40901AL0022

Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2014-2016 LIC. NO.

9894.20
Disc.

NET CONTENTS: 2.5 GALLONS

Agri Star®
By Albaugh Inc.

CLETHODIM 2E

ACTIVE INGREDIENT:

Clethodim*	26.4%
OTHER INGREDIENTS	73.6%
TOTAL	100.0%

Contains Petroleum Distillates.

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

CLETHODIM 2E contains 2.0 lbs. clethodim per gallon.

IN CASE OF EMERGENCY REGARDING THIS PRODUCT, CALL CHEMTREC 1-800-424-9300

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Immediately call a poison control center or doctor. • 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 INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND COMPLETE DIRECTIONS FOR USE.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. 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.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place in original container.

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: Non-refillable containers (<5 gallons): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure 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. **(non-refillable >5 gallons):** 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **Refillable container (bulk):** 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 the 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 rinsing process two more times.

EPA Reg. No. 42750-72 **EPA Est. No. 42750-MO-001**

Manufactured by:
ALBAUGH, INC.
1525 NE 36th Street • Ankeny, Iowa 50021

PEEL HERE TO OPEN

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HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN: Contains petroleum distillates – vomiting may cause aspiration pneumonia.

See inside label booklet for additional PRECAUTIONARY STATEMENTS.

Manufactured by:
ALBAUGH, INC.
1525 NE 36th Street
Ankeny, Iowa 50021

FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE, CALL CHEMTREC (800) 424-9300

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

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

PERSONAL PROTECTIVE EQUIPMENT

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 $\geq$ 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. 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.

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Wild Rice: Hays County, Texas.

PHYSICAL OR CHEMICAL HAZARDS

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

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

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

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

STORAGE AND DISPOSAL

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

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(non-refillable >5 gallons): 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable container (bulk): 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 the 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 rinsing process two more times.

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

CLETHODIM 2E is for use on:
Alfalfa, Artichoke (Globe), Asparagus, Bean and Pea (dry)[1], Bean and Pea (succulent)[2], Broccoli, Bushberry[3], Cabbage, Caneberry[4], Canola*, Carrot, Cauliflower (and other Head and Stem Brassica Vegetables)[5], Celery, Clover (grown in Idaho, Oregon and Washington only), Conifer, Cotton, Cranberry, Cucumber, Eggplants (and other Fruiting Vegetables)[6], Fallow Land (and other non-producing agricultural areas), Flax*, Field Corn[7], Garden Beet, Garlic, Herbs[8], Hops, Horseradish (and other Root Vegetables)[9], Legume Vegetables (edible-podded)[10], Lettuce, Head and Leaf (and other leafy greens)[11], Melons (including Cantaloupes and Watermelons)[12], Mint, Mustard Greens (and other Leafy Brassica Greens)[13], Mustard Seed*, Non-Bearing Food Crops, Non-Crop or Non-Planted Areas, Onions (dry bulbs and green), Ornamentals, Peaches, Peanuts (including perennial), Peppers (bell and non-bell), Potato, Radish, Rhubarb (and other Leaf Petioles)[14], Safflower, Sesame, Shallots (dry bulbs and green), Soybeans, Squash (including Pumpkins), Strawberry, Sugar Beet, Sunflower, Sweet Potato, Tomato, and Yam (and other Tuberous and Corm Vegetables)[15]

*Not for use in California

[1] Other Dry Shelled Bean and Pea crops approved for use with CLETHODIM 2E include: Bean *(Lupinus* spp.), grain, sweet, white and white sweet; Bean *(Phaseolus* spp.), field, kidney, lima (dry), navy, pinto and tepary; Bean *(Vigna* spp.), adzuki bean, 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 CLETHODIM 2E includes: Bean *(Lupinus* spp.), grain, sweet, white and white and white sweet; Bean *(Phaseolus* spp.), field kidney, lima (dry), navy, pinto and tepary; Bean *(Vigna* spp.), adzuki bean, 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 bushberry crops approved for use with CLETHODIM 2E include: Aronia Berry, Blueberry (highbush), Black Currant, Buffalo Currant, Chilean Guava, Cranberry (highbush), Elderberry, 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 CLETHODIM 2E include: Blackberry, Loganberry, Raspberry (black and red), Wild Raspberry; cultivars, varieties and/or hybrids of these.

[5] Other head and stem brassica vegetables approved for use with CLETHODIM 2E: Chinese broccoli, brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cavalo broccoli and kohlrabi.

[6] Other Fruiting Vegetables (except tomato) approved for use with CLETHODIM 2E include: eggplant, groundcherry, 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 CLETHODIM 2E include: angelica, balm, basil, borage, bumet, 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 CLETHODIM 2E include: burdock, edible; celeriac; chervil, turnip-rooted; chicory; ginseng; parsley, turnip-rooted; parsnip; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret and turnip.

(continued)

[10] Other Edible-Podded Legume Vegetable crops approved for use with CLETHODIM 2E include: 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 CLETHODIM 2E 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 CLETHODIM 2E 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 CLETHODIM 2E 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 CLETHODIM 2E include: cardoon, celtuce, Chinese celery, Florence fennel, and Swiss chard.

[15] Other tuber and corm vegetables approved for use with CLETHODIM 2E include: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible burdock, edible canna, bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, tanier, turmeric and bean yam.

CLETHODIM 2E is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided in this label.

CLETHODIM 2E is a selective postemergence herbicide for control of annual and perennial grasses. CLETHODIM 2E does not control sedges or broadleaf weeds.

In some grass species, 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.

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 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.

Control Symptoms

A reduction in vigor and growth is evident in treated grass weeds. Early chlorosis/necrosis of younger plant tissue is followed by a progressive collapse of the remaining foliage. Symptoms will generally be observed in 7 to 14 days depending on grass species treated and environmental conditions.

APPLICATION INFORMATION

Application Timing

Apply CLETHODIM 2E postemergence to actively growing grasses according to rate table directions in this label. 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.

In arid regions where irrigation is used to supplement limited rainfall, CLETHODIM 2E should be applied as soon as possible after an irrigation (within 7 days). In arid regions, a second application of CLETHODIM 2E will generally provide more effective control of perennial grass weeds than a single application. Make 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 CLETHODIM 2E may reduce weed control. DO NOT APPLY CLETHODIM 2E if rainfall is expected within one hour, since control may be reduced.

ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE

CROP	ADJUVANT RECOMMENDATIONS
Alfalfa, Cotton, Dry Bean, Dry Pea, Edible-Podded Legume Vegetables, Peanuts (including perennial), Potato, Soybeans, Succulent Bean and Pea, Sugar Beet, 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 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 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, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Artichoke (Globe), Asparagus, Bushberry, Caneberry, Canola, Carrot, Clover, Cranberry, Cucurbits, Flax, Fruiting Vegetables (except tomato), Garden Beet, Garlic, Head and Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Mint, Mustard Seed, Onions (dry bulbs and green), Peaches, Root Vegetables, Safflower, Sesame, Shallots (dry bulbs and green), Strawberry, Sweet Potato (Yam and other Tuberous and Corm Vegetables except Potato) and Tomato	Always use a crop oil concentrate at 1% v/v in the finished spray volume unless tank mix instructions indicate otherwise. For these crops, the addition of liquid fertilizer is not recommended.
Non-Bearing Food Crops, Ornamental Plants	Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (0.25% v/v). Use of crop oil concentrate is not recommended since it may injure flowers and foliage.
Conifer Trees, Fallow Land (and other non-producing agricultural areas), and 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.

*Acceptable crop oil concentrates would be those which contain a minimum of 80% oils 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

When using hand sprayers or high volume sprayers utilizing hand guns, mix 1/4% to 1/2% (0.33 oz. to 0.65 oz. per gallon) CLETHODIM 2E and treat to wet vegetation, while not allowing runoff of spray solution. For uses requiring crop oil concentrate, include crop oil concentrate at 1% (1.3 oz. per gallon) by volume. For uses requiring non-ionic surfactant, include non-ionic surfactant at 1/4% (0.33 oz. per gallon) 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 may occur.

CHEMIGATION – ONIONS (Dry Bulbs and Green) AND GARLIC SPRINKLER IRRIGATION APPLICATION

- Do not apply CLETHODIM 2E 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.

Apply 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 CLETHODIM 2E into 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 irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set, or hand move. 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 may result from non-uniform distribution of treated water.
3. If you have any 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 label-prescribed safety devices for public water supplies are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation or under 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 backflow.
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 broadleaf 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.

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- 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.
- 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 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 1.0% v/v (but not less than 1 pt./A) by air(5)	Do not plant rotational crops until 30 days after application of CLETHODIM 2E.(5,6) The addition of AMS has shown improved grass control for difficult-to-control species to control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
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, 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. For repeat applications, make on a minimum of a 14-day interval.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS[1]	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE[2]	SPECIAL USE INSTRUCTIONS
Beans, Dry including: Bean *(Lupinus* spp.*)* Grain Sweet White White Sweet Bean *(Phaseolus* spp.*)* Field Kidney Lima (dry) Navy Pinto Tepary Bean *(Vigna* spp.*)* Adzuki Bean Black-eyed Pea Catjang Cowpea Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Broad (dry) Chickpea (garbanzo) Guar Lablab Bean Lentil	30 days	6-16 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	Do not apply more than 16 fl. oz./A per application. For repeat applications, make on a minimum of a 14-day interval. Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Beans, Succulent including: Bean *(Phaseolus* spp.*)* Broad Bean (succulent) Lima Bean (green) Bean *(Vigna* spp.*)* Black-eyed Pea Cowpea Southern Pea	21 days	6-8 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	Refer to appropriate Table for reduced rate directions for the control of small annual grasses. Do not apply more than one (1) application per acre per season. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
Beet, Garden	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. For repeat applications, observe a minimum 14-day interval between applications.
Brassica Vegetables, Head and Stem including: Broccoli Cabbage Cauliflower Brussels sprouts	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. For repeat applications, observe a minimum 14-day interval between applications.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS(1)	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE(2)	SPECIAL USE INSTRUCTIONS
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 Salal 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 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 Bushberry grown for root stock.
Caneberry including: Blackberry Loganberry Raspberry, Black Raspberry, Red Raspberry, Wild Cultivars, varieties and/or hybrids of these	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 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 CLETHODIM 2E 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. per acre in a single application. For repeat applications, observe a minimum 14-day interval between applications.
Clover	15 days before grazing, feeding, or harvesting (cutting) for forage or hay	6-16 fl. oz.	1% v/v in the finished spray volume	For use on clover grown in Idaho, Oregon, and Washington only. Do not exceed 16 fl. oz. in a season.
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.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS(1)	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE(2)	SPECIAL USE INSTRUCTIONS
Cotton	60 days	6-16 fl. oz.	1 qt. by ground or 1.0% 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. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Cranberry	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. Do not apply between the "hook" stage and full fruit set. For repeat applications, observe a minimum 14-day interval between applications.
Cucurbits including: Cantaloupes (all) Chayote (fruit) Chinese Wax Gourd Citron Melon Cucumber Gherkin Gourd, Edible Honeydew Melon Muskmelons (all) Pumpkin 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. per acre in a single application. For repeat applications, observe a minimum 14-day interval between applications.
Fallow Land, Conifer Trees (and other non-producing agricultural areas) **Non-Crop or Non-Planted 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 in that crop.
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. ox./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. per acre in a single application. For repeat applications, observe a minimum 14-day interval between applications.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS(1)	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE(2)	SPECIAL USE INSTRUCTIONS
Herbs including: Angelica Balm Basil Borage Bumet Camomile Catnip Chervil (dried) Chive Chive, Chinese Cilantro (leaf) Clary Coriander (leaf) Costmary Curry (leaf) Dill (dillweed) Horehound Hyssop Lavender Lovage (leaf) Marigold Marjoram (*Origanum* spp.) Nasturtium Parsley (dried) Pennyroyal Rosemary Rue Sage Savory, Summer and Winter	14 days	6-8 fl. oz.	1% v/v in the finished spray volume	CLETHODIM 2E has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test CLETHODIM 2E on a small portion of the crop to be treated before treating the entire field. Crop tolerance should be verified to CLETHODIM 2E on a small area of the herb crop, at the desired CLETHODIM 2E 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, CLETHODIM 2E may be used on the entire field at the 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. For repeat applications, make on a minimum of a 14-day interval.
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. For repeat applications, make on a minimum of a 14-day interval.
Leafy Petioles including: Cardoon Celery Celtuce Chinese Celery Fennel, Florence (finochio) 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. For repeat applications, make on a minimum of a 14-day interval.
Leafy Brassica Greens including: Broccoli Raab Cabbage, Chinese (Bok Choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens	14 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. For repeat applications, observe a minimum 14-day interval between applications.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS[1]	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE[2]	SPECIAL USE INSTRUCTIONS
Leafy Greens including: Amaranth Chinese Spinach Leafy Amaranth Tampala Arugula (roquette) Chervil Chrysanthemum, Garland Corn Salad Cress Garden Upland (yellow rock and winter) Dandelion Dock (sorrel) Endive (escarole) Lettuce, Head & Leaf Orach Parsley Purslane Garden Winter Radicchio (red chicory) Spinach New Zealand Vine (Indian and Malabar)	14 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. For repeat applications, observe a minimum 14-day interval between applications.
Legume Vegetables, Edible-Podded including: Bean *(Phaseolus* spp.*)* Runner Snap Wax Bean *(Vigna* spp.*)* Asparagus Chinese Longbean Moth Yardlong Jackbean Pea *(Pisum* 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. Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

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 1.0% v/v (but not less than 1 pt./A) by air	Do not apply more than 16 fl. oz. per acre in a single application. For repeat applications, observe a minimum 14-day interval between 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 apply more than 6 fl. oz./A in a single application. Do not exceed 16 fl. oz. of CLETHODIM 2E per acre in a season.
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 gallons per acre spray volume by ground in the entire U.S. Minimum of 20 gallons per acre spray volume by air in California.[9] In states other than California, air applications to onions, garlic or shallots should be made in a minimum of 10 gals./A.
Onions, Green including: Green Eschalots Green Shallots Japanese Bunching Onions Leeks Scallions or Spring Onions	14 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. For repeat applications, observe a minimum 14-day interval between applications.
Ornamentals	N/A	6-16 fl. oz.	Use of crop oil concentrate is not recom-mended since it may injure flowers and foliage. See "Special Use Instructions".	Add a non-ionic 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 CLETHODIM 2E application.
Peas, Dry including: Pea *(Pisum* 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]	Do not apply more than 8 fl. oz./A per application. Do not apply more than one (1) application per acre per season. Apply before bloom but not later than 30 days prior to harvest.[10] Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
Peas, Succulent including: Pea *(Pisum* 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 per 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] Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals and volunteer corn.
Peach	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./A (0.5 lb. ai/A) per season. For repeat applications, make on a minimum of a 14-day interval. Do not apply to Peach grown for root stock.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS[1]	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE[2]	SPECIAL USE INSTRUCTIONS
Peanut (including perennial)	40 days	6-16 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Potato	30 days	6-16 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Radish	15 days	6-8 fl. oz.	1% v/v in the finished spray volume	Do not apply more than 8 fl. oz./A per acre in a single application. Do not apply more than 16 fl. oz. (0.25 lb. ai) per acre in a season. For repeat applications, observe a minimum 14-day interval between 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. per acre in a single application. For repeat applications, observe a minimum 14-day interval between 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. For repeat applications, make on a minimum of a 14-day interval.
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. For repeat applications, make on a minimum of a 14-day interval.
Soybean	60 days	6-16 fl. oz.	1 qt. by ground or 1.0% 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. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Strawberry	4 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. For repeat applications, observe a minimum 14-day interval between applications.
Sugar Beet	40 days	6-16 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	Refer to appropriate Table for reduced rate directions for the control of small annual grasses. The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.
Sunflower	70 days	6-16 fl. oz.	1 qt. by ground or 1.0% v/v (but not less than 1 pt./A) by air[5]	The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer red rice, wild oats, volunteer cereals, and volunteer corn.
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	The addition of AMS has shown improved grass control for difficult-to-control species including: quackgrass, rhizome Johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.

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CROP SPECIFIC RESTRICTIONS AND LIMITATIONS FOR CLETHODIM 2E *(cont.)*

CROPS(1)	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATES PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE(2)	SPECIAL USE INSTRUCTIONS
Tomato	20 days	6-16 fl. oz.	1% v/v in the finished spray volume	For repeat applications, make on a minimum of a 14-day interval.

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 which contain a minimum of 80% oils 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. See the "Addition of Adjuvant and Crop Oil Concentrate" section for further information.
(3) CLETHODIM 2E may be applied to seedling or established alfalfa grown for seed, hay, silage, green chop, or direct grazing.
(4) For weed control in established alfalfa and mint, the minimum use rate is 10 fl. oz./A.
(5) 1 to 2 qts./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 CLETHODIM 2E applications, in addition to the recommended rate of crop oil concentrate.
(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) 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 8 fl. oz./A in a single application. For garlic and shallots, do not exceed 2 applications per season. In CA for air applications to onions, do not exceed 2 applications per season.
(8) If CLETHODIM 2E is applied as a spot treatment to onions, garlic, shallots, or non-bearing food crops, care should be taken to not exceed the maximum rate allowed on a "per acre" basis or crop injury may occur.
(9) In California, do not apply CLETHODIM 2E to onions, garlic, or shallots until the crop has at least two full leaves. In California, 14-day spray intervals are recommended between the application of CLETHODIM 2E and Liquid Nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.
(10) Applications of CLETHODIM 2E to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.

NON-BEARING FOOD CROPS

CLETHODIM 2E should not be applied to non-bearing fruit or nut crops that are grown for root stock.

Crop injury to non-bearing fruit and nut crops can occur if CLETHODIM 2E is improperly applied. CLETHODIM 2E should not be applied directly over the top of these plant types. Instead, spray should be directed at the base of the plant where grassy weeds are growing near the ground.

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

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Apples	*Malus* spp.	Olives	*Olea* spp.	Tree Nuts	
Berries	*Vaccinium* spp.	Peaches	*Prunus persica*	Almond	*Prunus dulcis*
	Rubus spp.	Pears	*Pyrus communis*	Filbert	*Corylus maxima*
Cherry, Sweet	*Prunus avium*	Prunes	*Prunus* spp.	Pecan	*Carya illinoinensis*
Citrus Fruits	*Citrus* spp.	Stone Fruits	*Prunus* spp.	Pistachio	*Pistacia vera*
Grapes	*Vitis* spp.	Strawberries	*Fragaria* spp.	Walnut	*Juglans* 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).

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

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 and post-harvest croplands. Also 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 high 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 CLETHODIM 2E per application to canola, or mustard seed.

GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT (inches)	RATE (fl. oz./acre)	HIGH RATE(4)
Barnyardgrass	*Echinochloa crus-galli*	2-8	6	8
Broadleaf Signalgrass	*Brachiaria platyphylla*	2-6	6	8
Brome				
California	*Bromus carinatus*	2-6	6	8
Cheatgrass	*Bromus secalinus*	2-6	6	8
Downy	*Bromus tectorum*	2-6	6	8
Ripgut	*Bromus diandrus*	2-6	6	8
Canarygrass	*Phalaris canariensis*	1-4	6	8
Crabgrass				
Hairy	*Digitaria adscendens*	2-6**	6	8
Large	*Digitaria sanguinalis*	2-6**	6	8
Smooth	*Digitaria ischaemum*	2-6**	6	8
Southern	*Digitaria ciliaris*	2-6**	6	8
Crowfootgrass	*Dactyloctenium aegyptium*	2-6**	6	8
Fall Panicum	*Panicum dichotomiflorum*	2-8	6	8
Field Sandbur	*Cenchrus incertus*	2-6	6	8
Foxtail				
Giant	*Setaria faberi*	2-12	6	8
Green	*Setaria viridis*	2-8	6	8
Yellow	*Setaria glauca*	2-8	6	8
Goosegrass	*Eleusine indica*	2 to 6**	6	8
Itchgrass	*Rottboellia exaltata*	2-6	6	8
Junglerice	*Echinochloa colona*	2-6	6	8
Lovegrass (Stinkgrass)	*Eragrostis cilianensis*	2-6	6	8
Rabbitsfootgrass	*Polypogon monspeliensis*	1-4	6	8
Red Rice	*Oryza sativa*	1-3	6	8
Ryegrass				
Hardy	*Lolium remotum*	2-6	6	8
Italian	*Lolium multiflorum*	2-6	6	8
Seedling Johnsongrass	*Sorghum halepense*	4-10	6	8
Shattercane	*Sorghum bicolor*	6-18	6	8
Southwestern Cupgrass	*Eriochloa gracilis*	2-6	6	8
Sprangletop				
Amazon	*Leptochloa panicoides*	2-6	6	8
Bearded	*Leptochloa fascicularis*	2-6	6	8
Mexican	*Leptochloa uninervia*	2-6	6	8
Red	*Leptochloa filiformis*	2-6	6	8

(continued)

USE DIRECTIONS FOR ANNUAL GRASSES (Except for in Established Alfalfa and Mint) *(cont.)*

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE (fl. oz./acre)	HIGH RATE[1]
Texas Panicum	*Panicum texanum*	2-6	6	8
Volunteer Cereals[3]				
Barley	*Hordeum vulgare*	2-6	6	8
Oats	*Avena sativa*	2-6	6	8
Rye	*Secale cereale*	2-6	6	8
Wheat	*Triticum aestivum*	2-6	6	8
Volunteer Corn[2]	*Zea mays*	4-12	4	6
Volunteer Corn (S.R.)[1]	*Zea mays*	4-12	8	(suppression only)
Volunteer Corn[2]	*Zea mays*	12-24	6	8
Volunteer Grain Sorghum	*Sorghum bicolor*	8-12	6	8
Wild Oats	*Avena fatua*	2-6	6	8
Wild Proso Millet	*Panicum miliaceum*	2-10	6	8
Witchgrass	*Panicum capillare*	2-8	6	8
Woolly Cupgrass	*Eriochloa villosa*	2-8	6	8

*Generally occurs between 3-leaf stage and tillering
**Length of lateral growth

[1] Sethoxydim-resistant volunteer corn.
[2] Includes Roundup Ready®, Liberty Link® and IMI-CORN® volunteer corn.
[3] When the cereal grain crop (such as wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment, the minimum CLETHODIM 2E use rate for control is 8 fl. oz./A.
[4] Rates higher than 8 fl. oz./A may be applied in certain geographic areas, environmental conditions, or cropping situations, where experience has shown that higher rates are needed for satisfactory control of annual grasses. In these situations, rates from 8 to 16 fl. oz./A may 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 CLETHODIM 2E 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./acre)	HIGH RATE
Annual and Perennial Grasses Listed in Grass Table	See Table	10	16

Mowing: The best control of annual grasses can be achieved by applying CLETHODIM 2E before grass weeds are mowed. Once a 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 overwinter after having been mowed multiple times. These grasses form large crowns and may contain many viable buds. These grasses, even though they may be an annual grass, may require repeated application of CLETHODIM 2E for partial or complete control.

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

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

Annual Grass Control: Apply CLETHODIM 2E at the grass sizes indicated in the "Use Directions for 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. Apply 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. Also some annuals germinate over an extended period of time, and because control of small grasses is desired, applications 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 when grasses are at or near maximum height and/or under heavy grass pressure.

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./acre)	HIGH RATE
Annual Bluegrass *(Poa annua)*	to 4-Leaf	6*	16

*Use a minimum of 8 fl. oz./acre to control annual bluegrass in seedling and established alfalfa and mint.

1. Grass needs to be actively growing at time of application(s). Apply under favorable soil moisture and humidity that exists within a few days after rainfall or within 7 days after irrigation.
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./acre by ground to the finished spray volume.

USE DIRECTIONS FOR USE IN ROUNDUP READY FIELD CORN (BURNDOWN)

Not for Use in California unless accompanied by a supplemental label.

APPLICATION RATES		
GRASS SPECIES	WEED SIZE (inches)	RATE WHEN APPLIED ALONE OR WITH GLYPHOSATE
Field Corn	Up to 12	3 fl. oz./A
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 BEAN & DRY PEA (INCLUDING SOYBEANS), EDIBLE-PODDED LEGUME VEGETABLES, FLAX, MUSTARD SEED, SUCCULENT BEAN & PEA AND SUGAR BEET

- Make applications 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.
- Regrowth by tillering may occur if application is made when plants are stressed by lack of moisture, excessive moisture, low temperatures and/or under very low humidity.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE (fl. oz./acre)(1)
Barnyardgrass	*Echinochloa crus-galli*	1-4	4
Broadleaf Signalgrass	*Brachiaria platyphylla*	1-4	5
Crabgrass			
Large	*Digitaria sanguinalis*	1-3*	4
Large	*Digitaria sanguinalis*	1-4*	5
Smooth	*Digitaria ischaemum*	1-3*	4
Smooth	*Digitaria ischaemum*	1-4*	5
Southern	*Digitaria ciliaris*	1-4*	5
Fall Panicum	*Panicum dichotomiflorum*	1-4	4
Foxtail			
Giant	*Setaria faberi*	1-4	4
Green	*Setaria viridis*	1-4	4
Millet	*Setaria italica*	1-4	5
Yellow	*Setaria glauca*	1-4	4

(continued)

DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES IN CANOLA, DRY BEANS & DRY PEA (INCLUDING SOYBEANS), EDIBLE-PODDED LEGUME VEGETABLES, FLAX, MUSTARD SEED, SUCCULENT BEAN & PEA AND SUGAR BEET *(cont.)*

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE (fl. oz./acre)[1]
Seedling Johnsongrass	*Sorghum halepense*	1-6	5
Shattercane	*Sorghum bicolor*	4-10	4
Texas Panicum	*Panicum texanum*	1-4	5
Volunteer Cereals			
Barley	*Hordeum vulgare*	1-4	5
Oats	*Avena sativa*	1-4	5
Wheat	*Triticum aestivum*	1-4	5
Volunteer Corn**	*Zea mays*	4-12	4
Wild Oats	*Avena fatua*	1-4	5
Wild Proso Millet	*Panicum miliaceum*	1-6	4

*Length of lateral growth
**Not sethoxydim-resistant corn

[1] Always add a crop oil concentrate at 1 qt./acre by ground to the finished spray volume.

USE DIRECTIONS FOR PERENNIAL GRASSES

- Make applications 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 high rate when grasses are at maximum height and/or under heavy grass pressure.
- 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 CLETHODIM 2E per application to canola or mustard seed.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE (fl. oz./acre)	HIGH RATE
Bermudagrass	*Cynodon dactylon*			
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	*Festuca arundinacea*			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Foxtail Barley	*Hordeum jubatum*			
First Application		2-6	8	16
Repeat Application(s) (if regrowth occurs)		2-6	8	16
Orchardgrass	*Dactylis glomerata*			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Quackgrass*	*Elytrigia repens*			
First Application		4-12	8	16
Repeat Application(s) (if regrowth occurs)		4-12	8	16
Rhizome Johnsongrass	*Sorghum halepense*			
First Application		12-24	8	16
Repeat Application(s) (if regrowth occurs)		6-18	6	8

(continued)

USE DIRECTIONS FOR PERENNIAL GRASSES *(cont.)*

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE (fl. oz./acre)	HIGH RATE
Wirestem Muhly	*Muhlenbergia frondosa*			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Perennial Bluegrass*				
Roughstalk	*Poa trivialis*			
Kentucky	*Poa prantensis*			
First Application		2-4	8	16
Repeat Application(s) (if regrowth occurs)		2-4	8	16
Bentgrass*	*Agrostis* spp.			
First Application		2-4	–	16
Repeat Application(s) (if regrowth occurs)		2-4	–	16

*Control of quackgrass, perennial bluegrass and bentgrass with CLETHODIM 2E may be enhanced by adding AMS at 2.5 to 4.0 lbs./acre.

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 the CLETHODIM 2E label in certain considerations. These may include, but are not limited to:

1. Geographic restrictions – not all products are registered for use in all areas and rates may vary from one region of labeled use to another;
2. Crop rotation restrictions;
3. Applicator certification requirements;
4. Worker safety rules (i.e., protective clothing requirements, reentry time);
5. Soil type or soil characteristics;
6. Maximum application rate or number of applications allowed per season;
7. Rain free period required;
8. Application timing (e.g., pre-harvest interval);
9. 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 BROADLEAF WEEDS

- Apply only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Apply when the first grass or broadleaf weed species in a mixed population reaches the recommended height or growth stage for treatment.
- Apply under favorable soil moisture and humidity, which exist a few days after rainfall or within seven days after irrigation.
- Always add the appropriate adjuvant to the spray mix at the rate recommended for each specific tank mix combination.
- Tank mix applications may 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, make 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.

Information on Antagonism

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

ALFALFA

CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA

(REFER TO THE USE DIRECTIONS TABLES IN THIS LABEL 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 + 2,4-DB[4]	10 to 16 fl. oz. + Refer to 2,4-DB label	10 to 16 fl. oz. + Refer to 2,4-DB label	1%	1%
CLETHODIM 2E + PURSUIT DG[5] or PURSUIT[5]	10 to 16 fl. oz. + 1.08 to 2.16 oz. or 3 to 6 fl. oz.	–	1%	1%
CLETHODIM 2E + BUCTRIL® 2L[6] or BUCTRIL® GEL[6,7]	10 to 16 fl. oz. + 1.0 to 1.5 pts. or 0.5 to 0.75 pt.	–	0.5%	0.5%

(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 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 1pt./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) In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada and the western halves of North Dakota, South Dakota, Nebraska, and Kansas: The CLETHODIM 2E plus BUCTRIL® or BUCTRIL® GEL tank mix must be applied in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliates. Unacceptable crop injury may occur to alfalfa seedlings less than the 2 trifoliate leaf stage. CLETHODIM 2E plus BUCTRIL® or BUCTRIL® GEL 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 trifoliate leaves. When alfalfa stand is uneven and conditions favor leaf burn, unacceptable crop injury may occur to alfalfa in the 2 trifoliate or smaller stage of growth. CLETHODIM 2E plus BUCTRIL® or BUCTRIL® GEL applications made when temperatures are expected to exceed 70°F and 3 days following application can result in unacceptable crop injury. Crop leaf burn can occur following CLETHODIM 2E plus BUCTRIL® or BUCTRIL® GEL application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected.
(7) Do not apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

CANOLA

REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR CANOLA

(REFER TO THE USE DIRECTIONS 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 to 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 may occur.
(3) For use only on LibertyLink® canola.

COTTON
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 to 8 fl. oz.	8 to 16 fl. oz.	1% v/v	Reduce broadcast rate in proportion to the band area actually treated.
	See COBRA® label for rates to control broadleaf weeds and height limitations for cotton. Refer to the CLETHODIM 2E label for weed height and species controlled.			
	See MSMA label for rates to control broadleaf weeds and height limitations for cotton. Refer to the CLETHODIM 2E label for weed height and species controlled.			

(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 may 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) 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 may result and a second (non-post-directed) application of CLETHODIM 2E may be necessary.

CLETHODIM 2E TANK MIXED WITH BUCTRIL® 4EC HERBICIDE 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		
CLETHODIM 2E + BUCTRIL® 4EC Herbicide[4,5,6]	8 to 16 fl. oz. See the BUCTRIL® 4EC Herbicide label for rates to control broadleaf 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, make 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 enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage.
(3) Always add a crop oil concentrate at 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 two applications of BUCTRIL® before cotton is 12 inches tall and one application after cotton is 12 inches tall.
(7) Use a minimum of 10 gallons of spray solution per acre.

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 to 8 fl. oz.	8 to 16 fl. oz.	Non-ionic surfactant @ 0.125 to 0.25% v/v plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	Crop oil concentrate @ 1 pt./A plus ammonium sulfate @ 8.5 to 17 lbs. per 100 gals. of carrier	See charts for grasses controlled. Use a minimum of 10 gals. of spray solution per acre.
	See glyphosate label for rates to control broadleaf weeds and height limitations for cotton.				

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

DRY BEAN & SUCCULENT BEAN

Not for Use in California unless accompanied by a supplemental label.

CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR DRY BEANS

(REFER TO THE USE DIRECTIONS 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 + BASAGRAN®	8 to 10 fl. oz. + 1.0 to 2.0 pts./A	10 to 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 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 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.

REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR FLAX

(REFER TO THE USE DIRECTIONS TABLES ABOVE FOR SPECIFIC GRASSES AND GROWTH STAGES)

PRODUCT	APPLICATION RATES/ACRE			
	ANNUAL GRASSES[1]	PERENNIAL GRASSES	CROP OIL CONCENTRATE	
			GROUND	AIR
CLETHODIM 2E + BRONATE ADVANCED™[2,3]	4 to 5 fl. oz. + 11.4 fl. oz.	–	1 pt.	1 pt.
CLETHODIM 2E + BRONATE®[2,3]	4 to 5 fl. oz. + 0.9 pt.	–	1 pt.	1 pt.
CLETHODIM 2E + BUCTRIL[2,3]	4 to 5 fl. oz. + 1.0 pt.	–	1 pt.	1 pt.
CLETHODIM 2E + RHONOX®[2,3]	4 to 5 fl. oz. + 0.25 to 0.5 pt.	–	1 pt.	1 pt.

[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 or crop injury may occur.
[3] Do not apply tank mixes if temperatures are expected to exceed 85°F at (or 3 days following) application or crop injury may occur.

SOYBEAN
CLETHODIM 2E TANK MIXES[3] TO CONTROL ANNUAL GRASSES WHEN USED AS A BURNDOWN IN NO-TILL SOYBEANS

PRODUCT	PRODUCT RATE/ACRE[1]	GRASS HEIGHT	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 fl. oz.	Foxtail 1 to 3" Fall Panicum 1 to 3"	1 qt./A	1 to 2 qts./A *or* 2.5 to 4.0 lbs. AMS
	4 fl. oz.	Foxtail 1 to 4" Fall Panicum 1 to 4"	1 qt./A	1 to 2 qts./A *or* 2.5 to 4.0 lbs. AMS
	6 to 8 fl. oz. + 0.5 lb. ai	(See Grass Chart for grasses claimed)	1 qt./A	1 to 2 qts./A *or* 2.5 to 4.0 lbs. AMS

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

[1] If regrowth occurs or an additional flush of new grass emerges, make a second application of CLETHODIM 2E according to the appropriate size and rate directions.
[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.

CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEANS
(REFER TO THE USE DIRECTIONS TABLES IN THIS LABEL FOR SPECIFIC GRASSES AND GROWTH STAGES)

PRODUCT[2]	APPLICATION RATE/ACRE[1]			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE[3] (V/V)	
			GROUND	AIR
CLETHODIM 2E + COBRA®	6 to 8 fl. oz. + 12.5 fl. oz.	8 to 16 fl. oz. + 12.5 fl. oz.	0.5 to 1%	1%
CLETHODIM 2E + BASAGRAN® 4 SL	8 to 10 fl. oz. + 1 to 2 pts.	10 to 16 fl. oz. + 1 to 2 pts.	1%	1%
CLETHODIM 2E + Glyphosate (For use on Roundup Ready soybeans only)	6 to 8 fl. oz. + 0.75 to 3.0 lb. ai	8 to 16 fl. oz. + 0.75 to 3.0 lb. ai	0.5 to 1%[4]	1%[4]
CLETHODIM 2E + BLAZER® 2 SL	6 to 8 fl. oz. + 1 to 1.5 pts.	6 to 8 fl. oz. + 1 to 1.5 pts.	0.5 to 1%	1%
CLETHODIM 2E + FLEXSTAR® HL[6]	6 to 8 fl. oz. Refer to the FLEXSTAR® HL label for specific application rates.	8 to 16 fl. oz. Refer to the FLEXSTAR® HL label for specific application rates.	1%	1%
CLETHODIM 2E + CLASSIC® 25 DG	8 to 10 fl. oz. + 0.5 to 0.75 oz.	10 to 16 fl. oz. + 0.5 to 0.75 oz.	1%	1%
CLETHODIM 2E[5] + PURSUIT® 70 DG	6 to 8 fl. oz. + 4 fl. oz.	8 to 16 fl. oz. + 4 fl. oz.	1%	1%
CLETHODIM 2E[5] + COBRA® + CLASSIC® 25 DG	8 to 10 fl. oz. + 6 to 8 fl. oz. + 0.5 to 0.75 oz.	–	0.5%	1%

(continued)

CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEANS *(cont.)*

(REFER TO THE USE DIRECTIONS TABLES IN THIS LABEL FOR SPECIFIC GRASSES AND GROWTH STAGES)

PRODUCT[2]	APPLICATION RATE/ACRE[1]			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE[3] (V/V)	
			GROUND	AIR
CLETHODIM 2E[5] + COBRA® + BASAGRAN® 4 SL	8 to 10 fl. oz. + 6 to 10 fl. oz. + 1 to 1.5 pts.	–	0.5%	1%
CLETHODIM 2E[5] + COBRA® + PURSUIT® 70 DG	8 to 10 fl. oz. + 6 to 10 fl. oz. + 4 fl. oz.	–	0.5%	1%
CLETHODIM 2E[5] + STORM®	8 to 10 fl. oz. + 1.5 pts.	–	0.5%	1%
CLETHODIM 2E + RESOURCE® + PURSUIT® 70 DG	8 to 10 fl. oz. + 4 fl. oz. + 4 fl. oz.	–	1%	1%
CLETHODIM 2E + RESOURCE® + BASAGRAN®	8 to 10 fl. oz. + 4 fl. oz. + 1 pt.	–	1%	1%
CLETHODIM 2E + RESOURCE® + CLASSIC®	8 to 10 fl. oz. + 4 fl. oz. + 0.5 fl. oz.	–	1%	1%
CLETHODIM 2E + COBRA® + RESOURCE®	6 to 8 fl. oz. + 6 fl. oz. + 4 fl. oz.	–	0.5%	1%
CLETHODIM 2E[5] + FIRSTRATE®	6 to 8 fl. oz. + 0.3 oz.	8 to 16 fl. oz. + 0.3 oz.	1%	–
CLETHODIM 2E[5] + COBRA® + FIRSTRATE®	6 to 8 fl. oz. + 6 to 8 fl. oz. + 0.3 oz.	8 to 16 fl. oz. + 6 to 8 fl. oz. + 0.3 oz.	1%	–
CLETHODIM 2E[5] + RAPTOR® (1 AS)	6 to 8 fl. oz. + 4 to 5 fl. oz.	–	1%	–
CLETHODIM 2E[5] + COBRA® + RAPTOR® (1 AS)	6 to 8 fl. oz. + 6 to 8 fl. oz. + 4 to 5 fl. oz.	–	1%	–

(continued)

CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEANS *(cont.)*

(REFER TO THE USE DIRECTIONS TABLES IN THIS LABEL FOR SPECIFIC GRASSES AND GROWTH STAGES)

PRODUCT[2]	APPLICATION RATE/ACRE[1]			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONCENTRATE[3] (V/V)	
			GROUND	AIR
CLETHODIM 2E[5] + SYNCHRONY® STS™	6 to 8 fl. oz.[7] + 0.5 oz./A	–	1 qt./A	–
CLETHODIM 2E[5] + COBRA® + SYNCHRONY® STS™	6 to 8 fl. oz.[7] + 4 to 8 fl. oz. + 0.5 oz.	–	1 pt./A	–
CLETHODIM 2E[5] + RESOURCE®	6 to 8 fl. oz. + 4 to 12 fl. oz.	–	1 qt./A	–
CLETHODIM 2E[5] + FRONTROW™	8 to 10 fl. oz. + Refer to the FRONTROW™ label for use rates.	–	1%	–
CLETHODIM 2E + FIRSTRATE + FLEXSTAR HL[6]	6 to 8 fl. oz. + 0.3 oz. + Refer to the FLEXSTAR HL label for specific application rates.	8 to 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 may 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] The addition of 2.5 lb. of ammonium sulfate is required when CLETHODIM 2E is tank mixed with Glyphosate. If the Glyphosate formulation has a stand-alone built-in adjuvant, add 0.125% v/v non-ionic surfactant in place of crop oil concentrate. If the glyphosate formulation does not have a built-in adjuvant system, add 0.5 to 1% crop oil concentrate for ground application and 1% v/v for aerial application.

[5] The addition of 1 to 2 qts./A of liquid fertilizer (10-34-0, or 32% N) is recommended when CLETHODIM 2E is tank mixed with PURSUIT®, RESOURCE®, GALAXY™, STORM®, FIRSTRATE™, SYNCHRONY®, RAPTOR®, FRONTROW™, COBRA® plus CLASSIC®, COBRA® plus BASAGRAN®, COBRA® plus PURSUIT®, COBRA® plus FIRSTRATE™, COBRA® plus SYNCHRONY®, and COBRA® plus RAPTOR®. An equivalent amount (2.5 to 4.0 lbs./A) of 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 which are identified in the "DIRECTIONS FOR USE IN SOYBEANS AT A REDUCED RATE" table.

REDUCED RATE CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN

(REFER TO 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 to 8 fl. oz. + 0.3 oz.	–	1%	1%
CLETHODIM 2E + PURSUIT 70 DG	4 to 6 fl. oz. + 1.44 oz.	–	1%	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] Annual grasses and sizes controlled with these tank mixes 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] The addition of 1 to 2 qts./A of liquid fertilizer (10-34-0, 28%N, or 32%N) is required when CLETHODIM 2E is tank mixed at reduced rate. An equivalent amount (2.5 to 4.0 lbs./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 VOLUNTEER 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 gals. 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		

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

PEANUT (INCLUDING PERENNIAL)
CLETHODIM 2E TANK MIXES WITH BROADLEAF HERBICIDES FOR PEANUT
(REFER TO THE USE DIRECTIONS 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 + BASAGRAN®	8 to 10 fl. oz. + 1.0 to 2.0 pts.	–	1%	1%
CLETHODIM 2E + ULTRA BLAZER	8 to 10 fl. oz. + 0.5 to 1.5 pts.	–	1%	1%
CLETHODIM 2E + STORM	8 to 10 fl. oz. + 1.5 pts.	–	1%	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 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./acre)	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height charts "USE DIRECTIONS FOR ANNUAL GRASSES" and "USE DIRECTIONS FOR PERENNIAL GRASSES"	Up to and including grasses in the seedhead 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.			

SUGAR BEET
CLETHODIM 2E TANK MIXED WITH SPUR® (clopyralid) APPLIED TO SUGAR BEETS
(REFER TO THE USE DIRECTIONS TABLES FOR SPECIFIC GRASSES AND GROWTH STAGES)

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

[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 may 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.

CLETHODIM 2E TANK MIXED WITH BETAMIX® OR BETANEX® APPLIED TO SUGAR BEETS

PRODUCT[2]	WEEDS CONTROLLED		WEED HEIGHT	APPLICATION RATE/ACRE[1]
	COMMON NAME	SCIENTIFIC NAME		
CLETHODIM 2E[3] + BETAMIX® or BETANEX®	Barnyardgrass Foxtail Foxtail Millet Wild Oat Wild Proso Millet	*Echinochloa crus-galli* *Setaria* spp. *Setaria italica* *Avena fatua* *Panicum miliaceum*	1 to 3" 1 to 3" 1 to 3" 1 to 3" 1 to 3"	8 fl. oz.
			See the BETAMIX® and BETANEX® labels for rates to control broadleaf weeds. No additives are recommended in the tank mix.	

(1) Do not use crop oil concentrate. No additives are recommended in the tank mix.
(2) Broadleaf weed control may 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) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of CLETHODIM 2E at full label rate with appropriate rate of crop oil concentrate.

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 + BETAMIX	2 to 3 fl. oz. + 8 to 12 fl. oz.[3] + 8 to 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) Use 8 fl. oz./A rate when sugar beets are in the cotyledon to 4-leaf stage. Rate can be increased up to 12 fl. oz./A when the smallest sugar beet plants in the field are in the 4-leaf stage or larger.

USE DIRECTIONS FOR MICRO-RATE APPLICATIONS TO SUGAR BEETS

Multiple micro-rate applications of CLETHODIM 2E in tank mixtures will reduce rates of BETANEX or BETAMIX and methylated seed oils may be applied by air or ground equipment to sugar beets to control early germinating annual grasses listed above. The rate of BETANEX or BETAMIX must not exceed 0.12 lb. ai/A (broadcast application) 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 lbs. ai/A) or multiple low rate (0.24 to 0.73 lb. ai/A) applications of BETANEX or BETAMIX is prohibited on the BETANEX or BETAMIX master label. Favorable climatic conditions (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 to 3 fl. oz./A in tank mixtures 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; make initial application immediately after weeds emerge, and make repeat applications on 5- to 7-day intervals. If weed control is not adequate due to climatic conditions, spray coverage or other factors, return to conventional application rates of CLETHODIM 2E (6 to 8 fl. oz./A) and add rates of BETANEX or BETAMIX in tank mixtures with CLETHODIM 2E; a spray adjuvant is not recommended.

USE PRECAUTIONS FOR MICRO-RATE APPLICATIONS:
(SEE CLETHODIM 2E, BETANEX and BETAMIX MASTER LABEL FOR FURTHER USE PRECAUTIONS.)

Not all weeds will be adequately controlled, even with favorable climatic conditions. Conventional rate of CLETHODIM 2E, BETANEX or BETAMIX and/or hand labor may be required if multiple micro-rate applications do not adequately control weeds. 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. Albaugh, Inc. will not be responsible for any nozzle plugging that may occur with the use of multiple micro-rate applications. Methylated seed oils must not be added if the BETANEX or BETAMIX rate exceeds 0.12 lb. ai/A broadcast, as the addition of methylated seed oils could increase the possibility of crop injury at dosage rates greater than 0.12 lb. ai/A.

GROUND APPLICATION

Use of sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 10 gals. and a maximum of 20 gals. of 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

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

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 to 8 fl. oz. + 13 fl. oz.	8 to 16 fl. oz. + 13 fl. oz.	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 fungicide) according to the appropriate size and rate directions.
[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.

TANK MIX APPLICATION OF CLETHODIM 2E AND INSECTICIDES FOR THE CONTROL OF GRASS WEEDS AND INSECTS IN ALFALFA, COTTON, MINT, PEANUTS (INCLUDING PERENNIAL), SOYBEANS & 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® 75 S or ORTHENE 97	6 to 8 fl. oz. + 0.33 to 1.33 lbs. 0.25 to 1.0 lb.	8 to 16 fl. oz. + 0.33 to 1.33 lbs. 0.25 to 1.0 lb.	1%		X	X	X		
CLETHODIM 2E + ORTHENE 90 S[6]	6 to 8 fl. oz. + 0.25 to 1 lb.	8 to 16 fl. oz. + 0.25 to 1 lb.	1%		X	X	X	X	
CLETHODIM 2E + DANITOL® 2.4 EC	6 to 8 fl. oz. + 10 2/3 to 16 fl. oz.	8 to 16 fl. oz. + 10 2/3 to 16 fl. oz.	1%		X		X		
CLETHODIM 2E + ASANA XL®	6 to 8 fl. oz. + Refer to ASANA XL label	8 to 16 fl. oz. + Refer to ASANA XL label	1%						X
CLETHODIM 2E + WARRIOR®	6 to 8 fl. oz. + Refer to WARRIOR label	8 to 16 fl. oz. + Refer to WARRIOR label	1%						X
CLETHODIM 2E + WARRIOR	10 to 16 fl. oz.[7] + Refer to WARRIOR label	10 to 16 fl. oz. + Refer to WARRIOR label	1%	X					
CLETHODIM 2E + BAYTHROID®	10 to 16 fl. oz.[7] + Refer to BAYTHROID label	10 to 16 fl. oz. + Refer to BAYTHROID label	1%	X					
CLETHODIM 2E + DIMETHOATE®	10 to 16 fl. oz.[7] + Refer to DIMETHOATE label	10 to 16 fl. oz. + Refer to DIMETHOATE label	1%	X					
CLETHODIM 2E + LORSBAN®	10 to 16 fl. oz.[7] + Refer to LORSBAN label	10 to 16 fl. oz. + Refer to LORSBAN label	1 to 2 pts.[8]	X					
CLETHODIM 2E + POUNCE®	10 to 16 fl. oz.[7] + Refer to POUNCE label	10 to 16 fl. oz. + Refer to POUNCE label	1%	X					

(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 insecticide) according to the appropriate size and rate directions.
(2) Refer to CLETHODIM 2E and insecticide label for rates, 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 may cause temporary phytotoxic symptoms on alfalfa and mint foliage.
(5) The CLETHODIM 2E rate should be 6 to 8 fl. oz./A for annual grass control in baby mint, minimum of 8 fl. oz./A for annual grass control in established mint and 8 to 16 fl. oz./A for perennial grass control. Crop oil concentrate should be added at the rate of 1.0 to 2.0 pts./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 CLETHODIM 2E rate should be 6 to 8 fl. oz./A for annual grass control in seedling alfalfa.
(8) For the 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.

DIRECTIONS FOR USE IN FALLOW LAND

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

- Use a minimum spray volume of 15 gals./A for ground applications and 5 gals./A for aerial applications.
- Apply 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 which emerge after the CLETHODIM 2E application will not be controlled, and a second application may be necessary.
- The control of perennial grasses may require more than one application in non-tilled areas.
- Do not plant any crop for 30 days after application unless clethodim is registered for use in that crop.
- Do not apply to grasses that have tillered, formed seedheads or exceeded recommended growth stage.
- Do not use flood jet nozzles.
- Do not apply to drought-stressed grasses.
- Do not mow area for two weeks prior to or after CLETHODIM 2E application.

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

PRODUCT	APPLICATION RATE/ACRE[1]		CROP OIL CONCENTRATE[2]	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
CLETHODIM 2E + 2,4-D ester or Albaugh DICAMBA SG or BANVEL® SGF	6 to 8 fl. oz.	8 to 16 fl. oz.	1% v/v	
	0.5 lb./A			
	See the Albaugh DICAMBA SG or BANVEL® SGF label for rates.			

[1] Refer to CLETHODIM 2E label for weed height and species control. Review the Albaugh DICAMBA SG, BANVEL® SGF Herbicide and 2,4-D labels for crop restrictions, use rates and weeds controlled.

[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 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 charts above.	Up to and including grasses in the seedhead 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.			

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/SUPPRESSED		WEED STAGES
		COMMON NAME	SCIENTIFIC NAME	
CLETHODIM 2E	10 to 12 fl. oz./A	Tall Fescue	*Festuca arundinacea*	4 to 6 inches (40 to 60% green-up)
Adjuvant: CLETHODIM 2E must be applied with crop oil concentrate at 1 qt./A, plus a spray grade ammonium sulfate at 2.5 to 4 lbs./A. Recommended Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, add CLETHODIM 2E, then add crop oil concentrate.				

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

- Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue. Apply in the spring, at 40 to 60% green-up, prior to emergence of warm-season grasses. Do not mow area for 2 weeks after the CLETHODIM 2E application.
- Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 PSI at the nozzle. Apply using flat fan or hollow cone nozzles. Do not use flood nozzles.
- Apply only to fields that have warm-season grasses established for two years. Applications of CLETHODIM 2E to emerged warm-season grasses may cause injury. Do not apply 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 in that crop.
- **NOTE:** CLETHODIM 2E applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47°F.

CLETHODIM 2E FOR THE SUPPRESSION OF TALL FESCUE SEEDHEADS IN NON-PRODUCING AGRICULTURAL AREAS

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

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

- Apply at 50 to 90% tall fescue green-up.
- Use the higher CLETHODIM 2E rate if less tall fescue green matter is present.
- Do not mow area for two weeks after the CLETHODIM 2E application.
- Apply in a minimum of 15 to 20 gals. of water per acre at a spray pressure of 40 to 60 psi at the nozzle. Apply 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 the 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 in that crop.

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

- Apply only to actively growing grass and broadleaf weeds at recommended height or growth stage listed on each label.
- Apply 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. If regrowth occurs, or an additional flush of new grass emerges, make 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.
- This tank mix may be applied postemergence to ROUNDUP READY soybeans up through the full flowering stage. Do not apply less than 60 days before harvest.
- Avoid contact with foliage, green stems, or fruit crops, or any desirable plants and trees, other than soybeans with the ROUNDUP READY gene as severe injury or destruction will result.
- 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 was 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 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

For ornamental plant uses, CLETHODIM 2E can be used to control labeled grass weeds in greenhouses, lathhouses, shadehouses, and around outdoor ornamentals, including nurseries, parks, roadside plantings, 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. Due to variability within species, crop growth stage, environmental conditions, and application techniques, it is recommended that the user determine if herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of CLETHODIM 2E have investigated the safety factor to ornamental plants not listed on the label.

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

ORNAMENTAL TREES

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Alder, red	*Alnus oregona*	Golden chain tree	*Laburnum anagyroides*
Ash	*Fraxinus* spp.	Maples	*Acer* spp.
Basswood	*Tilia* spp.	Mulberry, white	*Morus alba*
Birch, European white	*Betula pendula*	Oaks	*Quercus* spp.
Birch, river	*Betula nigra*	Olive, wild	*Elaeagnus angustifolia*
Birch, white	*Betula papyrifera*	Redbud	*Cercis canadensis*
Crabapple, flowering	*Malus halliana*	Sweet gum, American	*Liquidambar styraciflua*
Dogwood, flowering	*Cornus florida*		

GARDEN FLOWERS AND PLANTS

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Ageratum	*Ageratum* spp.	Jasmine tobacco	*Nicotiana alata*
Alyssum*, sweet	*Lobularia maritime*	Loosestrife	*Lythrum salicaria*
Asparagus fern	*Asparagus setaceus*	Marigold	*Tagetes* spp.
Bleeding heart	*Dicentra spectabilis*	Partridgeberry	*Mitchella rapens*
Cast iron plant	*Aspidistra elatior*	Petunia*	*Petunia hybride*
Chrysanthemum	*Chrysanthemum* spp.	Phlox	*Phlox* spp.
Cinquefoil	*Potentilla* spp.	Pinks	*Dianthus* spp.
Coleus	*Coleus* spp.	Portulaca	*Portulaca grandiflora*
Coralbells	*Heuchera sanguinea*	Salvia	*Salvia* spp.
Cranesbill	*Geranium* spp.	Saxifrage	*Saxifraga* spp.
Dahlia	*Dahlia* spp.	Sedum	*Sedum* spp.
Daisy, trailing African	*Osteospermum fruticosum*	Selloum	*Philodendron selloum*
Daylily	*Hemerocallis* spp.	Snapdragon*	*Antirrhinum majus*
Dusty miller	*Senecio cineraria*	Sweet flag	*Acorus gramineus*
Euonymus	*Euonymus* spp.	Tickseed	*Coreopsis grandiflora*
Gazania	*Gazania* spp.	Touch-me-not	*Impatiens* spp.
Geranium, house	*Pelargonium hortorum*	Verbena	*Verbena* spp.
Heather, false	*Cuphea hyssopifolia*	Violet	*Viola* spp.
Hosta	*Hosta fortunei*	Yarrow, Common	*Achillea millefolium*
Iris	*Iris* spp.	Zinnia	*Zinnia elegans*

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

GROUND COVERS

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Bugleweed, carpet	*Ajuga reptans*	Moneywort	*Lysimachia nummularia*
Ivy, English	*Hedera helix*	Mondo grass, white	*Ophiopogon jaburan*
Japanese spurge	*Pachysandra terminalis*	Mondo grass, dwarf	*Ophiopogon japonicus*
Lilyturf	*Liriope muscari*	Periwinkle, common	*Vinca minor*

SHRUBS

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Abelia	*Abelia* spp.	Indian hawthorn	*Raphiolepis indica*
Anise, purple	*Illicium floridenum*	Jasmine	*Jasminum* spp.
Aucuba	*Aucuba* spp.	Jasmine, Asiatic	*Trachelospermum asiaticum*
Azalea*	*Rhododendron* spp.	Jasmine, star	*Trachelospermum jasminoides*
Bamboo	*Bambusa* spp.	Juniper	*Juniperus* spp.
Barberry, Japanese	*Berberis thunbergii*	Lantana	*Lantana* spp.
Barberry, Magellan	*Berberis buxifolia*	Nandina* bamboo, heavenly	*Nandinia domestica*
Bayberry	*Myrica pensylvanica*	Oleander, common	*Nerium oleander*
Bottlebrush	*Callistemon citrinus*	Oregon grape	*Mahonia aquifolium*
Boxwood, common	*Buxus sempervirens*	Photinia	*Photinia* spp.
Camellia, common	*Camellia japonica*	Pittosporum	*Pittosporum* spp.
Candytuft	*Iberis sempervirens*	Podocarpus	*Podocarpus* spp.
Cleyera	*Cleyera japonica*	Privet	*Ligustrum* spp.
Coralberry	*Ardisia crenata*	Pyracantha	*Pyracantha* spp.
Crape myrtle	*Lagerstroemia indica*	Rhododendron	*Rhododendron* spp.
Coyote brush	*Baccharis pilularis*	Rose	*Spiraea bumalda*
Fig, creeping	*Ficus pumila*	Sweet olive	*Osmanthus fragrans*
Gardenia	*Gardenia* spp.	Viburnum	*Viburnum tinus*
Holly	*Ilex* spp.	Wisteria	*Wisteria* spp.
Honeysuckle	*Lonicera pileata*	Yellow sage/Shrub verbena	*Lantana camara*

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

USE DIRECTIONS FOR ANNUAL GRASSES IN ORNAMENTALS

- 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 high 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	*Echinochloa crus-galli*	2-8	8	16
Broadleaf Signalgrass	*Brachiaria platyphylla*	2-6	8	16
Brome				
California	*Bromus carinatus*	2-6	8	16
Cheatgrass	*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
Foxtail Barley	*Hordeum jubatum*	2-6	8	16
Goosegrass	*Eleusine indica*	2-6**	8	16
Itchgrass	*Rottboellia exaltata*	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

(continued)

USE DIRECTIONS FOR ANNUAL GRASSES IN ORNAMENTALS *(cont.)*

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* (inches)	RATE (fl. oz./acre)(1)	HIGH RATE(2)
Volunteer Cereals				
Barley	*Hordeum vulgare*	2-6	8	16
Oats	*Avena sativa*	2-6	8	16
Rye	*Secale cereale*	2-6	8	16
Wheat	*Triticum aestivum*	2-6	8	16
Volunteer Corn	*Zea mays*	4-12	6	8
Volunteer Corn	*Zea mays*	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.

(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 gals. (0.25% v/v).

USE DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH CLETHODIM 2E IN ORNAMENTALS

GRASS SPECIES	WEED STAGE	RATE (fl. oz./acre)	HIGH RATE
Annual Bluegrass *(Poa annua)*	To 4-leaf	6	16

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).

Apply at weed stage indicated on the label, as reduced control can be expected with more mature annual bluegrass.

Use the high rate under heavy grass pressure and/or when annual bluegrass is more mature.

Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt. per 50 gals. (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 high 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
Bermudagrass	*Cynodon dactylon*			
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	*Elytrigia repens*			
First Application		4-8	8	16
Repeat Application(s) (if regrowth occurs)		4-8	8	16
Rhizome Johnsongrass	*Sorghum halepense*			
First Application		12-24	8	16
Repeat Application(s) (if regrowth occurs)		6-18	6	8
Wirestem Muhly	*Muhlenbergia frondosa*			
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.
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 gals. (0.25% v/v).

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