

85678-23

01-17-2012

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

A Reg. Number: 85678-23	Date of Issuance: JAN 17 2012
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NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:
Unconditional

Name of Pesticide Product:
Clethodim 2E

Name and Address of Registrant (include ZIP Code):

RedEagle International, LLC
PO Box 640
Hockessin, DE 19707

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(5) provided that you:

- 1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data. If required, failure to submit acceptable data to fulfill these requirements may result in registration cancellation in accordance with FIFRA section 6(e).
- 2) Generate one-year storage stability (830.6317) and corrosion characteristics (830.6320) data on the product. The observations should be made at 0, 3, 6, 9, and 12 month intervals. The results must be submitted to the Agency in electronic and hard copy format within 15 months of the date on this notice.
- 3) NOTE: Crops referenced in the Crop Specific Rates chart as well as all items on the label must be legible with any formatting issue or typographical error being corrected before the label is printed.
- 4) NOTE: The Basic Confidential Statements of Formula dated December 5, 2011 is acceptable and will remain on file with the Agency.
- 5) NOTE: While no additional data is being requested at this time, any marketing claims made on the pesticide label at any time must be substantiated by data maintained in your files. If data supporting marketing claims made on the product label is not available then those claims must be removed.

SEE NEXT PAGE FOR ADDITIONAL COMMENTS

Signature of Approving Official:
Kathryn V. Montague
Product Manager 23
Herbicide Branch
Registration Division (7505P)

Date:
JAN 17 2012

6) NOTE: 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.

7) Submit one (1) copy of the revised final printed label before the product is released for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

3
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CLETHODIM 2E

ACTIVE INGREDIENT:

*Clethodim 26.4%

OTHER INGREDIENTS** 73.6%

TOTAL: 100.0%

*(E)-2[1-[[[(3-chloro-2-propenyl)oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

**Contains Petroleum Distillates

Contains: 2.0 lbs. Clethodim per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

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

FIRST AID

IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for further treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR 24 HOUR EMERGENCY MEDICAL ASSISTANCE CALL: 1-866-303-6952 FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

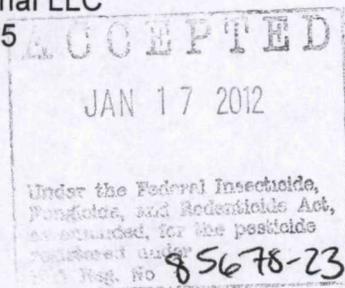
See inside label booklet for additional Precautionary Statements.

EPA Reg. No. 85678-

EPA Est. No.

NET CONTENTS: _____

Manufactured for: RedEagle International LLC
1925 E Edgewood Drive, Ste 105
Lakeland, FL 33803



4
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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS**

CAUTION. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as Barrier Laminate or Viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users Should:

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwater or rinsate.

The use of this product may pose a hazard to the federally designated endangered species of Solano Grass and Wild Rice. Use of this product is prohibited in the following areas where the species are known to exist:

Solano Grass: Solano County, California: the vernal lakes area bounded by the Union Pacific Railroad and Hastings Road to the north, Highway 113 to the east, Highway 12 to the south, and Travis Air Force Base to the west.

Wild Rice: Hays County, Texas

5
65

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this produce 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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, such as Barrier Laminate or Viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift. Do not enter or allow other persons to enter treated areas without protective clothing until sprays have dried.

TANK MIXES

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

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

CHEMIGATION

May be applied to onions and garlic by sprinkler irrigation systems. Do not apply by chemigation to any other crop, or to this crop using any other type of irrigation system.

PRODUCT INFORMATION

This product is for use on the following:

Alfalfa, Artichoke (Globe), Asparagus, Bean and Pea (dry shelled)¹, Bean and Pea (succulent)², Broccoli, Bushberry³, Cabbage, Caneberry⁴, Canola*, Carrot, Cauliflower (and other Head and Stem Brassica Vegetables)⁵, Celery, Clover (grown in Idaho, Oregon and Washington only), Conifers, Cotton, Cranberry, Cucumber, Eggplant (and other Fruiting Vegetables)⁶, Fallow Land (and other nonproducing agricultural areas), Flax*, Field Corn⁷, Garden Beets, Garlic, Herbs⁷, Hops, Horseradish (and other Root Vegetables)⁸, Legume Vegetables (edible podded)⁹, Lettuce, Head and Leaf (and other leafy greens)¹⁰, Melons (including Cantaloupes and Watermelons)¹¹, Mint, Mustard Greens (and other leafy brassica greens)¹², Mustard Seed*, Non-Bearing Food Crops, Non-Crop or Planted Areas, Onions (dry bulb and green), Ornamentals, Peaches, Peanut (including perennial), Peppers (bell and non-bell), Potato, Radish, Rhubarb, (and other leafy Petioles)¹³, Safflower, Sesame, Shallots (dry bulbs and green), Squash (including Pumpkins), Soybeans, Strawberry, Sugar Beet, Sunflower, Sweet Potato, Tomato, Turnip Greens and Yam (and other Tuberous and Corm Vegetables)¹⁴

*** Not for use in California**

¹ Other Dry Shelled Bean and Pea crops approved for use with this product include: Bean (*Lupinus* spp.) grain, sweet, white and sweet; Bean (*Phaseolus* spp.), field, kidney, lima (dry), navy, pinto and tepary; Bean (*Vigna* spp.), adzuki, black-eyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, broad (dry), chickpea (garbanzo), guar, lablab bean and lentil; Pea (*Pisum* spp.) field and pigeon

² Other Succulent Bean and Pea crops approved for use with this product include: Bean (*Lupinus* spp.) grain, sweet, white and sweet; Bean (*Phaseolus* spp.), field, kidney, lima (dry), navy, pinto and tepary; Bean (*Vigna* spp.), adzuki, black-eyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, broad (dry), chickpea (garbanzo), guar, lablab bean and lentil; Pea (*Pisum* spp.) field and pigeon

³ Other bush berry crops approved for use with this product include: Aronia Berry, Blueberry (highbush), Black Currant, Buffalo Currant, Chilean Guava, Cranberry (highbush), Eldeerberry, European Barberry, Gooseberry, Honeysuckle (edible), Huckleberry (edible), Jostaberry, Juneberry (Saskatoon berry), Native Currant, Salal, Sea Buckthorn, Red Currant; cultivars, varieties and/or hybrids of these.

⁴ Other Caneberry crops approved for use with this product include: Blackberry, Loganberry, Raspberry (black and red), Wild Raspberry; cultivars, varieties and/or hybrids of these.

⁵ Other Head and Stem Brassica approved for use with this product include: Chinese broccoli, Brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cavalo broccolo, and kohlrabi

⁶ Other Fruiting Vegetables (except tomato) approved for use with this product include: eggplant, ground cherry, Pepino, peppers (all) and tomatillo

⁷ For burndown of existing stand of Roundup Ready field corn or volunteer Roundup Ready field corn prior to replanting field corn.

⁸ Other Herb crops approved for use with this product: angelica, balm, basil, borage, burnet, chamomile, catnip, chervil, (dried), chive, Chinese chive, clary, coriander (leaf), costmary, cilantro (leaf), curry (leaf), dill (dillweed), horehound, hyssop, lavender, lovage (leaf), marigold, marjoram (*origanum* spp), nasturtium, parsley (dried), pennyroyal, rosemary, rue, sage and savory, summer and winter.

⁹ Other Root Vegetables approved for use with this product include: burdock, edible; celeriac; chervil, turnip-rooted; chicory, ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.

¹⁰ Other Edible Podded Legume Vegetable crops approved for use with this product: Bean (*Phaseolus* spp.), runner, snap and wax; Bean (*Vigna* spp.) asparagus, Chinese longbean, moth, yardlong, jackbean; Pea (*Pisum* spp.) dwarf, edible-pod, snow, sugar snap, pigeon, and sword bean.

¹¹ Other Leafy Greens crops approved for use with this product include: amaranth (Chinese spinach, leafy amaranth and tampala), arugula (roquette), chervil, chrysanthemum (edible-leaved and garland), corn salad, cress (garden, yellow rock and winter), dandelion, dock (sorrel), endive (escarole), lettuce (head and leaf), orach, parsley, purslane (garden and winter), radicchio (red chicory), spinach (New Zealand and Vine (Indian and malabar)).

¹² Other Cucurbit crops approved for use with this product include: chayote (fruit), Chinese wax gourd, citron melon, edible gourd, gherkin and muskmelons (all, including honeydew melon).

¹³ Other Leafy Brassica Greens approved for use with this product include: broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, rape greens and turnip greens.

¹⁴ Other Leaf Petiole crops approved for use with this product include: cardoon, celtuce, Chinese celery, Florence fennel, and Swiss chard.

¹⁵ Other Tuberous and Corm Vegetables approved for use with this product include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, tanier, tumeric and bean yam.

This product is a selective postemergence herbicide for control of annual and perennial grasses. CLETHODIM 2E does not control sedges or broadleaf weeds and is not recommended for use on vegetable crops being grown for seed production unless specific instructions are included in this labeling.

Repeated use of CLETHODIM 2E (or similar postemergence grass herbicides with the same mode of action) may lead to the selection of naturally occurring biotypes that are resistant to these products in some grass species.

A resistant biotype may be present if poor performance occurs and cannot be attributed to adverse weather or application conditions. This will most likely occur in fields where other

8
65

control strategies such as crop rotation, mechanical removal, and other classes of herbicides are not used from year to year.

Do not allow CLETHODIM 2E to contact desirable grass crops such as corn, rice, sorghum, small grains, or turf, as these and other grass crops will be injured or killed. Minor leaf spotting may occur on treated plants under certain environmental conditions. New foliage is not affected.

SYMPTOMS OF CONTROL

The treated grass weeds show a reduction in vigor and growth. Early chlorosis/necrosis of younger plant tissue is followed by a progressive collapse of the remaining foliage. Depending on grass species treated and environmental conditions, symptoms will generally be observed in 7 to 14 days after application.

APPLICATION INFORMATION

Timing

Apply CLETHODIM 2E postemergence to actively growing grasses according to the rate table directions. Do not apply to grass plants under stress from insufficient moisture or cold temperatures, or to grass plants exceeding recommended growth stages as unsatisfactory control may result.

When irrigation is used to supplement limited rainfall in arid regions, CLETHODIM 2E should be applied as soon as possible, after irrigation (within 7 days). A second application of this product will generally provide more effective control of perennial grass weed than a single application in arid regions. Apply a second application to actively growing grass 2 to 3 weeks after emergence of new growth.

Cultivation of treated grasses 7 days prior to or within 7 days after application of this product could reduce weed control. DO NOT APPLY if rainfall is expected within one hour as control may be reduced.

ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE

CROP	ADJUVANT RECOMMENDATIONS
Alfalfa, Cotton, Dry Shelled Bean & Pea, Edible Podded Legume Vegetables, Peanuts (including perennial), Potato, Soybean, Succulent Bean & Pea, Sugar Beet and Sunflower	Always use a crop oil concentrate* at 1.0 qt/A by ground or 1% v/v, but not less than 1 pt/A, in the finished spray volume by air. 1 to 2 qts./A liquid fertilizer (10-34-0, 28% N or 32% N) or an equivalent amount of spray grade ammonium sulfate (AMS) (2.5 to 4.0 lbs/A) can be added to CLETHODIM 2E applications in addition to the recommended rate of crop oil concentrate. The addition of AMS has shown improved grass control for difficult to control species including: quackgrass, red rice, rhizome Johnsongrass,

9
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	volunteer cereals, volunteer corn and wild oats.
Artichoke (Globe), Asparagus, Bushberry, Caneberry, Canola, Carrot, Clover, Cranberry, Cucurbits, Flax, Fruiting Vegetables (except Tomato), Garden Beet, Garlic, Head & Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Mint, Mustard Seed, Onion (Dry Bulb and Green), Peaches, Root Vegetables, Safflower, Sesame, Shallots (Dry Bulb and Green), Strawberry, Sweet Potato (Yam and Other Tuberous and Corm Vegetables except Potato) and Tomato	Unless tank mix instructions indicate otherwise, always use a crop oil concentrate at 1% v/v in the finished spray volume. The addition of a liquid fertilizer is not recommended for these crops.
Ornamental Plants and Non-Bearing Food Crops	Add a nonionic surfactant containing at least 80% active ingredient at the rate of 1 pint per 50 gallons (0.25% v/v). The use of a crop oil concentrate is not recommended as it could injure flowers and foliage.
Conifer Trees, Fallow Land (and other non-producing agricultural areas), Non-Crop or Non-Planted Areas	Always use a crop oil concentrate containing at least 15% emulsifier at 1 % v/v, but not less than 1 pt/A, in the finished spray volume.

*Crop oil concentrates that are acceptable would be those that contain a minimum of 80% oil and 15% emulsifier. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all the following criteria: be non phytotoxic, contain only EPA exempt ingredients, provide good mixing quality and be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

GROUND APPLICATION

Use a minimum of 5 gallons and a maximum of 40 gallons of spray solution per acre. Use of sufficient spray volumes and pressure is essential to ensure complete coverage. Under the following conditions a minimum of 10 gallons per acre is required: narrow row soybeans; broadleaf herbicide tank mixes, perennial grasses, volunteer corn, drought or stress conditions, heavy grass pressure or when grasses are at or near maximum height. Failure to use a minimum of 10 gallons per acre under these conditions can result in poor coverage and reduced grass control requiring repeat applications. Spray pressures should reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

Applications to onions (dry bulbs and green), garlic, and shallots (dry bulbs and green) should be made in a minimum of 20 gallons of spray solution per acre.

AIR APPLICATION

Use a minimum of 3 gallons of spray solution per acre. As grass or crop foliage becomes dense, increase spray volume up to 10 gallons. For onions (dry bulbs and green); garlic, or

shallots (dry bulbs and green): When applying by air do not exceed 8 fl. oz./A in a single application. In California, air applications to onions, garlic or shallots should be made in a minimum of 20 gallons of spray solution per acre.

NOTE: Crop injury may occur when CLETHODIM 2E is applied to onions, garlic, or shallots with aerial equipment.

Spot Treatment

Mix 1/4% to 1/2% (0.33 oz to 0.65 oz per gal) product when using hand sprayers or high volume sprayers utilizing hand guns. While not allowing runoff of spray solution, apply to wet vegetation. For uses requiring crop oil concentrate, include crop oil concentrate at 1% (1.3 oz per gal) by volume. For uses requiring nonionic surfactant, include nonionic surfactant at 1/4% (0.33 oz per gal) by volume.

NOTE: If CLETHODIM 2E is applied as a spot treatment, care should be taken to not exceed the maximum rate allowed on a "per acre" basis or crop injury could occur.

CHEMIGATION - ONIONS (Dry Bulbs and Green) AND GARLIC

SPRINKLER IRRIGATION APPLICATION

DO NOT APPLY THIS PRODUCT BY CHEMIGATION IN THE STATES OF IDAHO, MONTANA, OREGON AND WASHINGTON.

Apply CLETHODIM 2E at the high rate recommended for annual grasses (16 fl oz per acre) when the grass height is at the low end of the range (application to larger grasses may not provide adequate control). Add a crop oil concentrate containing at least 15% emulsifier at 1 quart per acre.

Make application of CLETHODIM 2E in 0.1 to 0.2 acre-inch of water, either at the end of a regular irrigation set or as a separate application not associated with a regular irrigation using the least amount of water that provides proper distribution and coverage. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Use a metering device to inject the CLETHODIM 2E into the irrigation water at a constant flow. Constant agitation must be maintained in the chemical supply tank during the entire period of herbicide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period.

It is not recommended that CLETHODIM 2E be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Use Precautions

1. Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move system(s). Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

RESTRICTIONS AND LIMITATIONS

- Do not apply if rain is expected within 1 hour of application as unsatisfactory control may occur.
- Do not apply a postemergence broad leaf herbicide within one day following application of CLETHODIM 2E or reduced grass control may result.
- CLETHODIM 2E is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.
- For canola, do not apply more than 6 fl. oz. of CLETHODIM 2E (0.08 lb. ai) per acre per season. For clover, flax, mustard seed and radish crops, do not apply more than 16 fl. oz. of CLETHODIM 2E (0.25 lb. ai) per acre per season. For all other crops, do not apply more than 32 fl. oz. of CLETHODIM 2E (0.50 lb. ai) per acre per season. Application on Long Island, New York, is restricted to no more than 16 fl. oz. of CLETHODIM 2E (0.25 lb. ai) per acre per season.

- Do not apply more than 8 fl. oz./A of CLETHODIM 2E per application to the following crops: asparagus, brassica vegetables (head and stem), bean (succulent), carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, legume vegetables (edible podded), non-bearing food crops, pea (shelled), pea (succulent), root vegetables, safflower, sesame and strawberry. Do not apply more than 6 fl. oz./A of CLETHODIM 2E per application to canola, or mustard seed. For all other crops, do not apply more than 16 fl. oz. of CLETHODIM 2E (0.25 lb. ai) per acre per application. Exceeding these directions may result in unacceptable crop injury.
- Do not apply under conditions of stress. Applying CLETHODIM 2E under conditions that do not promote active grass growth will reduce herbicide effectiveness. These conditions include drought, excessive water, extremes in temperature, low humidity and grasses either partially controlled or stunted from prior pesticide applications. Grasses under these kinds of stressful conditions will not absorb and translocate CLETHODIM 2E effectively, and will be less susceptible to herbicide activity.
- Best perennial grass control can be obtained if rhizomes or stolons are cut up by preplant tillage practices, (discing, plowing, etc.) to stimulate maximum emergence of grass shoots. Cultural practices, such as continuous no-tillage in which the perennial grass rhizomes or stolons are not cut up, result in a very staggered, non-uniform weed emergence. Due to this non-uniform weed emergence, no fewer than two CLETHODIM 2E applications per season per year are recommended at the appropriate weed-growth stage rate under continuous no-till conditions.
- Grass crops such as corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to CLETHODIM 2E.
- While all vegetable crops on this label have been tested and are tolerant to CLETHODIM 2E, not all specialty varieties of these crops have been tested. It is advised that, before applying CLETHODIM 2E to specialty varieties of vegetable crops on this label, crop tolerance be investigated first using a small section of the field. It is possible that injury symptoms can occur. Symptoms may appear as leaf speckling or stunting.
- Always read and follow the restrictions and limitations for all products whether used alone or in a tank mix. The most restrictive labeling of any product used applies in tank mixtures, including all crop rotational and other crop restrictions.
- Tank mixes of CLETHODIM 2E and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of CLETHODIM 2E may be necessary.

AVOID SPRAY DRIFT

Do not allow spray from ground or aerial equipment to drift onto adjacent land or crops. When drift may be a problem, do everything possible to reduce spray drift including:

- Do not spray if wind speeds are or become excessive. Do not spray if wind speed is 10 MPH or greater. If sensitive crops or plants are downwind, extreme caution must be used under all conditions. Do not spray if winds are gusty.
- Use extreme caution when conditions are favorable for drift (high temperatures, drought, low relative humidity), especially when sensitive plants are located nearby.

13
65

- Do not apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.
- Further reductions in drift can be obtained by:
 1. Using large droplet size sprays. Do not use nozzles that produce small droplets. Orient nozzles downward and slightly backward as needed to reduce drift for ground applications.
 2. Orienting nozzles straight back with the windstream, using straight stream orifices for aerial applications. Use the lowest number of nozzles practical with the largest possible orifice size to obtain the minimum 3 GPA volume. Application height and boom length should be set according to manufacturer's instructions to minimize drift.
 3. Increasing the volume of spray mixture (for example a minimum of 10 GPA for ground applications) by using higher flow rate nozzles. Using lower pressure with the appropriate nozzle to obtain higher volumes will also reduce drift.
 4. Applying as close to target plants as practical while maintaining a good spray pattern for adequate coverage.

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
Alfalfa including: Sainfoin Holy Clover Birdsfoot trefoil ⁽³⁾	15 days before grazing, feeding or harvesting (cutting) for forage or hay	6 -16 fl oz ⁽⁴⁾	1 qt. by ground or 1% v/v, but not less after than 1 pt/A, by air ⁽⁵⁾	Do not plant rotational crops until 30 days after application of CLETHODIM 2E ^(5,6) Adding AMS has shown improved grass control for difficult to control species including: quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats
Artichoke (Globe)	5 days	6 – 8 fl oz	1% v/v in the finished spray volume.	Do not apply more than 8 fl oz/A in a single application. For repeat applications

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
				make on a minimum of a 14 day interval. Do not apply more than 32 fl oz/A (0.5 lb ai/A) per season.
Asparagus	1 day	6- 8 fl oz	1% v/v in the finished spray volume.	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Beans, Dry Shelled including: Bean (<i>Lupinus</i> spp) Grain Sweet White White Sweet Bean (<i>Phaseolus</i> spp.) Field Kidney Lima (dry) Navy Pinto Tepary Bean (<i>Vigna</i> spp.) Adzuki Bean Black-eyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean	30 days	6 – 16 fl oz	1 qt by ground or 1% v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Do not apply more than 16 fl oz/A in single application A minimum 14-day interval required for repeat applications. For reduced rate directions for the control of small annual grasses, refer to the appropriate Table. Adding AMS has shown improved grass control for difficult to control species including: quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats

15
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
Rice Bean Southern Pea Urd Bean Broad (dry) Chickpea (garbanzo) Guar Lablab Bean Lentil				
Bean, Succulent including: Bean (<i>Phaseolus</i> spp.) Broad Bean (succulent) Lima (dry) Bean (<i>Vigna</i> spp.) Black-eyed Pea Cowpea Southern Pea	21 days	6 – 8 fl oz	1 qt by ground or 1% v/v, but not less than 1 pt/A by air ⁽⁵⁾	For reduced rate directions for the control of small annual grasses, refer to the appropriate Table. Do not apply more than one (1) application per acre per season. Adding AMS has shown improved grass control for difficult to control species including: quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats
Beet, Garden	30 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Brassica Vegetables, Head and Stem including:	30 days	6-8 fl oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz. per acre in a single application.

16
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
Broccoli Cabbage Cauliflower Brussels sprouts				For repeat applications, observe a minimum 14-day interval between applications.
Bushberry, including: Aronia berry Blueberry, highbush Chilean Guava Cranberry, Highbush Currant, Black Currant Buffalo Currant, native Currant, Red Elderberry European Barberry Gooseberry Honeysuckle edible Huckleberry Jostaberry Juneberry Saskatoon berry Native currant Salai Sea Buckthorn Cultivars, varieties and/or hybrids of these	14 days	6-8 fl. oz	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. Do not apply more than 32 fl oz. (0.5 lb. ai/A) per season. For repeat applications make a minimum of a 14 day interval. Apply at the base of the plant where grassy weeds are growing near the ground. Do not apply to low growing berries. Do not apply to Bushberry grown for root stock.
Caneberry, including: Blackberry Loganberry Raspberry,	7 days	6-8 fl. oz.	1% v/v in the finished spray volume.	Do not apply more than 8 fl. oz./A in a single application. Do not apply more than

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
black Raspberry, red Raspberry, wild Cultivars, varieties and/or hybrids of these.				32 fl. oz./A (0.5 lb. ai/A) per season. For repeat applications make on a minimum of a 14 day interval. Apply at the base of the plant where grassy weeds are growing near the ground. Do not apply to low growing berries. Do not apply to Caneberry grown for root stock.
Canola* Not for use in California unless accompanied by a supplemental label	70 days	4 – 6 fl oz	1% v/v in the finished spray volume	Do not apply after crop has begun bolting. Crop injury may occur when this product is applied during the bloom period. Do not apply more than 6 fl. oz./A in a single application. Do not exceed 6 fl oz/A in a season.
Carrot	30 days	6 – 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Clover	15 days before grazing,	6 -16 fl oz	1% v/v in the finished spray	Do not exceed 16 fl oz/A in a season.

18
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
	feeding, or harvesting (cutting) for forage or hay		volume	For use on clover grown in the states of Idaho, Oregon and Washington only
Corn, Field For burndown of existing stand of Roundup Ready field corn or volunteer Roundup Ready field corn prior to replanting field corn. See Directions for Use in Roundup Ready Field Corn (Burndown) table.	90 days	3 fl. oz.	Do not use COC or MSO with CLETHODIM 2E in this use pattern.	Do not make more than 1 application per season. Do not apply more than 3 fl. oz./A per season. To control the existing stand, replant no sooner than 6 days after application.
Cotton	60 days	6-16 fl oz	1 qt by ground or 1% v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Do not graze treated fields or feed treated forage or hay to livestock. Adding AMS has shown improved grass control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals,

19
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
				volunteer corn and wild oats.
Cranberry	30 days	6 – 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application Do not apply between the "hook" stage and full fruit set. A minimum 14-day interval required for repeat applications.
Cucurbits, including: Chayote (fruit) Chinese Wax Gourd Citron Melon Cucumber Gherkin Gourd, Edible Muskmelons (all) including: Cantaloupes Honeydew Melon Pumpkins Squash (all) Watermelon	14 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application A minimum 14-day interval required for repeat applications
Fallow Land Conifer Trees (and other non-producing agricultural areas)	N/A	6-16 fl oz	1% v/v (but not less than 1 pt/A) in the finished spray volume using a crop oil concentrate containing at least 15% emulsifier	Do not plant any crop for 30 days after application unless clethodim is registered for use on that crop

20
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
Non-Crop or Non-Planted areas				
Flax* Not for use in California unless accompanied by a supplemental label	60 days	6 - 8 fl oz	1% v/v in the finished spray volume	Apply prior to bloom. Crop injury may occur when Clethodim 2E is applied during the bloom period. Do not apply more than 8 fl oz/A in a single application. Do not exceed 16 fl oz of Clethodim 2E per acre in a season.
Fruiting Vegetables (except Tomato) including: Eggplant Groundcherry Pepino Peppers (all) Tomatillo	20 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application A minimum 14-day interval required for repeat applications.
Herbs including: Angelica Balm Basil Borage Burnet Chamomile Catnip Chervil, (dried) Chive Chinese chive Clary Coriander (leaf)	14 days	6 - 8 fl oz	1% v/v in the finished spray volume	This product has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test this product on a small portion of the crop to be treated before treating the entire field. Crop tolerance should be verified to this product on a small

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
Costmary Cilantro (leaf) Curry (leaf) Dill (dillweed) Horehound Hyssop Lavender Lovage (leaf) Marigold Marjoram (<i>origanum</i> spp) Nasturtium Parsley (dried) Pennyroyal Rosemary Rue Sage Savory, Summer and Winter				area of the herb crop at the desired rate and with the same crop oil concentrate that will be used on the herb field. If no crop response is evident seven (7) days after treatment, this product may be used on the entire field at the same rate tested and with the same crop oil used in the tolerance test. Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Hops	21 days	6 – 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Leaf Petioles including: Celery Cardoon Chinese celery Celtuce Florence fennel Rhubarb Swiss chard	30 days	6 – 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Leafy Brassica	14 days	6 - 8 fl oz	1% v/v in the finished spray	Do not apply more than 8 fl oz/A in a single

22
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
Greens, including: Broccoli Raab Cabbage, Chinese (Bok Choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens			volume	application. A minimum 14-day interval required for repeat applications.
Leafy Greens including: Amaranth Chinese Spinach Leafy Amaranth Tampala Arugula (raquette) Chervil Chrysanthemum, edible-leaved Corn Salad Cress Garden Yellow rock Winter Dandelion Dock (sorrel) Endive (escarole) Lettuce (head and leaf)	14 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.

23
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
Orach Parsley Purslane Garden Winter Radicchio (red chicory), Spinach New Zealand Vine (Indian and malabar)				
Legume Vegetables, Edible Podded including: Bean (<i>Phaseolus</i> spp.) Runner Snap Wax Bean (<i>Vigna</i> spp.) Asparagus Chinese Longbean Moth Yardlong Jackbean Pea (<i>Pisum</i> spp.) Dwarf Edible-pod Snow Sugar Snap Pigeon Sword Bean.	21 days	6 - 8 fl oz	1 qt by ground or 1% v/v (but not less than 1 pt/A) by air. ⁽⁵⁾	Do not apply more than 8 fl oz/A in a single application. Do not apply more than one (1) application per acre per season. For peas apply before bloom, but no later than 21 days before harvest. For reduced rate directions for the control of small annual grasses, refer to the appropriate Table. Adding AMS has shown improved grass control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats.

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
Mint	21 days	6 -16 fl oz ⁽⁴⁾	1 qt by ground or 1 % v/v, but not less than 1 pt/A, by air	Do not apply more than 16 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Mustard Seed* Not for use in California unless accompanied by a supplemental label	75 days	4-6 fl oz	1% v/v in the finished spray volume	Do not apply after crop has begun bolting. Crop injury may occur when Clethodim 2E is applied during the bloom period. Do not exceed 16 fl oz of Clethodim 2E per acre in a season. Do not apply more than 6 fl. oz./A in a single application.
Onions (Dry Bulbs Only) Garlic Shallots (Dry Bulbs Only)	45 days	6 - 16 fl oz ⁽⁷⁾ (8)	1% v/v in the finished spray volume	Minimum of 20 gals/A spray volume by ground in entire U.S. Minimum of 20 gals/A spray volume by air in California ⁽⁹⁾ States Other than California: Application by air to onions, garlic or shallots should be made in a minimum of 10 gals/A
Onions, Green, including: Leeks Scallions or Spring	14 days	6-8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day

25
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
Onions Japanese Bunching Onions Green Shallots Green Eschalots				interval required for repeat applications.
Ornamentals	N/A	6 -16 fl oz	Use of crop oil concentrate is not recommended as injury to flower and foliage may occur. See Special Use Instructions	Add a nonionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gallons (0.25% v/v.)
Non-Bearing Food Crops	N/A	6 - 8 fl oz ⁽⁸⁾		Sugar Maples cannot be tapped for syrup within one year of application.
Pea, Dry Shelled including: Pea (<i>Pisum</i> spp.) Field Pigeon	30 days	6- 8 fl oz	1 qt by ground or 1% v/v, but not less than 1 pt/A, by air ⁽⁵⁾	<p>Do not apply more than 8 fl oz/A in a single application.</p> <p>Do not apply more than one (1) application per acre per season.</p> <p>Apply before bloom, but not later than 30 days prior to harvest. ⁽¹⁰⁾</p> <p>For reduced rate directions for the control of small annual grasses, refer to the appropriate Table.</p> <p>Adding AMS has shown improved grass</p>

26
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
				control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats.
Pea, Succulent including: Pea (<i>Pisum</i> spp.) English Pea Garden Pea Green Pea Pigeon Pea	21 days	6 - 8 fl oz	1 qt by ground or 1 % v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Do not apply more than 8 fl oz/A in a single application. Do not apply more than one (1) application per acre per season. Apply before bloom, but not later than 21 days prior to harvest. ⁽¹⁰⁾ For reduced rate directions for the control of small annual grasses, refer to the appropriate Table. Adding AMS has shown improved grass control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats.
Peach	14 days	6 - 8 fl oz	1% v/v in the finished volume	Do not apply more than 8 fl oz/A in a single application.

27
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
				<p>Do not apply more than 32 fl oz/A (0.5 lb ai/A) per season.</p> <p>For repeat applications make on a minimum of a 14 day interval.</p> <p>Do not apply to Peach grown for root stock.</p>
Peanut (including perennial)	40 days	6 -16 fl oz	1 qt by ground or 1 % v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Adding AMS has shown improved grass control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats.
Potato	30 days	6-16 fl oz	1 qt by ground or 1% v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Adding AMS has shown improved grass control for difficult to control species including; quackgrass, red rice, rhizome Johnsongrass, volunteer cereals, volunteer corn and wild oats.
Radish	15 days	6-8 fl oz	1% v/v in the finished spray volume	<p>Do not apply more than 8 fl oz/A in a single application.</p> <p>Do not apply more than 16 fl oz (0.25 lb/a.i.) per acre in a season.</p> <p>A minimum 14-day</p>

CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
				interval required for repeat applications.
Root Vegetables (except Radish), including: Chicory Ginseng Horseradish Turnip	30 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Safflower	70 days	6 - 8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Sesame	14 days	6-8 fl oz	1% v/v in the finished spray volume	Do not apply during flowering. Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Soybean	60 days	6 -16 fl oz	1 qt by ground or 1 % v/v (but not less than 1 pt/A) by air ⁽⁵⁾	Do not graze treated fields or feed treated forage or hay to livestock. Refer to appropriate Table for reduced rate directions for the control of small annual grasses. Adding AMS has

29
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS ⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE ⁽²⁾	SPECIAL USE INSTRUCTIONS
				shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, volunteer cereals, volunteer corn and wild oats.
Strawberry	4 days	6-8 fl oz	1% v/v in the finished spray volume	Do not apply more than 8 fl oz/A in a single application. A minimum 14-day interval required for repeat applications.
Sugar Beet	40 days	6-16 fl oz	1 qt by ground or 1 % v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Refer to the appropriate Table for reduced rate directions for the control of small annual grasses. Adding AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, volunteer cereals, volunteer corn and wild oats.
Sunflower	70 days	6-16 fl oz	1 qt by ground or 1 % v/v, but not less than 1 pt/A, by air ⁽⁵⁾	Adding AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, volunteer cereals, volunteer corn and wild oats.

30
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CROP SPECIFIC RATES, RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E				
CROPS⁽¹⁾	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE⁽²⁾	SPECIAL USE INSTRUCTIONS
Sweet Potato, Yam and other tuberous and corm vegetables (except Potato), including: Artichoke - Chinese Jerusalem Cassava - Bitter Sweet Ginger	30 days	6-16 fl oz	1% v/v in the finished spray volume	Adding AMS has shown improved grass control for difficult to control species including: quackgrass, rhizome Johnsongrass, red rice, volunteer cereals, volunteer corn and wild oats.
Tomato	20 days	6-16 fl oz	1% v/v in the finished spray volume	A minimum 14-day interval required for repeat applications

N/A - Not Applicable

⁽¹⁾ CLETHODIM 2E is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.

⁽²⁾ Acceptable crop oil concentrates would be those that contain a minimum of 80% oils and 15% emulsifier. The crop oil concentration must contain either a petroleum or vegetable oil base and meet all the following criteria: a) contain only EPA-exempt ingredients, b) be nonphytotoxic, c) provides good mixing quality and d) be successful in local experience. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oil. For further information see the "Addition of Adjuvant and Crop Oil Concentrate" section.

⁽³⁾ This product can be applied to seedling or established alfalfa grown for seed, hay, silage, green chop or direct grazing.

⁽⁴⁾ The minimum use rate is 10 fl oz/A for weed control in established alfalfa and mint.

⁽⁵⁾ In addition to the recommended rate of crop oil concentrate, 1 to 2 qt/A of liquid fertilizer (10-34-0, 28% N or 32% N), or an equivalent amount (2.5 to 4.0 lbs/A) of spray grade ammonium sulfate (AMS) may be added to the CLETHODIM 2E application.

⁽⁶⁾ Do not apply CLETHODIM 2E and 2,4-DB as a tank mix to alfalfa unless the 60 day feeding, grazing, and harvesting restriction on the 2,4-DB label can be observed.

⁽⁷⁾ Do not exceed 8 fl oz/A in a single application for ground applications to garlic or shallots. Do not exceed 8 fl oz/A in a single application for air applications to onion, garlic or shallots. Do not exceed 2 applications per season for garlic and shallots. In CA, do not exceed 2 applications per season for air applications to onions.

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(8) Care should be taken to not exceed the maximum rate allowed on a "per acre" basis when CLETHODIM 2E is applied as a spot treatment to onions, garlic, shallots, or non-bearing food crops or crop injury could occur.

(9) In CA, do not apply this product to onions, garlic, or shallots until the crop has at least two full leaves. In CA, 14-day spray intervals are recommended between the application of this product and liquid nitrogen or other herbicide applications. Injury to crop could occur when shorter intervals are observed.

(10) Applications of this product to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.

NON-BEARING FOOD CROPS

DO NOT APPLY CLETHODIM 2E TO NON-BEARING FRUIT OR NUT CROPS GROWN FOR ROOT STOCK.

If CLETHODIM 2E is improperly applied, crop injury to non-bearing fruit and nut crops can occur. Do not apply CLETHODIM 2E directly over the top of these plant types. Rather, direct the spray at the base of the plant where grassy weeds are growing near the ground.

Non-bearing fruit and nut crops are plants, which will not bear fruit or nuts for at least one year following an application of CLETHODIM 2E.

COMMON NAME	SCIENTIFIC NAME
Apples	<i>Malus</i> spp.
Berries	<i>Vaccinium</i> spp.
	<i>Rubus</i> spp.
Cherry, Sweet	<i>Prunus avium</i>
Citrus Fruits	<i>Citrus</i> spp.
Grapes	<i>Vitis</i> spp.
Olives	<i>Olea</i> spp.
Peach	<i>Prunus persica</i>
Pears	<i>Pyrus communis</i>
Prunes	<i>Prunus</i> spp.
Stone Fruits	<i>Prunus</i> spp.
Strawberries	<i>Fragaria</i> spp.
Tree Nuts	
Almond	<i>Prunus triloba</i>
Filbert	<i>Corylus maxima</i>
Pecan	<i>Carya illinoensis</i>
Pistachio	<i>Pistacia vera</i>
Walnut	<i>Juglans</i> spp.

CONIFER TREES

CLETHODIM 2E can be used to control labeled grasses in Christmas tree farms, conifer nurseries, and conifer plantations (but not in forests).

32
65

COMMON NAME	SCIENTIFIC NAME
Arborvitae, American	<i>Thuja occidentalis</i>
Cedars	<i>Cedrus</i> spp.
Cypress	<i>Taxodium</i> spp.
Fir, Douglas	<i>Pseudotsuga menziesii</i>
Firs	<i>Abies</i> spp.
Hemlock, Canadian/Eastern	<i>Tsuga Canadensis</i>
Hemlock, Western	<i>Tsuga heterophylla</i>
Pines	<i>Pinus</i> spp.
Spruces	<i>Picea</i> spp.
Yew	<i>Taxus</i> spp.

NON-CROP OR NON-PLANTED AREAS

The following areas are considered non-crop or non-planted areas:

Rights-of-way, including railroads, highways, roads, dividers, medians, pipelines, public utility lines, pumping stations, transformer stations and substations; around airports; electric utilities; commercial buildings; manufacturing plants; storage yards; rail yards; fence lines; parkways; post-harvest croplands; and beneath greenhouse benches and around golf courses.

USE DIRECTIONS FOR ANNUAL GRASSES (EXCEPT FOR IN ESTABLISHED ALFALFA AND MINT)

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the higher rate under heavy grass pressure and/or when grasses are at maximum heights.
- Do not apply more than 8 fl oz/A per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry.

Do not apply more than 6 fl oz/A of product per application to canola or mustard seed.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL OZ/A	HIGH RATE ⁽⁴⁾
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	6	8
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	6	8
Brome				
California	<i>Bromus carinatus</i>	2 to 6	6	8
Cheat	<i>Bromus secalinus</i>	2 to 6	6	8
Downy	<i>Bromus tectorum</i>	2 to 6	6	8
Ripgut	<i>Bromus diandrus</i>	2 to 6	6	8
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	6	8

33
65

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL OZ/A	HIGH RATE (4)
Crabgrass				
Hairy	Digitaria adscendens	2 to 6**	6	8
Large	Digitaria sanguinalis	2 to 6**	6	8
Smooth	Digitaria ischaemum	2 to 6**	6	8
Southern	Digitaria ciliaris			
Crowfootgrass	Dactyloctenium aegyptium	2 to 6**	6	8
Fall Panicum	Panicum dichotomiflorum	2 to 8	6	8
Field Sandbur	Cenchrus incertus	2 to 6	6	8
Foxtail				
Giant	Setaria faberi	2 to 12	6	8
Green	Setaria viridis	2 to 8	6	8
Yellow	Setaria glauc	2 to 8	6	8
Goosegrass	Eleusine indica	2 to 6**	6	8
Itchgrass	Rottboellia cochinchinensis	2 to 6	6	8
Junglerice	Echinochloa colona	2 to 6	6	8
Lovegrass (Stinkgrass)	Eragrostis cilianensis	2 to 6	6	8
Rabbitsfootgrass	Polypogon monspeliensis	1 to 4	6	8
Red Rice	Oryza sativa	1 to 3	6	8
Ryegrass				
Hardy	Lolium remotum	2 to 6	6	8
Italian	Lolium multiflorum	2 to 6	6	8
Seedling Johnsongrass	Sorghum halepense	4 to 10	6	8
Shattercane	Sorghum bicolor	6 to 18	6	8
Southwestern Cupgrass	Eriochloa gracilis	2 to 6	6	8
Sprangle top				
Amazon	Leptochloa panicoides	2 to 6	6	8
Bearded	Leptochloa fascicularis	2 to 6	6	8
Mexican	Leptochloa uninervia	2 to 6	6	8
Red	Leptochloa filiformis	2 to 6	6	8
Texas Panicum	Panicum texanum	2 to 6	6	8
Volunteer Cereals ⁽³⁾				
Barley	Hordeum vulgare	2 to 6	6	8
Oats	Avena sativa	2 to 6	6	8
Rye	Secale cereal	2 to 6	6	8
Wheat	Triticum aestivum	2 to 6	6	8
Volunteer Corn ⁽²⁾	Zea mays	4 to 12	4	6
Volunteer Corn (S.R.) ⁽¹⁾	Zea mays	4 to 12	8 (suppression only)	
Volunteer Corn ⁽²⁾	Zea mays	12 to 24	6	8
Volunteer Grain Sorghum	Sorghum bicolor	8 to 12	6	8
Wild Oats	Avena fatua	2 to 6	6	8
Wild Proso Millet	Panicum miliaceum	2 to 10	6	8

34
65

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE FL OZ/A	HIGH RATE (4)
Witchgrass	Panicum capillare	2 to 8	6	8
Woolly Cupgrass	Eriochloa villosa	2 to 8	6	8

* Generally occurs between 3-leaf stage and tillering.

** Length of lateral growth.

(1) Sethoxydim resistant volunteer corn.

(2) Includes Roundup Ready® and Liberty® volunteer corn

(3) The minimum CLETHODIM 2E use rate for control when a cereal grain crop (such as wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment is 8 fl oz/A.

(4) Where experience has shown that higher rates are needed for satisfactory control of annual grasses, rates higher than 8 fl oz/A may be applied in certain geographic areas, cropping situations, or environmental conditions. In these situations, rates from 8 to 16 fl oz/A can be applied. Do not apply more than 8 fl oz/A of CLETHODIM 2E per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry.

Do not apply more than 6 fl oz/A of product per application to canola or mustard seed.

**USE DIRECTIONS FOR ANNUAL & PERENNIAL GRASS CONTROL
IN ESTABLISHED ALFALFA AND MINT WITH CLETHODIM 2E**

GRASS SPECIES	WEED STAGE	RATE FL OZ/A	HIGH RATE
Annual & perennial Grasses Listed in Grass Table	See Table	10	16

Mowing: Achieving the best control of annual grasses can be made by applying CLETHODIM 2E before grass weeds are mowed. Once grass is mowed it becomes tougher to control, as much of the available leaf surface has been removed. In areas without a killing frost, some annuals can over-winter after having been mowed multiple times. These grasses form large crowns and may contain many viable buds. Even though these grasses may be an annual grass, they may require repeated application of CLETHODIM 2E for partial or complete control.

Irrigated Alfalfa and Mint: Irrigation practices can be very critical to the successful use of CLETHODIM 2E in established alfalfa and mint and may be necessary to initiate active growth of the weeds prior to application. Generally applications 2 to 4 days after irrigation are most effective. Irrigation made shortly after application (2 days) can be effective, but more consistent grass control occurs when the irrigation is made before the application.

Aerial Application: When applying by air in established alfalfa and mint, apply CLETHODIM 2E in a minimum of 10 GPA.

Annual Grass Control: Make application at the grass sizes indicated in the Use Directions for

35
65

Annual Grass Table and rates indicated above (10 to 16 fl oz/A). If a grass has been cut, apply Clethodim 2E after active growth has resumed and regrowth has reached the minimum height and before it reaches the maximum height indicated. Make application before the alfalfa/mint canopy covers the grasses and interferes with the spray coverage. Some annual grasses are spring and summer germinating plants, while others are fall germinating plants, and the time they are actively growing and most susceptible to CLETHODIM 2E may vary from region to region. In addition, some annuals germinate over an extended period of time and because control of small grasses is desired, application after each weed flush may be required. As a general rule spray spring and summer germinating grasses as early in the season as possible, after initial green-up. Spray fall germinating weeds in the fall soon after they begin growing but before any damage is done due to frost. Late fall applications may be less effective due to environmental conditions, such as frost, slower plant growth, or the onset of flowering.

Perennial Grass Control: CLETHODIM 2E effectively controls perennial grasses, such as Bermudagrass, Johnsongrass, quackgrass, wirestem muhly, tall fescue, foxtail barley and orchardgrass. Due in part to lack of tillage, perennial grasses are more difficult to control in a perennial crop, such as established alfalfa or mint. A program of repeated applications is usually necessary for best results. The best way to control perennial grasses is to do so in the year of stand establishment before rhizomes and stolons become large and difficult to kill.

Use the high rate under heavy grass pressure and/or when grasses are at or near maximum height.

Always add a crop oil concentrate at 1 qt/A by ground or 1% v/v, but not less than 1 pt/A, to the finished spray volume by air.

USE DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH CLETHODIM 2E

GRASS SPECIES	WEED STAGE	RATE FL OZ/A	HIGH RATE
Annual Bluegrass (<i>Poa annua</i>)	to 4-leaf	6*	16

*Use a minimum of 10 fl oz/A to control annual bluegrass in seedling and established alfalfa and mint.

1. Apply under favorable soil moisture and humidity, which exists within a few days after rainfall or within 7 days after irrigation. Grass needs to be actively growing at time of application(s).
2. Apply at weed stage indicated on the label, as reduced control can be expected with more mature annual bluegrass.
3. Use the high rate under heavy grass pressure and/or when annual bluegrass is more mature.
4. Always add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.
5. Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v).

36
65

USE DIRECTIONS FOR USE IN ROUNDUP READY FIELD CORN (BURNDOWN)		
APPLICATIONS RATES		
GRASS SPECIES	WEED SIZE (inches)	Rate when applied alone or with glyphosate
Field corn	Up to 12	3 fl oz/A
<ul style="list-style-type: none"> For control of existing stand of Roundup Ready field corn or volunteer Roundup Ready field corn prior to replanting field corn. Care must be taken to avoid in-field boom (spray) overlaps or excessive crop injury may occur. Replant no sooner than 6 days after application. Adjuvant recommendations: NIS at 0.25% v/v plus AMS at 2.5 to 4 lbs/A. Do not use a COC or MSO with Clethodim 2E in this use pattern. 		

DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES IN CANOLA, DRY SHELLLED BEAN & PEA (INCLUDING SOYBEAN), EDIBLE PODDED LEGUME VEGETABLES, FLAX, MUSTARD SEED, SUCCULENT BEAN & PEA AND SUGAR BEET

- Make application only to actively growing grasses and the recommended weed heights.
- Make application when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Regrowth by tillering may occur if application is made when plants are stressed by lack of moisture, excessive moisture, low or high temperatures and/or under very low humidity.

Grass Species	Scientific Name	Weed Height (inches)	Rate Fl oz/A ¹
Barnyardgrass	Echinochloa crus-galli	1 to 4	4
Broadleaf Signalgrass	Brachiaria platyphylla	1 to 4	5
Crabgrass			
Large	Digitaria sanguinalis	1 to 3*	4
Large	Digitaria sanguinalis	1 to 4*	5
Smooth	Digitaria ischaemum	1 to 3*	4
Smooth	Digitaria ischaemum	1 to 4*	5
Southern	Digitaria ciliaris	1 to 4*	5
Fall Panicum	Panicum dichotomiflorum	1 to 4	4
Foxtail			
Giant	Setaria faberi	1 to 4	4
Green	Setaria viridis	1 to 4	4
Millet	Setaria italica	1 to 4	5
Yellow	Setaria alauca	1 to 4	4
Seedling Johnsongrass	Sorghum halepense	1 to 6	5
Shattercane	Sorghum bicolor	4 to 10	4
Texas Panicum	Panicum texanum	1 to 4	5
Volunteer Cereals			

37
65

Grass Species	Scientific Name	Weed Height (inches)	Rate Fl oz/A ¹
Barley	Hordeum vulgare	1 to 4	5
Oats	Avena sativa	1 to 4	5
Wheat	Triticum aestivum	1 to 4	5
Volunteer Corn**	Zea Mays	4 to 12	4
Wild Proso Millet	Panicum miliaceum	1 to 6	4
Wild Oats	Avena fatua	1 to 4	5

*Length of lateral growth

**Not sethoxydim resistant corn

¹ Always add a crop oil concentrate at 1 qt/A by ground application to the finished spray volume.

USE DIRECTIONS FOR PERENNIAL GRASSES

- Make application only to actively growing grasses at the recommended weed heights.
- Make application when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
- Use the higher rate under heavy grass pressure and/or when grasses are at maximum height.
- Do not apply more than 8 fl oz/A of CLETHODIM 2E per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, green onion, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry.
- Do not apply more than 6 fl oz/A of product per application to canola or mustard seed.

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL OZ/A	HIGH RATE
Bermudagrass (<i>Cynodon daetylon</i>)			
First Application	3 (or up to 6" runners)	8	16
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8	16
Fescue, Tall (<i>Festuea arundinacea</i>)			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
Foxtail Barley (<i>Hordeum jubatum</i>)			
First Application	2 to 6	8	16
Repeat Application(s) (if regrowth occurs)	2 to 6	8	16
Orchardgrass (<i>Dactylis glomerata</i>)			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
Quackgrass* (<i>Elytrigia repens</i>)			

38
65

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL OZ/A	HIGH RATE
First Application	4 to 12	8	16
Repeat Application(s) (if regrowth occurs)	4 to 12	8	16
Rhizome Johnsongrass (<i>Sorghum halepense</i>)			
First Application	12 to 24	8	16
Repeat Application(s) (if regrowth occurs)	6 to 18	6	8
Wirestem Muhly (<i>Muhlenbergia frondosa</i>)			
First Application	4 to 8	8	16
Repeat Application(s) (if regrowth occurs)	4 to 8	8	16
Perennial Bluegrass*			
Roughstalk (<i>Poa trivialis</i>)			
Kentucky (<i>Poa prantensis</i>)			
First Application	2 to 4	8	16
Repeat Application(s) (if regrowth occurs)	2 to 4	8	16
Bentgrass* (<i>Agrostis</i> spp.)			
First Application	2 to 4	-	16
Repeat Application(s) (if regrowth occurs)	2 to 4	-	16

*Control of quackgrass, perennial bluegrass and bentgrass with this product may be enhanced by adding AMS at 2.5 to 4.0 lbs/A.

TANK MIXES

The labels for each of the herbicides recommended for tank mixing with CLETHODIM 2E are unique to the characteristics of those products and contain restrictions and limitations that may be more restrictive than CLETHODIM 2E in certain considerations. These may include, but are not limited to:

- Geographic restrictions - all products are not registered for use in all areas and rates may vary from one region of labeled use to another
- Crop rotation restrictions may differ
- Applicator certification requirements
- Worker safety rules, i.e., personal protective equipment (PPE), reentry time, posting
- Soil characteristics or soil type, e.g. pH, OM
- Maximum application rate or number or applications allowed per season;
- Rain free period required
- Application timing, e.g. pre-harvest interval
- Do not exceed the total season rates

THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK MIX MUST BE FOLLOWED.

TANK MIX APPLICATION OF CLETHODIM 2E AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROAD LEAF WEEDS

- Make application only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Make application when the first grass or broad leaf weed species in a mixed population reaches the recommended height or growth stage for treatment.
- Make application under favorable soil moisture and humidity that exist a few days after rainfall or within seven (7) days after irrigation.
- Always add the appropriate adjuvant to the spray mix at the rate recommended for each specific tank mix combination.
- Tank mix application can sometimes result in reduced grass control and possible increases in crop injury as compared to either product used alone. If regrowth occurs or an additional flush of new grass emerges, apply a second application of CLETHODIM 2E as specified in the respective size and rate tables.
- Do not tank mix CLETHODIM 2E when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

MIXING INSTRUCTIONS

Use the jar test to verify mixing and compatibility properties. Maintain agitation throughout the spray application. Unsatisfactory weed control may result due to improper mixing if continuous agitation is not maintained during application.

CLETHODIM 2E Tank Mix: Add 1/2 the required water to the spray tank and begin agitation. Add the required amount of CLETHODIM 2E and mix thoroughly. Then add the required amount of tank mix partner and continue mixing. Finally, add the required amount of crop oil concentrate and/or nitrogen fertilizer and the remaining water.

ANTAGONISM INFORMATION

Tank mixes of CLETHODIM 2E with postemergence broad leaf herbicides have shown some reduction or failure to control certain grass species, which would have otherwise been controlled by CLETHODIM 2E alone. Activity of the postemergence broadleaf herbicide in the tank mix is not affected.

ALFALFA

Table 1. CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA
NOTE : See Use Direction tables above for specific grasses and growth stages

PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³	
			GROUND	AIR
CLETHODIM 2E + 2,4-DB ⁴	10-16 fl oz + See 2,4-DB label	10-16 fl oz + See 2,4-DB label	1%	1%
CLETHODIM 2E + PURSUIT DG ⁵ OR PURSUIT ⁵	10 -16 fl oz + 1.08 - 2.16 oz - OR 3 TO 6 fl oz	-	1%	1%
CLETHODIM 2E + BUCTRIL® 2L ⁶ OR BUCTRIL GEL ^{6,7}	10 -16 fl oz + 1.0 - 1.5 pts or 0.5 - 0.75 pt	-	0.5%	0.5%

¹ If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of CLETHODIM 2E alone - without a tank mix herbicide, according to the appropriate size and rate directions.

² Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

³ Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.

⁴ CLETHODIM 2E plus 2,4-DB may increase the severity of crop injury when tank mixed. Alfalfa plants will generally outgrow this temporary crop injury within a few weeks.

⁵ Before using this tank mix, read and understand the PURSUIT or PURSUIT DG labels for geographical restrictions and restrictions regarding alfalfa growth stage and type. Failure to do so can result in crop injury to alfalfa. DO NOT feed, graze or harvest alfalfa for 30 days following an application of PURSUIT to alfalfa.

⁶ States of Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming and the western halves of Kansas, Nebraska, North Dakota, South Dakota: The tank mix of CLETHODIM 2E plus BUCTRIL or BUCTRIL GEL must be applied in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliolate. Unacceptable crop injury can occur to alfalfa seedlings less than the 2 trifoliolate leaf stage. BUCTRIL or BUCTRIL GEL plus CLETHODIM 2E applications made when temperatures are expected to exceed 80°F and 3 days following application can result in unacceptable crop injury. In the states not listed above, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. Unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage growth, when alfalfa stand is uneven and conditions favor leaf burn. When applications of CLETHODIM 2E plus BUCTRIL or BUCTRIL GEL are made when temperatures are expected to exceed 70°F and three days following such application can result in unacceptable crop injury. Crop leaf burn can occur following CLETHODIM 2E plus

41
65

BUCTRIL or BUCTRIL GEL applications. Warm, humid conditions may enhance leaf burn. However, new crop growth will not be affected.

⁷ Do not make application when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

CANOLA

Table 2. REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR CANOLA (See Use Direction tables above for specific grasses and growth stages) Not for use in California unless accompanied by a supplemental label.

PRODUCT	APPLICATION RATES/ACRE			
	ANNUAL GRASSES ¹	PERENNIAL GRASSES	AMMONIUM SULFATE	
			GROUND	AIR
CLETHODIM 2E ² + LIBERTY ³	4 - 5 fl oz + 34 fl oz	-	3.0 lbs	3.0 lbs

¹ Annual grasses and sizes controlled with these tank mixtures are those that are identified in the DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES table.

² Do not apply CLETHODIM 2E tank mix during or after bolting or flowering or crop injury could occur.

³ For use only on Liberty® canola.

COTTON

Table 3. CLETHODIM 2E TANK MIXED WITH COBRA HERBICIDE AND MSMA APPLIED POST DIRECTED TO COTTON

PRODUCT ²	APPLICATION RATES/ACRE ¹		CROP OIL CONCENTRATE ³	COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	
CLETHODIM 2E ⁴ + COBRA HERBICIDE + MSMA (4.0 lbs/gal) or MSMA (6.6 lbs/gal)	6 - 8 fl oz	8 -16 fl oz	1% v/v	Reduce broadcast rate in proportion to the band area actually treated.
	See COBRA HERBICIDE product label for rates to control broadleaf weeds and height limitations for cotton. See CLETHODIM 2E label for weed height and species controlled.			
	See MSMA label for rates to control broadleaf weeds and height limitations for cotton. See CLETHODIM 2E label for weed height and species controlled.			

1. If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of CLETHODIM 2E alone - without a tank mix herbicide - according to the appropriate size and rate directions.

2. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.

4. If at the time of application, grass height is so tall that post-directed applications cannot get good coverage over the top of the grassy weeds, then poor control can result and a second non-post directed application of CLETHODIM 2E may be necessary.

Table 4. CLETHODIM 2E TANK MIXED WITH BUCTRIL 4 EC TO CONTROL EMERGED WEEDS IN BXN COTTON AS A BROADCAST APPLICATION

PRODUCT ²	APPLICATION RATE/ACRE ¹		CROP OIL CONCENTRATE ³	COMMENTS ⁷
	ANNUAL GRASSES	PERENNIAL GRASSES		
CLETHODIM 2E + BUCTRIL 4 EC ^{4,5,6}	8 -16 fl oz Refer to BUCTRIL 4 EC label for rates to control broad leaf weeds and height limitations for cotton.		1 qt./A	See charts for grasses controlled.

1. If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of CLETHODIM 2E at the recommended rate with the appropriate amount of crop oil concentrate in a non-BUCTRIL tank mix.
2. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage.
3. Always add a crop oil concentrate 1 qt/A by ground in the finished spray solution.
4. Applications of BUCTRIL 4 EC can be made only to cotton that has been genetically modified for crop tolerance to postemergence over-the-top applications of bromoxynil.
5. Do not apply the CLETHODIM 2E plus BUCTRIL tank mix within 75 days of harvest.
6. Do not exceed 2 applications of BUCTRIL before cotton is 12 inches tall and one application after 12 inches tall.
7. Use a minimum of 10 gallons of spray solution per acre.

Table 5. CLETHODIM 2E TANK MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN COTTON AS A BROADCAST APPLICATION

PRODUCT	APPLICATION RATE/ACRE ¹		ADJUVANT		COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	Glyphosate formulation with built in adjuvant	Glyphosate formulation without built in adjuvant	
CLETHODIM 2E + GLYPHOSATE	6 - 8 fl oz See glyphosate label for rates to control broadleaf weeds and height limitations for cotton	8-16 fl oz	Nonionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs per 100 gallons carrier	Crop oil concentrate @ 1 pt/A plus ammonium sulfate @ minimum of 8.5 to 17 lbs gals per 100 gals carrier	See charts for grasses controlled. Use a minimum of 10 gals of spray solution per acre.

1. If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of CLETHODIM 2E at the recommended rate with the appropriate amount of crop oil.

DRY SHELLLED AND SUCCULENT BEAN

Not for use in California unless accompanied by a supplemental label

Table 6. CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR DRY SHELLLED AND SUCCULENT BEANS

(See Use Direction tables above for specific grasses and growth stages)

PRODUCT	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E + BENTAZON 4	8-10 fl oz + 1.0 - 2.0 pts/A	10-16 fl oz + 1 to 2 pts	1%	1%

1. If grass regrowth occurs or an additional flush of new grass emerges, make a second application of CLETHODIM 2 EC alone - without a tank mix herbicide - according to the appropriate size and rate directions.

2. Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.

3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.

FLAX

Not for use in California unless accompanied by a supplemental label

Table 7. REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR FLAX (See Use Direction tables above for specific grasses and growth)

PRODUCT	APPLICATION RATES/ACRE			
	ANNUAL GRASSES ¹	PERENNIAL GRASSES	CROP OIL CONCENTRATE	
			GROUND	AIR
CLETHODIM 2E + BRONATE ADVANCED ^{2,3}	4 - 5 fl oz + 11.4 fl oz	-	1 pt	1 pt
CLETHODIM 2E + BRONATE ^{2,3}	4 - 5 fl oz + 0.9 pt	-	1 pt	1 pt
CLETHODIM 2E + BUCTRIL ^{2,3}	4 - 5 fl oz + 1.0 pt	-	1 pt	1 pt

44
65

CLETHODIM 2E + RHONOX ^{2,3}	4-5 fl oz + 0.25 - 0.5 pt	-	1 pt	1 pt
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1. Annual grasses and sizes controlled with these tank mixtures are those that are identified in the DIRECTIONS FOR REDUCED RATE USE IN DRY BEANS, CANOLA, FLAX, MUSTARD SEED, SOYBEANS AND SUGAR BEETS USE DIRECTIONS FOR SMALL ANNUAL GRASSES table.
2. Do not apply CLETHODIM 2E tank mix during or after the bud stage or to ornamental flax as crop injury can occur
3. Do not apply tank mixes when temperatures are expected to exceed 85°F at or for 3 days following application as crop injury can occur.

SOYBEAN

Table 8. CLETHODIM 2E TANK MIXES³ TO CONTROL ANNUAL GRASSES WHEN USED AS A BURNDOWN IN NO-TILL SOYBEANS

PRODUCT	PRODUCT RATE/ACRE ¹	GRASS HEIGHT (inches)	CROP OIL CONCENTRATE ² +	28%N OR 32%N qts/A OR 2.5 TO 4.0 lbs AMS
CLETHODIM 2E + 2,4-D ESTER ^{*,3}	3 fl oz	Foxtail 1 to 3 Fall Panicum 1 to 3	1 qt/A	1 - 2 qt or 2.5 - 4.0 lb AMS
	4 fl oz	Foxtail 1 to 4 Fall Panicum 1 to 4	1 qt/A	1 -2 qt or 2.5 - 4.0 lb AMS
	6 - 8 fl oz + 0.5 lb a i	(See Grass Chart for grasses claimed)	1 qt/A	1 -2 qt or 2.5 - 4.0 lb AMS

*2, 4-D ester should NOT be used where drift sensitive crops may be grown.

1. Apply a second application of CLETHODIM 2E, according to the appropriate size and rate directions, if regrowth occurs or an additional flush of new grass emerges.
2. Always use a crop oil concentrate at the listed rate in the finished spray volume.
3. The following products can be tank mixed with CLETHODIM 2E plus 2,4-D ester: DUAL MAGNUM, PROWL, SENCOR®, and SENCOR plus Dual Magnum.

Table 9. CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN (See Use Direction tables above for specific grasses and growth stages)

PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E + COBRA	6-8 fl oz + 12.5 fl oz	8 -16 fl oz + 12.5 fl oz	0.5 to 1%	1%

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PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E + BENTAZON 4	8 -10 fl oz + 1 - 2 pts	10 -16 fl oz + 1 -2 pt	1%	1%
CLETHODIM 2E + Glyphosate (For use on Roundup Ready soybeans only)	6-8 fl oz + See Glyphosate label for specific application rates	8 - 16 fl oz + See Glyphosate label for specific application rates	0.5 to 1% ⁴	1% ⁴
CLETHODIM 2E + Flexstar HL ⁶	6 - 8 fl oz + See Flexstar HL label for specific application rates	8 – 16 fl oz + See Flexstar HL label for specific application rates	1%	1%
CLETHODIM 2E + Classic 25DG	8 -10 fl oz + 0.5 - 0.75 oz	10 – 16 fl oz + 0.5 - 0.75 oz	1%	1%
CLETHODIM 2E ⁴ + PURSUIT 70 DG	6 - 8 fl oz + 4 fl oz	8 – 16 fl oz + 4 fl oz	1%	1%
CLETHODIM 2E ⁵ + COBRA + CLASSIC 25DG	8 -10 fl oz + 6 - 8 fl oz + 0.5 - 0.75 oz	-	0.5%	1%
CLETHODIM 2E ⁵ + COBRA + BENTAZON 4	8 -10 fl oz + 6 -10 fl oz + 1 - 1.5 pts	-	0.5%	1%
CLETHODIM 2E ⁵ + COBRA + PURSUIT 70 DG	8 -10 fl oz + 6-10 fl oz + 4 fl oz	-	0.5%	1%
CLETHODIM 2E ⁵ + STORM	8 -10 fl oz + 1.5 pts	-	0.5%	1%
CLETHODIM 2E ⁵ + RESOURCE® + PURSUIT 70 DG	8 -10 fl oz + 4 fl oz + 4 fl oz	-	1%	1%

46
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PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E ⁵ + RESOURCE + BENTAZON 4	8-10 fl oz + 4 fl oz + 1 pt	-	1%	1%
CLETHODIM 2E ⁵ + RESOURCE + CLASSIC	8 - 10 fl oz + 4 fl oz + 0.5 oz	-	1%	1%
CLETHODIM 2E ⁵ + COBRA + RESOURCE	6 - 8 fl oz + 6 fl oz + 4 fl oz	-	0.5%	1%
CLETHODIM 2E ⁵ + FIRSTRATE®	6 - 8 fl oz + 0.3 oz	8 -16 fl oz + 0.3 oz	1%	-
CLETHODIM 2E ⁵ + COBRA + FIRSTRATE®	6 - 8 fl oz + 6 - 8 fl oz + 0.3 oz	8 -16 fl oz + 6 - 8 fl oz + 0.3 oz	1%	-
CLETHODIM 2E ⁵ + RAPTOR (1 AS)	6 - 8 fl oz + 4 - 5 fl oz	-	1%	-
CLETHODIM 2E ⁵ + COBRA + RAPTOR (1 AS)	6 - 8 fl oz + 6 - 8 fl oz + 4 - 5 fl oz	-	1%	-
CLETHODIM 2E ⁵ + SYNCHRONY® STS™	6 - 8 fl oz ⁷ + 0.5 oz	-	1 qt	-
CLETHODIM 2E ⁵ + COBRA + SYNCHRONY STS	6 - 8 fl oz ⁷ + 4 - 8 fl oz + 0.5 oz	-	1 pt	-

47
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PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E ⁵ + RESOURCE	6 – 8 fl oz + 4 -12 fl oz	-	1 qt	-
CLETHODIM 2E ⁵ + FRONTROW™	8 - 10 fl oz + Refer to FRONTROW™ label for use rates	-	1%	-
CLETHODIM 2E + FIRSTRATE + FLEXSTAR HL ⁶	6 – 8 fl oz + 0.3 oz + Refer to the FLEXSTAR HL label for specific application rates.	8 – 16 fl oz + 0.3 oz. + Refer to the FLEXSTAR HL label for specific application rates.	1%	-

1. If grass regrowth occurs or an additional flush of new grass emerges, make a second application of CLETHODIM 2E alone - without a tank mix herbicide – according to the appropriate size and rate directions.
2. Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.
4. When CLETHODIM 2E is tank mixed with glyphosate, the addition of 2.5 lb. ammonium sulfate is required. If the glyphosate formulation has a stand alone build-in adjuvant, add 0.125% v/v nonionic surfactant in place of crop oil concentrate, Add 0.5% to 1% crop oil concentrate for ground application and 1% v/v for aerial application, if the glyphosate formulation does not have a build-in adjuvant system.
5. When CLETHODIM 2E is tank mixed with PURSUIT, RESOURCE, STORM, FIRSTRATE, SYNCHRONY, RAPTOR, FRONTROW, COBRA plus CLASSIC, COBRA plus BENTAZON 4, COBRA plus PURSUIT, COBRA plus FIRSTRATE, COBRA plus SYNCHRONY, and COBRA plus RAPTOR, the addition of 1 – 2 qt/A of liquid fertilizer (10-34-0, 28%N, or 32%N) is recommended. An equivalent amount, 2.5 - 4.0 lb/A. of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.
6. Refer to FLEXSTAR HL label for geographic and rotational restrictions.
7. Annual grasses and sizes controlled with these tank mixtures are those that are identified in the DIRECTIONS FOR REDUCED RATE USE IN SOYBEANS AT A REDUCED RATE table.

48
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Table 10. REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN
(See table for REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET USE DIRECTIONS FOR SMALL ANNUAL GRASSES FOR SPECIFIC GRASSES AND GROWTH STAGES)

PRODUCT	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES ²	PERENNIAL GRASSES	CROP OIL CONCENTRATE ^{3,4} (V/V)	
			GROUND	AIR
CLETHODIM 2E + FIRSTRATE	4 – 8 fl oz + 0.3 oz	-	1%	1%
CLETHODIM 2E + PURSUIT 70 DG	4 - 6 fl oz + 1.44 oz	-	1%	1%

1. Make a second application of CLETHODIM 2E alone - without a tank mix herbicide - according to the appropriate size and rate directions if grass regrowth occurs or an additional flush of new grass emerges.
2. Annual grasses and sizes controlled with these tank mixtures are those that are identified in the USE DIRECTIONS FOR SMALL ANNUAL GRASSES table.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.
4. When CLETHODIM 2E is tank mixed at reduced rates, the addition of 1 - 2 qt/A of liquid fertilizer (10-34-0, 28% N. or 32%N) is required. An equivalent amount, 2.5 to 4.0 lb/A. of spray grade ammonium sulfate (AMS) may be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

USE DIRECTIONS FOR ROUNDUP READY VOUNTEER CORN CONTROL IN ROUNDUP READY SOYBEANS WITH CLETHODIM 2E HERBICIDE TANK MIX

Roundup Ready Volunteer Corn Height (inches)	CLETHODIM 2E Rate fl. oz./A	Glyphosate ⁽¹⁾ rate for formulations with built in adjuvant	Adjuvant
<12	4	1.0 to 2.0 lb. ai./A (Approximately equivalent to 22 to 44 fl. oz./A of ROUNDUP weather MAX)	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gal. of carrier
12 to 18	5		
18 to 24	6		

Roundup Ready Volunteer Corn Height (inches)	CLETHODIM 2E Rate fl. oz./A	Glyphosate ⁽¹⁾ rate for formulations without built in adjuvant	Adjuvant
<12	4	Up to 2.0 lb. ai./A (Equivalent to 32 to 64 fl. oz./A of ROUNDUP Original)	Crop oil concentrate @ 1 pt./A plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier
12 to 18	5		
18 to 24	6		

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1. Glyphosate formulation must be labeled for use on Roundup Ready soybeans.

PEANUT (Including Perennial)

Table 11. CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR PEANUT (See Use Direction tables above for specific grasses and growth stages)

PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES ²	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E + BENTAZON 4	8 - 10 fl oz + 1.0 - 2.0 pt	-	1%	1%
CLETHODIM 2E + STORM	8 -10 fl oz + 1.5 pt	-	1%	1%

1. Make a second application of CLETHODIM 2E alone - without a tank mix herbicide - according to the appropriate size and rate directions, if grass regrowth occurs or an additional flush of new grass emerges.
2. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.

USE DIRECTIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY IN PEANUT WITH CLETHODIM 2E

GRASS SPECIES	WEED STAGE	RATE FL OZ/A	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height charts "USE DIRECTIONS FOR ANNUAL GRASSES" & "USE DIRECTIONS FOR PERENNIAL GRASSES"	Up to and including grasses in the seed head stage	16	32

Do not apply as part of a tank mix when applying CLETHODIM 2E for grass suppression.

Add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.

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SUGAR BEET

Table 12. CLETHODIM 2E TANK MIXED WITH SPUR (clopyralid) APPLIED TO SUGAR BEETS (See USE DIRECTIONS tables above for specific grasses and growth stages)

PRODUCT ²	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)	
			GROUND	AIR
CLETHODIM 2E + SPUR	6 - 8 fl oz	8 -16 fl oz	1%	
	See the SPUR label for rates. Refer to the Clethodim 2E label for weed height and species controlled.			

1. Make a second application of CLETHODIM 2E alone - without a tank mix herbicide - according to the appropriate size and rate directions, if grass regrowth occurs or an additional flush of new grass emerges.
2. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.

Table 13. CLETHODIM 2E TANK MIXED WITH BETANEX OR BETAMIX APPLIED TO SUGAR BEET

PRODUCT ²	WEEDS CONTROLLED		WEED HEIGHT (Inches)	APPLICATION RATES/ACRE ¹
	COMMON NAME	SCIENTIFIC NAME		
CLETHODIM 2E ³ + BETANEX OR BETAMIX	Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 3	8 fl oz
	Foxtail	<i>Setaria spp.</i>	1 to 3	
	Foxtail Millet	<i>Setaria italica</i>	1 to 3	
	Wild Oat	<i>Avena fatua</i>	1 to 3	
	Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 3	
			See BETANEX OR BETAMIX label for rates to control broadleaf weeds. No additives are recommended in this tank mix.	

1. Do not use crop oil concentrate. No additives are recommended in this tank mix.
2. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
3. Make a second application of CLETHODIM 2E at the full label rate with appropriate rate of crop oil concentration, if grass regrowth occurs or an additional flush of new grass emerges.

51
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Table 14. CLETHODIM 2E PLUS BETANEX OR BETAMIX TANK MIX FOR THREE SEQUENTIAL APPLICATIONS FOR ANNUAL GRASS CONTROL (MICRO-RATE APPLICATION)

PRODUCT	APPLICATION RATES/ACRE ¹			
	ANNUAL GRASSES	GRASSES CONTROLLED (inches)	METHYLATED SEED OIL ² (V/V)	
			GROUND	AIR
CLETHODIM 2E + BETANEX or BETAMIX	2 - 3 fl oz + 0.8 -12 fl oz ³ or 0.8 -12 fl oz ³	Green Foxtail (1-2) Yellow Foxtail (1-2) Barnyardgrass (1-2) Wild Oat (1-2) Volunteer Cereals (1-2)	1.5%	1.5%

1. Broadleaf weed control may be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. Tank mixing is not recommended in these situations.
2. Always use a methylated seed oil at the listed rate, but not less than 1 pt/A, in the finished spray volume.
3. When sugar beets are in the cotyledon to 4-leaf stage, use 8 fl oz/A rate. This rate can be increased up to 12 fl oz/A when the smallest sugar beet plants in the field are in the 4 true leaf stage or larger.

DIRECTIONS FOR USE WITH MICRO-RATE APPLICATIONS TO SUGAR BEETS

Multiple micro-rate applications of CLETHODIM 2E in tank mixtures with reduced rates of BETANEX or BETAMIX and methylated seed oils can be applied by air or ground equipment to sugar beets to control early germinating annual grasses listed above. Do not exceed the rate of 0.12 lb ai/A broadcast application for BETANEX or BETAMIX when in combination with these spray adjuvants. Note that maximum rate allowed varies depending on crop growth stage. The use of wetting agents or spray adjuvants with conventional rates (0.73 to 1.22 lb ai/A) or multiple low rate (0.24 to 0.73 lb ai/A) applications of BETANEX or BETAMIX is prohibited on the BETANEX and BETAMIX master label. Favorable climatic conditions, i.e. good conditions for plant growth and development, are essential for adequate weed control. All use precautions and restrictions on the BETANEX and BETAMIX master labels must be followed.

DIRECTIONS FOR USING MICRO-RATE MULTIPLE APPLICATIONS OF CLETHODIM 2E TANK MIXES

Apply CLETHODIM 2E in broadcast applications only at a rate of 2 - 3 fl oz/A in tank mixture with either BETANEX or BETAMIX following the directions for use on the tank mix partner label. A minimum of three sequential applications of 2 fl oz/A or a minimum of 2 sequential applications of 3 fl oz/A should be utilized for CLETHODIM 2E tank mixtures. A minimum of 3 sequential applications of BETANEX or BETAMIX should be used. Accurate timing is essential. Immediately after weeds emerge, make initial application and make repeat applications on 5 to 7 day intervals. Return to conventional application rates of CLETHODIM 2E, 6 - 8 fl oz/A, and add rates of BETANEX or BETAMIX as directed on their label, if weed control is not adequate due to climatic conditions, spray coverage or other factors. A spray

52
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adjuvant is not recommended when using conventional rates of BETANEX or BETAMIX in tank mixtures with CLETHODIM 2E.

Use Precautions for Micro-Rate Applications: (See CLETHODIM 2E, BETANEX and BETAMIX master label for further use precautions)

Even with favorable climatic conditions, not all weeds will be adequately controlled. If multiple micro-rate applications do not adequately control weeds, conventional rates of CLETHODIM 2E, BETANEX or BETAMIX and/or hand labor may be required. Plugging of spray nozzles may be encountered, due to the potential for formation of a precipitate in the spray solution that is often associated with micro-rate applications. If the BETANEX or BETAMIX rate exceeds 0.12 lb ai/A broadcast, methylated seed oils must not be added. This addition of methylated seed oils could increase the possibility of crop injury at dosage rates greater than 0.12 lb ai/A.

GROUND APPLICATION

It is essential to use sufficient spray volumes and pressure to ensure complete coverage. Use a minimum of 10 gallons and maximum of 20 gallons spray solution per acre. Spray pressures should reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

AERIAL APPLICATION

It is essential to use sufficient spray volumes to ensure complete coverage. Use a minimum of 5 gallons and maximum of 15 gallons of spray solution per acre.

Table 15. TANK MIX APPLICATION OF CLETHODIM 2E AND FUNGICIDES FOR CONTROL OF GRASS WEEDS AND DISEASES IN SUGAR BEET

PRODUCT ²	APPLICATION RATES/ACRE ¹		
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE ³ (V/V)
CLETHODIM 2E + EMINENT®	6 - 8 fl oz + 13 fl oz	8 to 16 fl oz + 13 fl oz	1%

1. Make a second application of CLETHODIM 2E at the full label rate with appropriate rate of crop oil concentration, if grass regrowth occurs or an additional flush of new grass emerges.
2. Refer to CLETHODIM 2E and fungicide label for rates and weeds and diseases controlled.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.

53
65**Table 16. TANK MIX APPLICATION OF CLETHODIM 2E AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS IN ALFALFA, COTTON, MINT, PEANUT (INCLUDING PERENNIAL), SOYBEAN AND SUNFLOWER**

PRODUCT ²	APPLICATION RATES/ACRE ¹			CROP					
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE (V/V) ³	Alfalfa ⁴	Cotton	Mint ^{4,5}	Peanut	Soybean	Sunflower
CLETHODIM 2E + Orthene 75S or Orthene 97	6- 8 fl oz + 0.33 – 1.33 lb or 0.25 -1.0 lb	8 -16 fl oz + 0.33 - 1.33 lb or 0.25 -1.0 lb	1%		X	X	X		
CLETHODIM 2E + Orthene 90 S ⁶	6 - 8 fl oz + 0.25 -1 lb	8 – 16 fl oz + 0.25 -1 lb	1%		X	X	X	X	
CLETHODIM 2E + DANITOL® 2.4 EC	6 - 8 fl oz + 10 2/3 - 16 fl oz	8 -16 fl oz + 10 2/3 -16 fl oz	1%		X		X		
CLETHODIM 2E + ASANA XL®	6 - 8 fl oz + See ASANA XL label	8 - 16 fl oz + See ASANA XL label	1%						X
CLETHODIM 2E + WARRIOR	6 – 8 fl oz + See WARRIOR label	8 -16 fl oz + See WARRIOR label	1%						X
CLETHODIM 2E + WARRIOR	10 - 16 fl oz + See WARRIOR label	10 – 16 fl oz + See WARRIOR label	1%	X					
CLETHODIM 2E + BAYTHROID	10 – 16 fl oz + See BAYTHROID label	10 – 16 fl oz + See BAYTHROID label	1%	X					
CLETHODIM 2E + DIMETHOATE	10 -16 fl oz + See Dimethoate label	10 -16 fl oz + See Dimethoate label	1%	X					

54
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CLETHODIM 2E + LORSBAN	10 – 16 fl oz + See LORSBAN label	10 – 16 fl oz + See LORSBAN label	1 - 2 pt ^b	x					
CLETHODIM 2E + POUNCE	10 – 16 fl oz + See POUNCE label	10 -16 fl oz + See POUNCE label	1%	x					

1. Make a second application of CLETHODIM 2E alone - without a tank mix insecticide - according to the appropriate size and rate directions, if grass regrowth occurs or an additional flush of new grass emerges.
2. Refer to CLETHODIM 2E and insecticide label for rates and weeds and insects controlled.
3. Always use a crop oil concentrate at the listed rate, but not less than 1 pt/A, in the finished spray volume.
4. Certain insecticides can cause temporary phytotoxic symptoms on alfalfa and mint foliage.
5. Rates for CLETHODIM 2E for annual grass control in baby mint should be 6 - 8 fl oz/A; minimum of 8 fl oz/A for annual grass control in established mint and 8 - 16 fl oz/A for perennial grass control. Add a crop oil concentrate at the rate of 1.0 - 2.0 pt/A.
6. Insecticide tank mix use with ORTHENE 90 S in soybeans is permitted only in a state having an approved Section 24(c) registration for ORTHENE 90 S use in soybeans.
7. The rate for CLETHODIM 2E for annual grass control in seedling alfalfa should be 6 - 8 fl oz/A.
8. For CLETHODIM 2E plus LORSBAN tank mix, reduce the adjuvant rate down to 1.0 pt/A when the LORSBAN rate is 1.0 pt/A or higher.

FALLOW LAND DIRECTIONS FOR USE

CLETHODIM 2E can be used to control annual and perennial grasses in land that has been left fallow the previous year and on other non-producing agricultural areas. Apply Clethodim 2E at 6 - 8 fl oz/A for annual grasses and 8 - 16 fl oz/A for perennial grasses. CLETHODIM 2E can be tanked mixed with 2,4-D ester or BANVEL SGF for broad spectrum control when both grass and broadleaf weeds are the target pest. Apply a minimum of 8 fl oz/A CLETHODIM 2E when both annual and perennial grasses occur in the same field.

- Use a minimum spray volume of 5 gallons/A for aerial applications and 15 gallons/A for ground applications.
- Make application only to actively growing grasses when the first grass reaches the recommended weed height as specified by the Use Directions for Annual and Perennial Grasses section of this label.
- Annual grasses that emerge after the Clethodim 2E application will not be controlled and a second application could be necessary.
- Control of perennial grasses may require more than one (1) application in non-tilled areas.
- Do not plant any crop for 30 days after application unless clethodim is registered for use on that crop.

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- Do not apply to grasses that have tillered, formed seed-heads or exceeded recommended growth stage.
- Do not use flood jet nozzles.
- Do not apply to drought stressed grasses.
- Do not mow area for two (2) weeks prior to or after the CLETHODIM 2E application.

Table 18. CLETHODIM 2E IN TANK MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND

PRODUCT	APPLICATION RATES/ACRE ⁽¹⁾		CROP OIL CONCENTRATE ²	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
CLETHODIM 2E	6 – 8 fl oz	8 -16 fl oz	1%	1%
+ 2,4-D ester or BANVEL SGF	+ See 2,4-D ester label for rates or See BANVEL SGF label for rates			

¹ See CLETHODIM 2E label for weed height and species control. Review BANVEL SGF and 2,4-D labels for use rates, weeds controlled and crop restrictions.

² Always use a crop oil concentrate or methylated seed oil containing at least 15% emulsifier at the listed rate, but not less than 1 pt/A, in the finished spray volume.

USE DIRECTIONS FOR GRASS SUPPRESSION IN NON-CROP AREAS WITH CLETHODIM 2E			
GRASS SPECIES	WEED STAGE	RATE FL OZ/ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height chart above	Up to and including grasses in the seed head stage	12	16
Do not apply as part of a tank mix when applying CLETHODIM 2E for grass suppression.			
Add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.			

Table 19. CLETHODIM 2E FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM SEASON GRASS RESTORATION PROJECTS

PRODUCT	PRODUCT RATES	GRASS WEEDS CONTROLLED/SUPRESSED		WEED STAGES
		Common Name	Scientific Name	
CLETHODIM 2E	10 -12 fl oz/A	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 inches tall (40-60% green-up)
<p>ADJUVANT: CLETHODIM 2E must be applied with a crop oil concentrate at 1 qt/A, plus a spray grade ammonium sulfate (AMS) at 2.5 - 4 lb/A.</p> <p>Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add CLETHODIM 2E, then add crop oil concentrate.</p>				

SPECIAL APPLICATION RESTRICTIONS/PRECAUTIONS

- Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue. Make application in the spring at 40 - 60% tall fescue green-up, prior to emergence of warm-season grasses. Do not mow area for two (2) weeks after the CLETHODIM 2E application.
- Make application in a minimum of 15 - 20 gallons water per acre at a spray pressure of 40 - 60 PSI at the nozzle. Apply using flat fan or hollow cone nozzles. Do not use flood jet nozzles.
- Make application only to fields that have warm season grasses established for two (2) years. Application of CLETHODIM 2E to emerged warm-season grasses may cause injury. Do not make applications to warm-season grasses grown for seed.
- Do not graze treated fields or feed treated forage and/or hay to livestock. Do not plant any crop for 30 days after application, unless clethodim is registered for use on that crop.
- NOTE: CLETHODIM 2E applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47°F.

Table 20. CLETHODIM 2E FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NONPRODUCING AGRICULTURAL AREAS

PRODUCT	PRODUCT RATE	SUPPRESSION	APPLICATION TIMING
CLETHODIM 2E	1-1/2 - 2 fl oz/A	Tall Fescue Seed-Heads (<i>Festuca arundinacea</i>)	(50 to 90% Tall Fescue green-up)
<p>ADJUVANT: CLETHODIM 2E must be applied with a crop oil concentrate at 1 qt/A, plus a spray grade ammonium sulfate (AMS) at 2.5 - 4 lb/A.</p> <p>Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add CLETHODIM 2E, then add crop oil concentrate.</p>			

SPECIAL APPLICATION RESTRICTIONS/PRECAUTIONS

- Make application at 50 - 90% tall fescue green-up.
- If less tall fescue green matter is present, use the higher CLETHODIM 2E rate.
- Do not mow area for two (2) weeks after the CLETHODIM 2E application.
- Make application in a minimum of 15 - 20 gallons water per acre at a spray pressure of 40 - 60 PSI at the nozzle. Make application using flat fan or hollow cone nozzles. Do not use flood nozzles.
- 2,4-D ester may be added to this tank mix for broadleaf control (see 2,4-D ester label for weeds controlled.)
- Do not graze treated fields or feed treated forage and/or hay to livestock. Do not plant any crop for 30 days after application unless clethodim is registered for use on that crop.

THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK MIX MUST BE FOLLOWED.

- Make application only to actively growing grass and broad leaf weeds at recommended height or growth stage listed on each label.
- Make application under favorable soil moisture and humidity, which exist a few days after rainfall or within seven days after irrigation.
- Tank mix applications may sometimes result in reduced grass control. Make a second application of CLETHODIM 2E as specified in the respective size and rate tables if regrowth occurs or an additional flush of new grass emerges.
- Do not tank mix CLETHODIM 2E when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.
- This tank mix may be applied postemergence to ROUNDUP READY soybeans up through the full flowering stage. Do not make application less than 60 days before harvest.
- Severe injury or destruction will result unless contact is avoided with foliage, green stems, or fruit crops, or any desirable plants and trees, other than soybeans with ROUNDUP READY gene.
- Do not allow the CLETHODIM 2E plus ROUNDUP to mist, drip, drift or splash onto desirable vegetation as minute quantities of the tank mix can cause severe damage or destruction to the crops, plants, or other areas on which treatment is not intended. The likelihood of injury occurring from drift of this product is greatest when winds are gusty or in excess of 5 miles per hour. Even under lesser wind velocities, avoid conditions that will allow spray drift to occur, such as combinations of spray pressure and nozzle type that will result in fine particles (mist) that are likely to drift.

DIRECTIONS FOR USE IN ORNAMENTALS

CLETHODIM 2E can be used for ornamental plant uses to control labeled grass weeds in greenhouse, lathouses, shadehouses, and around outdoor ornamentals, including nurseries, parks, roadside plants, and structure landscapes.

IMPORTANT: CLETHODIM 2E successfully controls weeds in newly transplanted and established non-grassy ornamentals. Plant tolerance to CLETHODIM 2E at labeled rates has been found to be acceptable for the indicated genera and species listed below. It is recommended that the user determine if herbicide can be used safely on a few plants prior to widespread application, due to variability within species, crop growth stage, environmental

conditions, and application techniques. Neither the seller nor the manufacturer of CLETHODIM 2E have investigated the safety factor to ornamental plants not listed on this label.

The following plants have shown a tolerance for CLETHODIM 2E applications:

ORNAMENTAL TREES

COMMON NAME	SCIENTIFIC NAME
ALDER, RED	<i>Alnus rubra</i>
ASH	<i>Fraxinus spp.</i>
BASSWOOD	<i>Tilia spp.</i>
BIRCH, EUROPEAN WHITE	<i>Betula pendula</i>
BIRCH, RIVER	<i>Betula nigra</i>
BIRCH, WHITE	<i>Betula papyrifera</i>
CRABAPPLE, FLOWERING	<i>Malus halliana</i>
DOGWOOD, FLOWERING	<i>Cornus florida</i>
GOLDEN CHAIN TREE	<i>Laburnum anagyroides</i>
MAPLES	<i>Acer spp.</i>
MULBERRY, WHITE	<i>Morus alba</i>
OAKS	<i>Quercus spp.</i>
OLIVE, WILD	<i>Elaeagnus anqustifolia</i>
REDBUD, EASTERN	<i>Cercis Canadensis</i>
SWEET GUM, AMERICAN	<i>Liquidambar styraciflua</i>

GARDEN FLOWERS AND PLANTS

COMMON NAME	SCIENTIFIC NAME
AGERATUM	<i>Ageratum spp.</i>
AL YSSUM*, SWEET	<i>Lobularia maritima</i>
ASPARAGUS FERN	<i>Asparagus setaceus</i>
BLEEDING HEART	<i>Dicentra spectabilis</i>
CAST IRON PLANT	<i>Aspidistra elatior</i>
CHRYSANTHEMUM	<i>Chrysanthemum spp.</i>
CINQUEFOIL	<i>Potentilla spp.</i>
COLEUS	<i>Coleus spp.</i>
CORALBELLS	<i>Heuchera sanguinea</i>
CRANESBILL	<i>Geranium spp.</i>
DAHLIA	<i>Dahlia spp.</i>
DAISY, TRAILING AFRICAN	<i>Osteospermum fruticosum</i>
DAYLILY	<i>Hemerocallis spp.</i>
DUSTY MILLER	<i>Senecio cineraria</i>
EUONYMUS	<i>Euonymus spp.</i>
GAZANIA	<i>Gazania spp.</i>
GERANIUM, HOUSE	<i>Pelargonium hortorum</i>
HEATHER, FALSE	<i>Cuphea hyssopifolia</i>
HOSTA	<i>Hosta fortune</i>
IRIS	<i>Iris spp.</i>

JASMINE TOBACCO	<i>Nicotiana glauca</i>
LOOSESTRIFE	<i>Lythrum salicaria</i>
MARIGOLD	<i>Tagetes spp.</i>
PARTRIDGEBERRY	<i>Mitchella repens</i>
PETUNIA*	<i>Petunia hybrida</i>
PHLOX	<i>Phlox spp.</i>
PINKS	<i>Dianthus spp.</i>
PORTULACA	<i>Portulaca grandiflora</i>
SALVIA	<i>Salvia spp.</i>
SAXIFRAGE	<i>Saxifraga spp.</i>
SEDUM	<i>Sedum spp.</i>
SELLOUM	<i>Philodendron selloum</i>
SNAPDRAGON*	<i>Antirrhinum majus</i>
SWEET FLAG	<i>Acorus gramineus</i>
TICKSEED	<i>Coreopsis grandiflora</i>
TOUCH-ME-NOT	<i>Impatiens spp.</i>
VERBENA	<i>Verbena spp.</i>
VIOLET	<i>Viola spp.</i>
YARROW, COMMON	<i>Achillea millefolium</i>
ZINNIA	<i>Zinnia elegans</i>

* Slight foliage or flower speckling has been observed on these species.

GROUND COVERS

COMMON NAME	SCIENTIFIC NAME
BUGLEWEED, CARPET	<i>Ajuga reptans</i>
IVY, ENGLISH	<i>Hedera helix</i>
JAPANESE SPURGE	<i>Pachysandra terminalis</i>
LILYTURF	<i>Liriope muscari</i>
MONEYWORT	<i>Lysimachia nummularia</i>
MONDO GRASS, WHITE	<i>Ophiopogon jaburan</i>
MONDO GRASS, DWARF	<i>Ophiopogon japonicus</i>
PERIWINKLE, COMMON	<i>Vinca minor</i>

SHRUBS

COMMON NAME	SCIENTIFIC NAME
ABELIA	<i>Abelia spp.</i>
ANISE, PURPLE	<i>Illicium floridanum</i>
AUCUBA	<i>Aucuba spp.</i>
AZALEA*	<i>Rhododendron spp.</i>
BAMBOO	<i>Bambusa spp.</i>
BARBERRY, JAPANESE	<i>Berberis thunbergii</i>
BARBERRY, MAGELLAN	<i>Berberis buxifolia</i>
BAYBERRY	<i>Myrtila pensylvanica</i>
BOTTLEBRUSH	<i>Callistemon citrinus</i>
BOXWOOD, COMMON	<i>Buxus sempervirens</i>
CAMELLIA, COMMON	<i>Camellia japonica</i>

50
65

COMMON NAME	SCIENTIFIC NAME
CANDYTUFT	<i>Iberis sempervirens</i>
CLEYERA	<i>Cleyera japonica</i>
CORALBERRY	<i>Ardisia crenata</i>
CRAPE MYRTLE	<i>Lagerstroemia indica</i>
COYOTE BRUSH	<i>Baccharis pilularis</i>
FIG, CREEPING	<i>Ficus pumila</i>
GARDENIA	<i>Gardenia spp.</i>
HOLLY	<i>Ilex spp.</i>
HONEYSUCKLE	<i>Lonicera spp.</i>
INDIAN HAWTHORN	<i>Raphiolepis indica</i>
JASMINE	<i>Jasminum spp.</i>
JASMINE, ASIATIC	<i>Trachelospermum asiaticum</i>
JASMINE, STAR	<i>Trachelospermum jasminoides</i>
JUNIPER	<i>Juniperus spp.</i>
LANTANA	<i>Lantana spp.</i>
NANDINA* BAMBOO, HEAVENLY	<i>Nandinia domestica</i>
OLEANDER, COMMON	<i>Nerium oleander</i>
OREGON GRAPE	<i>Mahonia aquifolium</i>
PHOTINIA	<i>Photinia spp.</i>
PITTOSPORUM	<i>Pittosporum spp.</i>
PODOCARPUS	<i>Podocarpus spp.</i>
PRIVET	<i>Ligustrum spp.</i>
PYRACANTHA	<i>Pyracantha spp.</i>
RHODODENDRON	<i>Rhododendron spp.</i>
ROSE	<i>Spiraea bumalda</i>
SWEET OLIVE	<i>Osmanthus fragrans</i>
VIBURNUM	<i>Viburnum tinus</i>
WISTERIA	<i>Wisteria spp.</i>
YELLOW SAGE/SHRUB VERBENA	<i>Lantana camara</i>

*Slight foliage or flower speckling has been observed on these species.

USE DIRECTIONS FOR ANNUAL GRASSES IN ORNAMENTALS

1. Apply only to actively growing grasses at recommended weed heights.
2. Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.
3. Use the higher rate under heavy grass pressure and/or when grasses are at maximum height.

GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT (Inches)	RATE FL OZ/ACRE ¹	HIGH RATE ²
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 - 8	8	16
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 - 6	8	16

61
65

GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT (Inches)	RATE FL OZ/ACRE ¹	HIGH RATE ²
Brome				
California	Bromus carinatus	2 - 6	8	16
Cheat	Bromus secalinus	2 - 6	8	16
Downy	Bromus tectorum	2 - 6	8	16
Ripgut	Bromus diandrus	2 - 6	8	16
Canarygrass	Phalaris canariensis	1 - 4	8	16
Crabgrass				
Hairy	Digitaria adscendens	2 - 6**	8	16
Large	Digitaria sanguinalis	2 - 6**	8	16
Smooth	Digitaria ischaemum	2 - 6**	8	16
Southern	Digitaria ciliaris	2 - 6**	8	16
Crowfootgrass	Dactyloctenium aegyptium	2 - 6**	8	16
Fall Panicum	Panicum dichotomiflorum	2 - 8	8	16
Field Sandbur	Cenchrus incertus	2 - 6	8	16
Foxtail				
Giant	Setaria faberi	2 - 12	8	16
Green	Setaria viridis	2 - 8	8	16
Yellow	Setaria glauca	2 - 8	8	16
Goosegrass	Eleusine indica	2 - 6**	8	16
Itchgrass	Rottboellia cochin	2 - 6	8	16
Junglerice	Echinochloa colona	2 - 6	8	16
Lovegrass (Stinkgrass)	Eragrostis cilianensis	2 - 6	8	16
Rabbitsfootgrass	Polypogon monspeliensis	1 - 4	8	16
Red Rice	Oryza sativa	1 - 3	8	16
Ryegrass				
Hardy	Lolium remotum	2 - 6	8	16
Italian	Lolium multiflorum	2 - 6	8	16
Seedling Johnsongrass	Sorghum halepense	4 - 10	8	16
Shattercane	Sorghum bicolor	6 - 18	8	16
Southwestern Cupgrass	Eriochloa gracilis	2 - 6	8	16
Sprangletop				
Amazon	Leptochloa panicoides	2-6	8	16
Bearded	Leptochloa fascicularis	2-6	8	16
Mexican	Leptochloa uninervia	2-6	8	16
Red	Leptochloa filiformis	2-6	8	16
Texas Panicum	Panicum texanum	2-6	8	16
Volunteer Cereals				
Barley	Hordeum vulgare	2-6	8	16
Oats	Avena sativa	2-6	8	16

62
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GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT (Inches)	RATE FL OZ/ACRE ¹	HIGH RATE ²
Rye	Secale cereale	2-6	8	16
Wheat	Triticum aestivum	2-6	8	16
Volunteer Corn	Zea mays	4 -12	6	8
Volunteer Corn	Zeamays	12 - 24	8	16
Volunteer Grain Sorghum	Sorghum bicolor	8-12	8	16
Wild Oats	Avena fatua	2-6	8	16
Wild Proso Millet	Panicum miliaceum	2-10	8	16
Witchgrass	Panicum capillare	2-8	8	16
Woolly Cupgrass	Eriochloa villosa	2-8	8	16

*Generally occurs between 3-leaf stage and tillering

**Length of lateral growth

¹8 fl oz/A = approximately 0.2 fl oz/1,000 sq ft

²16 fl oz/A = approximately 0.4 fl oz/1,000 sq ft

Add a nonionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gallons (0.25% v/v).

USE DIRECTIONS FOR PERENNIAL GRASSES

- Apply only to actively growing grasses at recommended weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment
- Use the higher rate under heavy grass pressure and/or when grasses are at maximum height.

GRASS SPECIES	WEED HEIGHT (inches)	RATE FL OZ/ACRE ¹	HIGH RATE ²
Bermudagrass (<i>Cynodon dactylon</i>)			
First Application	3 (or up to 6" runners)	8	16
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8	16
Quackgrass (<i>Elytrigia repens</i>)			
First Application	4-8	8	16
Repeat Application(s) (if regrowth occurs)	4-8	8	16
Rhizome Johnsongrass (<i>Sorghum halepense</i>)			
First Application	12 -24	8	16
Repeat Application(s) (if regrowth occurs)	6-18	6	8
Wirestem Muhly (<i>Muhlenbergia frondosa</i>)			
First Application	4-8	8	16
Repeat Application(s) (if regrowth occurs)	4-8	8	16

1. 8 fl oz/A = approximately 0.2 fl oz/1,000 sq ft

2. 16 fl oz/A = approximately 0.4 fl oz/1,000 sq ft

Add a non ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gallons (0.25% v/v)

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store product in original container only. Store in a cool, dry place. Do not store diluted spray. Open dumping is prohibited.

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

CONTAINER DISPOSAL:

Containers equal to or less than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple-rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Containers greater than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple-rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

REFILLABLE CONTAINERS: 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 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 procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

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