per acre by ground.</li> <li>Use of a Crop Oil Concentration (COC) adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> <li>Use the higher rate for hard-to-control weeds.</li> </ul>
			<ul> <li>Refer to Rotational Crop Restrictions table.</li> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz (0.0090 lb ai) per acre per year for this use.</li> </ul>

Corn			
field corn, popco			
Application Preplant Burndown	Pest Listed Broadleaf Weeds	0.7 to 2.4 fl oz/acre  (0.0009 to 0.0032 lb ai/acre)	<ul> <li>Application Instructions</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>Use of a COC adjuvant at a concentration of 1% to 2% is advised for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz (0.0090 lb ai) per acre per year for this use.</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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for this use.</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>Some temporary herbicidal leaf speckling may appear on the crop. This effect is transient and will NOT appear on new growth.</li> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 1.4 fl oz (0.0019 lb ai) per acre in a single application for all postemergence applications to corn.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz (0.0019 lb ai) per acre per year for all postemergence applications to corn.</li> <li>Do not use crop oils or COC adjuvants for postemergence</li> </ul>
			<ul> <li>applications.</li> <li>Do not apply postemergence to sweet corn.</li> </ul>

Application	Pest	Rate/Acre	Application Instructions
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>Make directed or drop nozzle applications when the corn has achieved a sufficient height for the spray to be directed beneath the corn leaves.</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>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not use crop oils or COC adjuvants for postemergence applications to corn.</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>Do not exceed 1.4 fl oz (0.0019 lb ai) per acre in a single application for all postemergence applications to corn.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz (0.0019 lb ai) per acre per year for all postemergence applications to corn.</li> </ul>
Corn (all uses)			Refer to Rotational Crop Restrictions table.     Use the listed higher rates for hard-to-control weeds.
			<ul> <li>USE RESTRICTIONS</li> <li>Do not exceed 6.8 fl oz (0.0090 lb ai) per acre per year for all preplant burndown applications.</li> <li>Do not exceed 3.8 fl oz (0.0050 lb ai) per acre per year for all after planting before crop emergence, and postemergence uses.</li> <li>Do not harvest corn for silage within 50 days after last application.</li> <li>Do not harvest corn for grain or stover within 90 days after last application.</li> </ul>

#### **Cottonseed Subgroup (Crop Subgroup 20C)** Cottonseed; cultivars, varieties, and/or hybrids of these Application Pest Rate/Acre **Application Instructions** Preplant Listed 0.7 to 2.4 • Apply in a minimum of 5 gallons spray solution per acre Burndown Broadleaf fl oz/acre by air or 10 gallons spray solution per acre by ground. Weeds Use of a COC adjuvant at a concentration of 1% to 2% After Planting (0.0009 tois directed for optimum weed control. Use the higher 0.0032 lb Before Crop COC rate for larger labeled weed species or in low Emergence ai/acre) moisture conditions. COC adjuvants are advised, although other adjuvants may be used. **USE RESTRICTIONS** Allow a minimum of 30 days between applications for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for after planting before crop emergence. 0.7 to 2.4 Postemergence Listed Apply to cotton having less than 3 inches of stem bark (Hooded) Broadleaf fl oz/acre using hooded ground equipment only. Weeds Avoid contact with desirable vegetation. (0.0009 to **USE RESTRICTIONS** 0.0032 lb Allow a minimum of 30 days between applications for ai/acre) this use. Do not apply by air for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for this use. Postemergence Listed 0.7 to 1.4 Apply when the cotton has attained an average height of Broadleaf fl oz/acre (Layby) 18 inches or more and having at least 3 inches of stem Weeds bark using hooded or post-directed ground spray (0.0009 to equipment only. 0.0019 lb Avoid contact with desirable vegetation. ai/acre) **USE RESTRICTIONS** Allow a minimum of 30 days between applications for this use. • Do not apply by air for this use. • Do not exceed 1.4 fl oz (0.0019 lb ai) per acre in a single application for this use. • Do not exceed 1.4 fl oz (0.0019 lb ai) per acre per year for this use.

Application	Pest	Rate/Acre	Application Instructions
Preconditioning		0.42 to	• ET 2%SC Herbicide/Defoliant may be used as a
		1.12 fl oz/acre	preconditioner to enhance the activity of a subsequent
		11 02/4016	defoliant application.  • Apply using 15 to 30 gallons of water per acre by ground
		(0.0006 to	or 5 gallons of water per acre by air.
		0.0015 lb	USE RESTRICTIONS
		ai/acre)	<ul> <li>Apply 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 directions.</li> </ul>
			• Do not exceed 1.12 fl oz (0.0015 lb ai) per acre in a
			single application for preconditioning uses.  • <b>Do not</b> make more than 2 applications or exceed 7.7 fl
			oz (0.0102 lb ai) per acre per year for all preconditioning and defoliation applications to cotton.
Defoliation	Defoliation	1.8 to 3.85	Apply when greater than 60% mature bolls have
	of Cotton	fl oz/acre	developed to produce desired yield.  • Adequate defoliation is achieved within 7 to 14 days,
		(0.0024 to 0.0051 lb ai/acre)	<ul> <li>Adequate defoliation is 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>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®, Finish®, Folex®, Ginstar®, Gramoxone®, and/or Roundup®.</li> </ul>
			USE RESTRICTIONS
			<ul> <li>Applications must be a minimum of 7 days apart.</li> <li>Do not exceed 3.85 fl oz (0.0051 lb ai) per acre in a single application for this use.</li> </ul>
			Do not make more than 2 applications or exceed 7.7 fl oz (0.0102 lb ai) per acre for all preconditioning and defoliation applications.
Cottonseed Sub	group (all us	es)	Refer to Rotational Crop Restrictions table.
			Use the listed higher rates for hard-to-control weeds.
			USE RESTRICTIONS
			Preharvest Interval (PHI): 7 days
			• <b>Do not</b> exceed 11.9 fl oz (0.0158 lb ai) per acre per year to cotton.

Hops			
Application	Pest	Rate/ Acre	Application Instructions
In-Season	Listed Broadleaf Weeds Sucker Management	2.0 to 4.0 fl oz/acre (0.0027 to 0.0053 lb ai/acre)	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Direct application to the lower 12-18 inches of the hops plant and extend out to approximately 20-40 inches from each side of the row.</li> <li>Calculate the rate on a treated acre basis as follows: assuming a plot length of 50 feet, calculations would be 1.5 feet (if 18 inch extension), 2 feet (if 24 inch extension) x 50 feet x 2 passes (one on each side of the vine).</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</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 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 vines established less than one year unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers.</li> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Preharvest Interval (PHI): 30 days.</li> <li>Do not apply by air for this use.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees as damage will occur.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> <li>Do not exceed a combined total of 2 applications per year for these uses.</li> <li>Do not exceed 8.0 fl oz (0.0106 lb ai) per acre per year for all applications combined.</li> </ul>

Soybean			
Application	Pest	Rate/Acre	Application Instructions
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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for these uses.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for all after planting before emergence applications.</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>Some temporary herbicidal leaf speckling may appear on the crop. This effect is transient and will NOT appear on new growth.</li> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 1.4 fl oz (0.0019 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz (0.0019 lb ai) per acre per year for this use.</li> <li>Do not use crop oils or COC adjuvants for postemergence applications.</li> </ul>
Soybean (all use	es)		<ul> <li>Refer to Rotational Crop Restrictions table.</li> <li>Use the listed higher rates for hard-to-control weeds.</li> <li>USE RESTRICTIONS</li> <li>Do not exceed 3.8 fl oz (0.0050 lb ai) per acre per year 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> </ul>

Triticale; Wh	Triticale; Wheat			
Application	Pest	Rate/Acre	Application Instructions	
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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> </ul>	
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz (0.0090 lb ai) per acre per year for this use.</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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> </ul>	
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use.</li> <li>Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for this use.</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>Use of a NIS adjuvant at a concentration of 0.25% is directed 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> <li>USE RESTRICTIONS</li> </ul>	
			<ul> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 1.4 fl oz (0.0019 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 2 applications or exceed 1.4 fl oz (0.0019 lb ai) per acre per year for this use.</li> </ul>	

Application	Application Instructions
	Refer to Rotational Crop Restrictions table.
Triticale; Wheat (all uses)	Use the listed higher rates for hard-to-control weeds.
	USE RESTRICTIONS
	• <b>Do not</b> apply more than 6.8 fl oz (0.0090 lb ai) per acre per year for all preplant burndown applications.
	• <b>Do not</b> apply more than 4.4 fl oz (0.0058 lb ai) per acre per year for all after planting prior to crop emergence and postemergence uses.
	<ul> <li>Do not harvest wheat or triticale for hay within 21 days of last ET 2%SC Herbicide/Defoliant application.</li> </ul>
	Do not harvest wheat or triticale for grain within 60 days after last application of ET 2%SC Herbicide/Defoliant.

Tuberous and Corm Vegetables Subgroup (Crop Subgroup 1C) - Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen; ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; yam, true **Application** Pest Rate/Acre **Application Instructions** Preplant 0.6 to 2.4 Listed • Apply in a minimum of 10 gallons spray solution per acre Burndown Broadleaf fl oz/acre by ground or 5 gallons water per acre by air. Weeds • Use of a COC adjuvant at a concentration of 1% to 2% is (0.0008 to directed for optimum weed control. Use the higher COC 0.0032 lb rate for larger labeled weed species or in low moisture ai/acre) conditions. COC adjuvants are advised, though other adjuvants may be used. **USE RESTRICTIONS**  Allow a minimum of 30 days between applications for this • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for this use. After Planting Listed 0.6 to 2.4 • Apply in a minimum of 5 gallons spray solution per acre by Broadleaf Before Crop fl oz/acre air or 10 gallons spray solution per acre by ground. Emergence Weeds • Use of a COC adjuvant at a concentration of 1% to 2% is (0.0008 to directed for optimum weed control. Use the higher COC 0.0032 lb rate for larger labeled weed species or in low moisture ai/acre) conditions. COC adjuvants are advised, although other adjuvants may be used. **USE RESTRICTIONS** • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre in a single application for this use. • Do not exceed 2.4 fl oz (0.0032 lb ai) per acre per year for this use.

Application	Pest	Rate/Acre	Application Instructions
Desiccation	Foliage and Vines	3.4 to 6.7 fl oz/acre	<ul> <li>Apply as a foliar spray in the early stage of crop senescence.</li> </ul>
	Listed Broadleaf Weeds	(0.0045 to 0.0089 lb ai/acre)	<ul> <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>Use higher water volumes in dense canopy conditions.</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> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Make 1 to 2 applications at a minimum 7-day interval.</li> <li>Do not exceed 6.7 fl oz (0.0089 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 2 applications or exceed 13.5 fl oz (0.0179 lb ai) per acre per year for desiccation.</li> <li>NOTE: The seasonal maximum is 13.5 fl oz (0.0179 lb ai) per acre for all applications (preplant burndown + after planting before crop emergence + dessication).</li> </ul>
All uses			<ul><li>Refer to Rotational Crop Restrictions table.</li><li>Use the listed higher rates for hard-to-control weeds.</li></ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Preharvest Interval (PHI): 7 days</li> <li>Do not exceed 13.5 fl oz (0.0179 lb ai) per acre per year for all preplant burndown, after planting prior to emergence, and desiccation applications combined.</li> </ul>

# **Bearing and Nonbearing**

**Pome Fruit Group (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**

**Small Fruit Vine Climbing Subgroup except Fuzzy Kiwifruit (Crop Group 13-07F) -** amur river grape; gooseberry; grape; kiwifruit, hardy; Maypop; schisandra berry; cultivars varieties, and/or hybrids of these.

**Stone Fruit Group (Crop Group 12-12) -** apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these

**Tree Nut Group (Crop Group 14-12)** - African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (Filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these

Tropical and Subtropical, Small Fruit, Edible Peel Subgroup (Crop Subgroup 23A) - acerola; African plum; agritos; almondette; appleberry; arbutus berry; bayberry, red; bignay; breadnut; cabeluda;

carandas-plum; Ceylon iron wood; Ceylon olive; cherry-of-the-Rio-Grande; Chinese olive, black; Chinese olive, white; chirauli-nut; cocoplum; desert-date; false sandalwood; fragrant manjack; gooseberry, abyssinian; gooseberry, Ceylon; gooseberry, otaheite; governor's plum; grumichama; guabiroba; guava berry; guava, Brazilian; guava, Costa Rican; guayabillo; illawarra plum; Indian-plum; Jamaica-cherry; jambolan; kaffir-plum; kakadu plum; kapundung; karanda; lemon aspen; mombin, yellow; monos plum; mountain cherry; olive; persimmon, black; pitomba; plum-of-Martinique; rukam; rumberry; sea grape; sete-capotes; silver aspen; water apple; water pear; water berry; wax jambu; cultivars, varieties, and hybrids of these commodities

Application	Pest	Rate/ Acre	Maximum Applications Per Year	Application Instructions
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 year for this use.	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</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 year for this use.	<ul> <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 vine trunks, growth must be controlled when the tissue is young, immature and/or not hardened</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 year for these uses.	off.  • 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.
	Sucker Management	3.0 to 4.0 fl oz/acre (0.0040 to 0.0053 lb ai/acre)		<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Preharvest Interval (PHI): 0 days</li> <li>Do not apply by air for this use.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for these uses.</li> <li>Do not exceed 6.8 fl oz (0.0090 lb ai) per acre per year for all postharvest, dormant, and prebloom applications combined.</li> <li>Do not exceed 12.0 fl oz (0.0159 lb ai) per acre per year for all in-season applications combined.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees as damage will occur.</li> </ul>

Application	Pest	Rate/ Acre	Maximum Applications Per Year	Application Instructions
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 year for this use	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture</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 year for this use	<ul> <li>conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</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> <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>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not apply by air for this use.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for these uses.</li> <li>Do not exceed 6.8 fl oz (0.0090 lb ai) per acre per year for all postharvest, dormant, and prebloom applications combined.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees,</li> </ul>

			Persimmon Maximum	
Application	Pest	Rate/Acre	Applications Rate/Year	Application Instructions
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 year for these uses.	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucke growth.</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed 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)		<ul> <li>COC adjuvants are advised, although other adjuvants may be used.</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>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>
				<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for these uses.</li> <li>Do not exceed 6.8 fl oz (0.0090 lb ai) per acre per year for all in-season applications combined.</li> <li>Do not apply by air for this use.</li> <li>Do not allow spray to drift onto</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 (pump-up) 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 Application Instructions columns in the CROP USE DIRECTIONS tables. Please refer to and follow all precautions and restrictions under Application Instructions 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**

 $Fluid\ oz\ ET\ 2\%SC\ to\ add\ to\ sprayer\ tank = \frac{Application\ rate\times Sprayer\ tank\ capacity}{Spray\ volume}$ 

# **Example Calculation for 1 gallon sprayer tank capacity**

Fluid oz ET 2%SC 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 ET 2%SC 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 an	d Rangeland	
Pest	Rate/Acre	Application Instructions
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>Use of a crop oil or spray tank adjuvant at a concentration of 0.5% to 1.0% is directed for optimum weed control.</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>
		<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 14 days between applications for this use.</li> <li>Do not exceed 3.5 fl oz (0.0046 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 2 applications or exceed 7.0 fl oz (0.0093 lb ai) per acre per year for this use.</li> </ul>

Fallow Bed	Fallow Bed and Crop Stubble			
Application	Pest	Rate/Acre	Application Instructions	
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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although 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>	
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz (0.0090 lb ai) per acre per year.</li> </ul>	

Non-Cropla	Non-Cropland, Uncultivated Agricultural Areas, Conservation Reserve Program				
Land/Fede	Land/Federal Set-Aside Acreage* (Non Food Producing)				
Pest	Rate/Acre	Application Instructions			
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>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although 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>			
		<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 6.8 fl oz (0.0090 lb ai) per acre per year.</li> </ul>			
* Follow fede	ral, state and	local rules for use on grass and hay.			

Noncrop We	ed Contro	м

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

Ditches and	Ditchbanks,	Vacant Lots, and Similar Agricultural and Industrial Non-Crop Sites		
Pest	Rate/Acre	Application Instructions		
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 20 to 40 gallons spray solution per acre by ground.</li> <li>Avoid contact with desirable vegetation.</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</li> <li>Use the higher rate for hard-to-control weeds.</li> <li>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.</li> </ul>		
		<ul> <li>USE RESTRICTIONS</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> <li>Do not make more than 3 applications or exceed 12.0 fl oz (0.0159 lb ai) per acre per year.</li> </ul>		

# Established Ornamental Turf Lawns (Residential, Industrial, and Institutional), Parks, Cemeteries, Athletic Fields, Golf Courses (Fairways, Aprons, Greens, Tees, and Roughs), and Sod Farms

**Do not** allow people (other than the applicator) or pets on treatment area during the application and until sprays have dried.

Pest	Rate/Acre	Application Instructions
Silvery Thread Moss	2.0 to 6.8 fl oz/acre (0.046 to 0.156 fl oz/1000 ft²) (0.0027 to 0.0090 lb ai/acre)	<ul> <li>For ground application, use a minimum of 40 gallons of water per acre.</li> <li>Multiple applications will be required for complete control.</li> </ul>
		<ul> <li>USE RESTRICTIONS</li> <li>Allow at least 14 days between applications.</li> <li>Do not exceed 6.8 fl oz (0.0090 lb ai) per acre in a single application for this use.</li> </ul>
Broadleaf weeds	1.0 to 4.0 fl. oz./ acre (0.023 to 0.092 fl oz/1000 ft²)	For ground application, use a minimum of 20 gallons of water per acre.
	(0.0013 to 0.0053 lb ai/acre)	<ul> <li>USE RESTRICTIONS</li> <li>Allow at least 30 days between applications for control of broadleaf weeds.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> </ul>
Turf Areas (all uses)		Use of a non-ionic surfactant at a rate of 0.25% v/v is directed to obtain best results.
		<ul> <li>USE RESTRICTIONS</li> <li>Do not apply by air.</li> <li>Do not exceed 13.6 fl oz (0.018 lb ai) per acre per year.</li> </ul>

# **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 sprayer, 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 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: Bentgrass, bluegrass, fescue, ryegrass	0.45	1.0	4	1000
Warm season grasses: bahiagrass, common bermudagrass, centipedegrass, St. Augustine grass, zoysia grass	3.4 fl oz/acre (0.0045 lb ai/acre)	0.5	2	500

# Formula

Amount of Spray Concentrate, fl. oz.

= (Application Rate)  $\times$  (Spray Concentrate Dilution)  $\times$  (Area to Treat)

× (Conversion Factor)

# Example Calculation: Amount of Spray Concentrate to treat 1000 sq ft

Amount of Spray Concentrate, fl. oz.

$$= \frac{3.4 floz}{A} \times \left(\frac{130 floz Spray Concentrate}{10 floz ET 2\%SC}\right) \times 1000 sq. ft. \times \frac{1 acre}{43560 sq ft}$$

$$=\frac{3.4 \times 13 \times 1000}{43560}$$

= 1.0 fl oz spray concentrate to treat 1000 sq. ft.

where:

Application rate = 3.4 fl oz/A

Spray Concentrate Dilution: = 130 fl oz Spray Concentrate/ 10 fl oz ET 2%SC

Area to Treat: = 1000 sq ft

Conversion Factor: = 1 acre/43560 sq ft

# Entire lawn: Dial Type Hose-End Sprayer

Spray lawn using coarse spray. Apply evenly over area to be treated. 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 spray concentrate 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. One gallon of mixed spray solution will cover approximately 2000 square feet.
- 5) Monitor the spray solution level in the spray bottle, [jar], [reservoir], to gauge coverage.

Turf Species	Application Rate	Area to Treat (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	
bentgrass, bluegrass,	(0.0045 lb	5000	5.0	2.0 fl oz
fescue, ryegrass	ai/acre)	8000	8.0	

# Formula

Amount of Spray Concentrate, fl. oz.

= (Application Rate)  $\times$  (Spray Concentrate Dilution)  $\times$  (Area to Treat)

× (Conversion Factor)

# **Example Calculation: fl oz Spray Concentrate to treat 5000 sq ft**

Amount of Spray Concentrate, fl. oz.

$$= \frac{3.4 \ fl \ oz}{A} \times \left(\frac{130 \ fl \ oz \ Spray \ Concentrate}{10 \ fl \ oz \ ET \ 2\%SC}\right) \times 5000 \ sq. ft. \times \frac{1 \ acre}{43560 \ sq \ ft}$$

= 5.0 fl oz spray concentrate to treat 5000 sq ft

where:

Application rate = 3.4 fl oz/A

Spray Concentrate Dilution: = 130 fl oz spray concentrate/10 fl oz ET 2%SC

Area to Treat: = 5000 sq ft

Conversion Factor: = 1 acre/43560 sq ft

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

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

# **Formula**

Amount of Spray Concentrate, fl. oz.

= (Application Rate)  $\times$  (Spray Concentrate Dilution)  $\times$  (Area to Treat)

 $\times$  (Conversion Factor)

# Example Calculation: fl oz Spray Concentrate to treat 8000 sq ft

Amount of Spray Concentrate, fl. oz.

$$= \frac{3.4 \ fl \ oz}{A} \times \left(\frac{130 \ fl \ oz \ Spray \ Concentrate}{10 \ fl \ oz \ ET \ 2\%SC}\right) \times \ 8000 \ sq.ft. \times \frac{1 \ acre}{43560 \ sq \ ft}$$

= 8.0 fl oz spray concentrate to treat 8000 sq ft

where:

Application rate = 3.4 fl oz/A

Spray Concentrate Dilution: = 130 fl oz spray concentrate/10 fl oz ET 2%SC

Area to Treat: = 8000 sq ft

Conversion Factor: = 1 acre/43560 sq ft

# Precautions for Use in Nurseries and Ornamental Plantings; Sod Farms; Christmas Trees and Conifer Plantation Site Preparation; Established Turf Areas

#### **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, 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 (bentgrass, Kentucky bluegrass, Rough bluegrass, tall fescue, perennial ryegrass). Assure tolerance of both newly seeded and established cool season grasses by applying ET 2%SC Herbicide/Defoliant at labeled rates to a small test area before treating large areas. 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). Assure tolerance to warm season turfgrasses listed above by applying ET 2%SC Herbicide/Defoliant at labeled rates to a small test area before treating large areas. Centipedegrass may exhibit a slight yellowing 3 to 7 days after application, however complete recovery is expected. 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.

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 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. Do not** apply to lawns or turf where clovers and carpetgrass are desirable.

#### 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. Apply uniform sprays at 20 to 200

gallons/A (0.5 to 4.5 gallons per 1000 sq. ft). Use higher spray volumes 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 manufacturers' instructions on use rates for specific sites.

Use	Rate/Acre	Application Instructions
Nursery and ornamental plantings  Sod farms  Christmas trees and conifer plantation site preparation  Established Ornamental turf	When not tank mixing with other herbicides: Apply ET 2%SC Herbicide/Defoliant at rates of 1.0 to 4.0 fl oz (0.0013 to 0.0053 lb ai) per acre in 20 to 40 GPA for control of seedling, non-mature winter and summer annual weeds and/or for temporary burndown of broadleaf weeds listed in <i>Broadleaf Weeds</i> Controlled. Tank mixes including other broadleaf herbicides with ET 2%SC Herbicide/ Defoliant may be needed for control of larger winter and summer annual broadleaf weeds.  When tank mixing with other herbicides: Apply ET 2%SC Herbicide/Defoliant at rates of 0.7 to 1.5 fl oz (0.0009 to 0.0020 lb ai) per 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 broadleaf annual weeds and perennial weeds listed in Broadleaf Weeds Controlled. 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.	USE RESTRICTIONS  • Allow a minimum of 30 days between applications for control of broadleaf weeds.  • Do not apply by air.  • Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use when not tank mixed with other herbicides.  • Do not exceed 1.5 fl oz (0.0020 lb ai) per acre in a single application for this use when tank mixed with other herbicides.  • Do not exceed 1.5 fl oz (0.0120 lb ai) per acre in a single application for this use when tank mixed with other herbicides.  • Do not exceed 13.6 fl oz (0.0181 lb ai) per acre per year using ground equipment.

# **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 (0.0020 lb ai) per acre rate.

Backpack tank capacity (gallons)	Spray volume (gallons/A)	fluid oz ET 2%SC per tank for 1.5 fl oz/A	mL ET 2%SC per tank for 1.5 fl oz/A	
	20	0.23	6.6	
3	30	0.15	4.4	
	40	0.11	3.3	
	20	0.30	8.9	
4	30	0.20	5.9	
	40	0.15	4.4	
	20	0.38	11.1	
5	30	0.25	7.4	
	40	0.19	5.5	

# Formula

Fluid oz ET 2%SC to add to sprayer tank =  $\frac{\text{Application rate} \times \text{Sprayer}}{\text{Tank capacity}}$ 

# **Example Calculation for 4 gallon sprayer tank capacity**

Fluid oz ET 2%SC to add to sprayer tank = 
$$\frac{(1.5 \text{ fl oz /A}) \times 4 \text{ gallon}}{30 \text{ gallons/A}}$$

= 0.20 fl oz

= 1.5 fl oz/Awhere: Application rate

= 4 gallon Sprayer tank capacity = 30 gallons/A Spray volume

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 (0.0020 lb ai) per acre rate. For specific measurements based on spray volume (gallons/A), see the table below.

Spray Volume (gallons/A)	fluid oz ET 2%SC per gallon water for 1.5 fl. oz/A	mL ET 2%SC per gallon water for 1.5 fl. oz/A
20	0.07	2.1
30	0.05	1.4
40	0.03	1.0

# Formula

Fluid oz ET 2%SC per gallon for 1.5 fl. oz./A =  $\frac{\text{Application rate} \times \text{Sprayer tank capacity}}{\text{Spray volume}}$ 

# **Example Calculation for 1 gallon sprayer tank capacity**

Fluid oz ET 2%SC to add to sprayer tank = 
$$\frac{(1.5 \text{ fl oz /A}) \times 1 \text{ gallon}}{30 \text{ gallons/A}}$$

= 0.05 fl oz

where: Application rate = 1.5 fl oz/ASprayer tank capacity = 1 gallon

Spray volume = 30 gallons/A

# STORAGE AND DISPOSAL

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

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

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

**CONDITIONS:** The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability, or otherwise.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT

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{Notes to Reviewer:

Optional text in [brackets]

{Note to Reviewer: This language will be on the front panel of the booklet affixed to the container:} See [inside] booklet for [First Aid,] [Precautionary Statements,] [and] [Application Instructions]

{Note to Reviewer: This language will be on the label permanently affixed to the container:}

See [inside] booklet for [First Aid,] [Precautionary Statements,] [and] [Application Instructions]

# SUPPLEMENTAL LABEL

**PYRAFLUFEN-ETHYL** 

**GROUP** 

14

HERBICIDE



EPA Reg. No. 71711-25

**CROP: Hops** 

ACCEPTED
09/18/2019
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under
EPA Reg. No. 71711-25

This supplemental label expires September 30, 2022 and must not be used or distributed after this date.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling and the EPA approved container label must be in the possession of the user at the time of application.

Read the label affixed to the container for VENUE herbicide before applying. Use of VENUE herbicide according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for VENUE herbicide. New use directions appear on this supplemental label that may be different from those that appear on the container label.

# **CROP USE DIRECTIONS**

Hops			
Application	Pest	Rate/ Acre	Application Instructions
In-Season	Listed Broadleaf Weeds Sucker Management	2.0 to 4.0 fl oz/acre (0.0027 to 0.0053 lb ai/acre)	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Direct application to the lower 12-18 inches of the hops plant and extend out to approximately 20-40 inches from each side of the row.</li> <li>Calculate the rate on a treated acre basis as follows: assuming a plot length of 50 feet: calculations would be 1.5 feet (if 18-inch extension), 2 feet (if 24 inch extension) x 50 feet x 2 passes (one on each side of the vine).</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</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 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 vines established less than one year unless protected from spray contact by nonporous wraps, grow tubes, or waxed containers.</li> </ul>
			<ul> <li>USE RESTRICTIONS</li> <li>Allow a minimum of 30 days between applications for this use.</li> <li>Preharvest Interval (PHI): 30 days.</li> <li>Do not apply by air for this use.</li> <li>Do not allow spray to drift onto desirable fruit, foliage, vines, or trees as damage will occur.</li> <li>Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for this use.</li> <li>Do not exceed a combined total of 2 applications per year for these uses.</li> <li>Do not exceed 8.0 fl oz (0.0106 lb ai) per acre per year for all applications combined.</li> </ul>

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# SUPPLEMENTAL LABEL



EPA Reg. No. 71711-25

**PYRAFLUFEN-ETHYL** 

**GROUP** 

14

**HERBICIDE** 

ACCEPTED

09/18/2019

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

CROPS: Bearing and Nonbearing - Pome Fruit Group; Pomegranate; Small Fruit Vine Climbing Subgroup Except Fuzzy Kiwifruit; Stone Fruit Group; Tree Nut Group; Tropical and Subtropical, Small Fruit, Edible Peel Subgroup

This supplemental label expires September 30, 2022 and must not be used or distributed after this date.

# DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling and the EPA approved container label must be in the possession of the user at the time of application.

Read the label affixed to the container for VENUE herbicide before applying. Use of VENUE herbicide according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for VENUE herbicide. New use directions appear on this supplemental label that may be different from those that appear on the container label.

#### **CROP USE DIRECTIONS**

# **BEARING AND NONBEARING**

Pome Fruit Group (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**

Small Fruit Vine Climbing Subgroup except Fuzzy Kiwifruit (Crop Group 13-07F) amur river grape; gooseberry; grape; kiwifruit, hardy; Maypop; schisandra berry; cultivars varieties, and/or hybrids of these.

Stone Fruit Group (Crop Group 12-12) apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these

Tree Nut Group (Crop Group 14-12) African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; qinkqo; Guiana chestnut; hazelnut (Filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these

Tropical and Subtropical, Small Fruit, Edible Peel Subgroup (Crop Subgroup 23A) acerola; African plum; agritos; almondette; appleberry; arbutus berry; bayberry, red; bignay; breadnut; cabeluda; carandas-plum; Ceylon iron wood; Ceylon olive; cherry-of-the-Rio-Grande; Chinese olive, black; Chinese olive, white; chirauli-nut; cocoplum; desert-date; false sandalwood; fragrant manjack; gooseberry, abyssinian; gooseberry, Ceylon; gooseberry, otaheite; governor's plum; grumichama; guabiroba; guava berry; guava, Brazilian; guava, Costa Rican; guayabillo; illawarra plum; Indian-plum; Jamaica-cherry; jambolan; kaffir-plum; kakadu plum; kapundung; karanda; lemon aspen; mombin, yellow; monos plum; mountain cherry; olive; persimmon, black; pitomba; plum-of-Martinique; rukam; rumberry; sea grape; sete-capotes; silver aspen; water apple; water pear; water berry; wax jambu; cultivars, varieties, and hybrids of these commodities

Application	Pest	Rate/ Acre	Maximum Applications Per Year	Application Instructions
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 year for this use.	<ul> <li>Apply in a minimum of 20 gallons spray solution per acre by ground equipment to target weeds and sucker growth.</li> <li>Use of a COC adjuvant at a concentration of 1% to 2% is directed for optimum weed control. Use the higher COC rate for larger labeled weed species or in low moisture conditions.</li> <li>COC adjuvants are advised, although other adjuvants may be used.</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 year for this use.	<ul> <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 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> </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 year for these uses.	USE RESTRICTIONS  Allow a minimum of 30 days between applications for this use.  Preharvest Interval (PHI): 0 days  Do not apply by air for this use.  Do not allow spray to drift onto desirable fruit, foliage, vines, and the same as demand will apply.
	Sucker Management	3.0 to 4.0 fl oz/acre (0.0040 to 0.0053 lb ai/acre)		or trees as damage will occur.  • Do not exceed 4.0 fl oz (0.0053 lb ai) per acre in a single application for these uses.  • Do not exceed 6.8 fl oz (0.0090 lb ai) per acre per year for all postharvest, dormant, and prebloom applications combined.  • Do not exceed 12.0 fl oz (0.0159 lb ai) per acre per year for all in-season applications combined.

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