



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

December 18, 2025

Jessica Vigna  
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MAKHTESHIM AGAN OF NORTH AMERICA, INC.  
8601 Six Forks Rd., Suite 300  
Raleigh NC, 27615

Subject: Approval of Label Amendment; Only Indicated Changes Reviewed - Correction of a rate error  
Product Name: ARROW 2EC  
EPA Registration Number: 66222-60  
Application Date: 11/06/2025  
Action Case Number: 00676455

Dear Jessica Vigna:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. However, EPA reviewed only the label changes highlighted, marked, or otherwise indicated on the submitted label. Any other changes to the previously approved label that were not clearly highlighted, marked, or otherwise indicated in your submission were not reviewed and may form the basis of regulatory and/or enforcement action if later discovered by the Agency. Further, submission of a label amendment application with unidentified changes may be considered a knowing submission of false information to the Agency. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The label submitted with the application has been stamped "Accepted Only Indicated Revisions Reviewed" and is enclosed for your records.

This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 C.F.R. § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 C.F.R. § 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website contains any false or misleading statement, design, or graphic, the product may be misbranded and unlawful to sell or distribute under FIFRA Sections 2(q)(1)(A) and 12(a)(1)(E). 40 C.F.R. § 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on the product label, claims made as part of the product's sale or distribution may not substantially differ from those claims approved through the registration process under FIFRA Section 12(a)(1)(B). Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the product will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact Olivia Anderson by telephone at (202) 564-2255 or via email at [anderson.olivia@epa.gov](mailto:anderson.olivia@epa.gov).

Sincerely,

*Kable Bo Davis*

Kable Bo Davis, Senior Advisor  
FHB, RD  
Office of Pesticide Programs

**ACCEPTED**  
ONLY INDICATED  
REVISIONS REVIEWED

12/18/2025

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

66222-60

CLETHODIM	GROUP	1	HERBICIDE
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# Arrow® 2EC

[Optional Text:  
No label revisions other than those indicated were reported to the Agency.]

[Selective Postemergence Herbicide for Control of Grasses]

[Controls Annual & Perennial Grasses]

[Apply to Actively Growing Grasses]

[Rainfast in 1 Hour]

**ACTIVE INGREDIENT:** % BY WT.

Clethodim: (E)-2-[1-[(3-chloro-2-propenyl)oxy]imino]propyl]- ..... 26.4%

5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

**OTHER INGREDIENTS:** ..... 73.6%

**TOTAL** ..... 100.0%

Contains petroleum distillate.

Contains 2.0 lbs clethodim per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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

**Manufactured for:**

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
8601 Six Forks Road, Suite 300  
Raleigh, NC 27615

**How can we help? 1-866-406-6262**

EPA Reg. No. 66222-60

EPA Est. No. \_\_\_\_\_

## NET CONTENTS:

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• <b>DO NOT</b> give any liquid to the person.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

**Have the product container or label with you when calling a poison control center or doctor or going for treatment.** You may also contact 1-877-250-9291 for emergency medical treatment information.

**NOTE TO PHYSICIAN:** Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid, which can cause pneumonitis. Contains petroleum distillate.

[For additional Precautionary Statements, handling, Directions for Use, (and Storage and Disposal), see inside of this booklet.]

In case of spills, fires, leaks or accidents call 1-800-535-5053.

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

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

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**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

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

**USER SAFETY RECOMMENDATIONS**

**Users should:**

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

**ENVIRONMENTAL HAZARDS**

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

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

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

**NON-TARGET ORGANISM ADVISORY**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**PHYSICAL OR CHEMICAL HAZARDS**

**DO NOT** use or store near heat or open flame.

**DIRECTIONS FOR USE**

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

**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

## 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 unprotected persons out of operating areas, or vicinity where there may be drift. **DO NOT** enter treated area without protective clothing until sprays have dried.

## TANK MIXES

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

## PRODUCT INFORMATION

**DO NOT** use Arrow® 2EC on vegetable crops being grown for seed production unless specific use directions are provided.

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

Repeated use of Arrow 2EC (or similar postemergence grass herbicide with the same mode of action) can lead to the selection of naturally occurring biotypes that are resistant to these products in some grass species.

If poor performance occurs and cannot be attributed to adverse weather or application conditions, a resistant biotype may be present. This is most likely to occur in fields where other control strategies including crop rotation, mechanical removal, and other classes of herbicides are not used from year to year.

**DO NOT** allow Arrow 2EC to come in contact with desirable grass crops including corn, rice, sorghum, small grains, or turf, as these and other grass crops will be injured or killed. Minor leaf spotting can occur on treated plants under certain environmental conditions. New foliage is not affected.

### Control symptoms

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

When an adjuvant is to be used with this product, ADAMA suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

## APPLICATION INFORMATION

### Timing of Applications

Apply Arrow 2EC postemergence to actively growing grasses according to rate table directions. Applications made to grass plants stressed by insufficient moisture or hot or cold temperatures or to grass plants exceeding specified growth stages can result in unsatisfactory control. **DO NOT** apply under these conditions.

In arid regions where irrigation is used to supplement limited rainfall, apply Arrow 2EC as soon as possible after an irrigation (within 7 days). In arid regions, a second application of Arrow 2EC will 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 Arrow 2EC can reduce weed control. **DO NOT APPLY** Arrow 2EC if rainfall is expected within one hour since control can be reduced.

#### ADDITION OF ADJUVANT OR CROP OIL CONCENTRATE

CROP	ADJUVANT DIRECTIONS
Alfalfa, Cotton, Dry Shelled Beans and Pea, Edible Podded Legume Vegetables, Peanuts (including perennial), Potato, Soybeans, Succulent Bean & Pea, Sugarbeets, Sunflowers	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) can be added to Arrow 2EC applications in addition to the specified 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.
Asparagus, Artichoke (Globe), Bushberries (low growing), Canola, Carrots, Clover, Cranberries, Cucurbits, Flax, Fruiting Vegetables (except okra and tomato), Garden Beets, Garlic, Head and Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Peppermint and Spearmint Tops, Mustard Seed, Okra, Onions (dry bulbs and green), Pome Fruit, Root Vegetables, Safflower, Sesame, Stalk and Stem Vegetable, Stone Fruit, Strawberries, Stevia (dried leaves), Sweet Potatoes (Yams and other tuberous and corm vegetables except potato), Tomato, Tree Nuts and Watercress.	Always use a crop oil concentrate at 1% v/v in the finished spray volume unless tank mix instructions indicate otherwise.  <b>DO NOT</b> add a liquid fertilizer for these crops.
Non-Bearing Fruit and Nut 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). <b>DO NOT</b> use a crop oil concentrate since it can 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 of sufficient spray volumes and pressure is essential to ensure complete coverage. Use a minimum of 5 gals and a maximum of 40 gals of spray solution per acre. Under the following conditions a minimum of 10 gals per acre is required: ultra narrow row cotton, 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 gals per acre under these conditions can result in poor coverage and reduced grass control requiring repeat applications. Set spray pressures to a minimum of 30 psi and a maximum of 60 psi at the nozzle. **DO NOT** use flood nozzles.

Make applications to onions (dry bulbs and green), garlic, or shallots (dry bulbs and green) in a minimum of 20 gals of spray solution per acre.

#### Air application

Use a minimum of 3 gals of spray solution per acre unless otherwise directed in this label. Increase spray volumes up to 10 gals as grass or crop foliage becomes dense.

For onions (dry bulbs and green), garlic, or shallots (dry bulbs and green): When applying by air **DO NOT** exceed 8 fl oz/A (0.125 lb ai) in a single application. In California, make air applications to onions, garlic, or shallots in a

minimum of 20 gals of spray solution per acre. In states other than California, make air application to onions, garlic, or shallot in a minimum of 10 gals of spray solution per acre.

**Note: Crop injury can occur when Arrow 2EC 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 gal) Arrow 2EC 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 gal) by volume. For uses requiring non-ionic surfactant, include non-ionic surfactant at 1/4% (0.33 oz per gal) by volume.

**Note: If Arrow 2EC is applied as a spot treatment, care must be taken not to exceed the maximum rate allowed on a "per acre" basis or crop injury can occur.**

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

This product can be applied to onions and garlic by sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set, or hand move. **DO NOT** apply by chemigation to any other crop or to this crop using any other type of irrigation system.

Apply Arrow 2EC at the high rate specified for annual grasses (16 fl oz/A)(0.25 lb ai/A) 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 Arrow 2EC 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 specified quantities of irrigation water per acre can result in decreased product performance by removing the chemical from the zone of effectiveness. Use a metering device to inject the Arrow 2EC into the irrigation water at a constant flow. Constant agitation must be maintained in the chemical supply tank during the entire period of herbicide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator can be injected into the lines to mark the end of the application period.

#### **Restrictions**

1. **DO NOT** apply Arrow 2EC by chemigation in the states of Idaho, Montana, Oregon, and Washington.
2. **DO NOT** apply Arrow 2EC 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.
3. 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.
4. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
5. If you have any questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
6. **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.
7. 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 as needed.
8. 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.
9. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
10. 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.

11. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
12. 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.
13. Systems must use a metering pump, like 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.
14. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

#### Precautions

1. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.
2. If you have any questions about calibration, you should contact State Extension specialists, equipment manufacturers or other experts.

#### PRODUCT INFORMATION

#### RESTRICTIONS

- Application on Long Island, New York is restricted to no more than 16 fl oz of Arrow 2EC (0.25 lb ai) per acre per year.
- In New York, **DO NOT** apply more than 0.5 lb. active ingredient (a.i.) per acre per year, regardless of formulation or method of application.
- **DO NOT** apply if rain is expected within 1 hour of application as control can be unsatisfactory.
- **DO NOT** apply a postemergence broadleaf herbicide within one day following application of Arrow 2EC or reduced grass control can result.
- **DO NOT** apply under conditions of stress. Applying Arrow 2EC 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 Arrow 2EC effectively and will be less susceptible to herbicide activity.
- **DO NOT** plant rotational crops until 30 days after application of Arrow 2EC unless the crop is listed on the Arrow 2EC label.
- Aerial applications for all tree fruits and tree nuts uses are prohibited.

#### PRECAUTIONS

- See the "Crop-Specific Restrictions and Limitations for Arrow 2EC" table for crop specific application rates.
- 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, including continuous no-tillage in which the perennial grass rhizomes or stolons are not cut up, results in a very staggered, non-uniform weed emergence. Due to this non-uniform weed emergence, make no fewer than two Arrow 2EC applications per year at the appropriate weed-growth stage rate under continuous no-till conditions.
- Grass crops including corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to Arrow 2EC.
- While all the vegetable crops on this label have been tested and are tolerant to Arrow 2EC, not all specialty varieties of these crops have been tested. It is advised that, before applying Arrow 2EC 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 Arrow 2EC and broadleaf herbicides can result in reduced grass control. If grass regrowth occurs, an additional application of Arrow 2EC may be necessary.

#### MANDATORY SPRAY DRIFT

##### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1)
- The boom length must not exceed 65% of the wingspan for airplanes or 73% of the rotor blade diameter for helicopters.

- Applicators must use  $\frac{1}{2}$  swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **Ground Boom Applications:**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above ground or crop canopy. For all other ground applications, the nozzle must be no more than 3 feet from the target vegetation.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1)
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **IMPORTANCE OF DROPLET SIZE**

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

#### **Controlling Droplet Size – Ground Boom**

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

#### **Controlling Droplet Size – Aircraft**

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

#### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

#### **SHIELDED SPRAYERS**

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

#### **TEMPERATURE AND HUMIDITY**

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

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## **WIND**

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

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

## **WEED RESISTANCE MANAGEMENT**

For resistance management, Arrow 2EC is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to Arrow 2EC and other Group 1 herbicides. Weed species with acquired resistance to Group 1 herbicides may eventually dominate the weed population if control for targeted species. This may result in partial or total loss of control of those species by Arrow 2 EC or other Group 1 herbicides. Users should scout before and after application.

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

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

To delay herbicide resistance:

- Avoid the consecutive use of Arrow 2EC or other target site of action Group 1 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern (an herbicide mode of action classification by itself may not adequately address specific weeds that are resistance to specific herbicides.)
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Scout fields prior to application to identify the weed species present and their growth state to determine if the intended application will be effective.
- Scout fields after application to verify that the treatment was effective.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistance weed biotypes.

Report any incidence of non-performance of this product against a particular weed species to your ADAMA retailer, representative or call 1-866-406-6262. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemicals means to remove escapes, as practical, with the goal of preventing further seed production.

**CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC**

<b>CROPS<sup>(1)</sup></b>	<b>USE RATE IN FL OZ PER ACRE</b>	<b>CROP OIL CONCENTRATE RATES PER ACRE<sup>(2)</sup></b>	<b>SPECIAL USE INSTRUCTIONS</b>
<b>Alfalfa</b> including: Sainfoin, Holy Clover, Birdsfoot Trefoil <sup>(3)</sup> <sup>(6)</sup>	6-16 <sup>(4)</sup> (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>Refer to tank mix partners for feeding, grazing and harvesting restrictions. <sup>(5, 6)</sup></p> <p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate, 16 fl. oz. per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 15 days before grazing, feeding or harvesting (cutting) for forage or hay.</li> </ul>
<b>Artichoke (Globe)</b>	6-8 (0.094 – 0.125 lb ai)	Non-Ionic Surfactant (NIS) at 1% v/v (but not less than 1 pt/A)	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• For repeat applications make on a minimum of a 14 day interval.</li> <li>• <b>DO NOT</b> apply more than 8 fl oz/A (0.125 lb ai/A) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz/A (0.5 lb ai/A) per year.</li> <li>• <b>DO NOT</b> make more than 4 applications per year</li> <li>• The Preharvest Interval (PHI) is 5 days.</li> </ul>
<b>Beans, Dry Shelled (except Soybean)</b> Dried Shelled Pea and Bean (except soybean) Subgroup 6C including: Bean ( <i>Lupinus</i> spp.): Grain, Sweet, White, White Sweet; Bean ( <i>Phaseolus</i> spp.): Field, Kidney, Lima (dry), Navy, Pinto, Tepary; Bean ( <i>Vigna</i> spp.):	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> make more than 4 applications at the lowest rate, 6- fl. oz., or 2 applications at the highest rate, 16 fl. oz., per year.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
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			<ul style="list-style-type: none"> <li>The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Bean, Succulent</b> <b>Shelled</b> Succulent Shelled Pea and Bean Subgroup 6B including: Bean ( <i>Phaseolus</i> spp.): Broad Bean (succulent), Lima Bean (green); Bean ( <i>Vigna</i> spp.): Black-eyed Pea, Cowpea, Southern Pea	6-8 (0.094 – 0.125 lb ai)	1 qt by ground or 1 % v/v (but not less than 1 pt/A) by air. <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li><b>DO NOT</b> make more than 1 application per acre per year.</li> <li><b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per year.</li> <li>The Preharvest Interval (PHI) is 21 days.</li> </ul>
<b>Beet, Garden</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li><b>DO NOT</b> make more than 4 applications per acre per year.</li> <li><b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year</li> <li>Minimum of 14 days between applications.</li> <li>The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Bushberry, Highbush</b> Crop Subgroup 13-07B including: Aronia berry; Blueberry, highbush; Chilean guava; Cranberry, highbush; Currant, black; Currant, buffalo; Currant,	4-8 (0.063 – 0.125 lb ai)	1 % v/v (but not less than 1 pt/A)	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>See Use Directions for Bushberry, Caneberry and Peach.</b></p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
native; Currant, red; Elderberry; European barberry; Gooseberry; Honeysuckle, edible; Huckleberry; Jostaberry; Juneberry; Lingonberry[*]; Salal; Sea buckhorn; cultivars, varieties and/or hybrids of these  [*Not for use in CA]			<ul style="list-style-type: none"> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days</li> </ul>
<b>Berry, Low Growing (except Cranberry and Strawberry) Crop</b> Subgroup 13-07G including: Bearberry; Bilberry; Blueberry, lowbush; Cloudberry; Lingonberry; Muntrees; Partridgeberry	4-8 (0.063 – 0.125 lb ai)	Non-Ionic surfactant (NIS) at 0.25% v/v	<p>Verify crop safety to Arrow 2EC on a small area of the crop, at the desired rate and with same non-ionic surfactant (NIS) that will be used on the field. If no crop response is evident 7 days after treatment, Arrow 2EC may be used on the entire field at the rate tested and with the same NIS used in the crop safety test.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 45 days.</li> </ul>
<b>Head and Stem Brassica Vegetables Crop</b> Subgroup 5-16 including: Broccoli; Cabbage; Cauliflower; Brussels Sprouts; Chinese (Napa) cabbage; Cultivars, varieties and/or hybrids of these commodities	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Caneberry Crop</b> Subgroup 13-07A including: Blackberry; Loganberry; Raspberry, black; Raspberry, red;	4-8 (0.063 – 0.125 lb ai)	1 % v/v (but not less than 1 pt/A)	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>See Use Directions for Bushberry, Caneberry and Peach.</b></p>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Raspberry, wild; Cultivars, varieties and/or hybrids of these			<b>RESTRICTIONS</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 7 days.</li> </ul>
[*] <b>Brassica Leafy Greens Subgroup 4-16B (except Radish Leaves, Turnip Greens and Watercress)</b> including: Arugula; Broccoli, Chinese; Broccoli Raab; Cabbage, Abyssinian; Cabbage, Chinese (bok choy); Cabbage, Seakale; Collards; Cress, Garden; Cress, Upland; Hanover Salad; Kale; Maca (leaves); Mizuna; Mustard Greens; Rape Greens; Rocket, Wild; Shepherd's Purse; Cultivars, varieties, and/or hybrids of these commodities	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<b>RESTRICTIONS</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
[*]Not for use in CA]			
[*] <b>Canola</b> including: <b>Rapeseed</b> <b>Subgroup 20A</b> <b>except flax seed,</b> <b>mustard seed and</b> <b>sesame seed</b> Borage; Crambe; Cuphea; Echium; Gold of Pleasure (Camelina);	4-6 (0.063 – 0.094 lb ai)	1% v/v in the finished spray volume	Refer to appropriate table for reduced rate specifications for the control of small annual grasses.  Verify crop safety to Arrow 2EC on a small area of the crop, at the desired rate and with the same non-ionic surfactant (NIS) that will be used on the entire field at the rate tested and with the same NIS used in the crop safety test.  <b>RESTRICTIONS</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 6 fl oz (0.094 lb ai) per acre per year.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Hare's Ear Mustard; Lesquerella; Lunaria; Meadowfoam; Milkweed; Oil Radish; Poppy seed; Rapeseed (canola); Sweet Rocket [*Not for use in CA]			<ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 6 fl. oz. (0.094 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 application per acre per year.</li> <li>• <b>DO NOT</b> apply after crop has begun bolting. Crop injury can occur when Arrow 2EC is applied during the bloom period.</li> <li>• The Preharvest Interval (PHI) is 70 days.</li> </ul>
Carrot	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
Clover (Idaho, Oregon, and Washington only)	6-16 (0.094 – 0.25 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• The Preharvest Interval (PHI) is 15-days before grazing, feeding, or harvesting (cutting) for forage or hay.</li> <li>• For use on clover grown in the states of Idaho, Oregon, and Washington only.</li> </ul>
Corn, Field  (For burndown of an existing stand of Roundup Ready field corn or volunteer Roundup Ready field corn prior to replanting field corn.)	3 (0.047 lb ai)	<b>DO NOT</b> use COC on field corn. Use NIS at 0.25% v/v	<p>For burndown of an existing stand of Roundup Ready field corn or volunteer Roundup Ready field corn prior to replanting field corn.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 3 fl oz (0.047 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 application per acre per year.</li> <li>• <b>DO NOT</b> apply more than 3 fl oz (0.047 lb ai) per acre per year.</li> <li>• Replant no sooner than 6 days after application.</li> <li>• The Preharvest Interval (PHI) is 90 days.</li> </ul>
Cotton (including cotton grown for seed)	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not	The addition of AMS has shown improved grass control for difficult to control species including

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		less than 1 pt/A) by air) <sup>(3)</sup>	<p>quackgrass, rhizome johnsongrass, red rice, wild oats, volunteer cereals, and volunteer corn.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate, 16 fl. oz., per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 60 days.</li> <li>• <b>DO NOT</b> graze treated fields or feed treated forage or hay to livestock.</li> </ul>
Cranberry	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> apply between the “hook” stage and the full fruit set.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
Fallow Land, Conifer Trees  Non-Crop or Non- Planted Areas (and other non- producing agricultural areas) <sup>(7)</sup>  Wildland Properties[*];  Federal Wildland Properties[*]	6-16 (0.094 – 0.25 lb ai)	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.	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate, 16 fl. oz., per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> plant any crop for 30-days after application unless clethodim is registered for use in that crop.</li> </ul>
[*Not for use in CA]			

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>[*]Flax</b> [*Not for use in CA]	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• Apply prior to bloom. Crop injury can occur when Arrow 2EC is applied during the bloom period.</li> <li>• The Preharvest Interval (PHI) is 60 days.</li> </ul>
<b>Fruiting Vegetables (except Okra and Tomato)</b> Crop Group 8-10 including: African Eggplant; Bush Tomato; Cocona; Currant Tomato; Eggplant; Garden Huckleberry; Goji Berry; Groundcherry; Martynia; Naranjilla; Pea Eggplant; Pepino; Peppers (all); Roselle; Scarlet Eggplant; Sunberry; Tomatillo; Tree Tomato; Cultivars, varieties, and/or hybrids of these	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 20 days.</li> </ul>
<b>Herbs</b> Crop Group 19A including: Angelica; Balm; Basil; Borage; Burnet; Chamomile; Catnip;	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Arrow 2EC has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test Arrow 2EC on a small portion of the crop to be treated before treating the entire field.</p> <p>Verify the crop tolerance to Arrow 2EC on a small area of the herb crop, at the desired Arrow 2EC 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</p>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Chervil (dried); Chive; Chive (Chinese); Clary; Coriander (leaf); Costmary; Culantro (leaf); Curry (leaf); Dill (dillweed); Horehound; Hyssop; Lavender; Lovage (leaf); Marigold; Marjoram ( <i>Origanum</i> spp.); Nasturtium; Parsley (dried); Pennyroyal; Rosemary; Rue; Sage; Savory; Summer and Winter; Sweet Bay; Tansy; Tarragon; Thyme; Wintergreen; Woodruff; Wormwood			<p>treatment, Arrow 2EC can be used on the entire field at the rate tested and with the same crop oil used in the tolerance test.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Hops</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 21 days.</li> </ul>
<b>Leaf Petiole Vegetables</b> Subgroup 22B including: Cardoon; Celery; Celtuce; Chinese Celery; Fennel,	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Florence (finochio); [*]Fuki; Rhubarb; Swiss Chard; [*]Udo; [*]Zuiki; [*]cultivars, varieties, and/or hybrids of these commodities  [*]Not for use in CA]			<ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Leafy Greens</b> Subgroup 4-16A including: Amaranth, Chinese; Amaranth, Leafy; Amaranth, Tampala; Arugula (roquette); [*]Aster, Indian; [*]Blackjack; [*]Cat's Whiskers; [*]Cham-chwi; [*]Cham-na-mul; [*]Chervil, (fresh leaves); [*]Chipilin; Chrysanthemum (Edible leaved); Chrysanthemum (Garland); [*]Cilantro (fresh leaves); Corn salad; [*]Cosmos; Cress (garden, upland [yellow rock and winter]); [*]Dandelion (leaves); [*]Dang-gwi (leaves); [*]Dillweed; Dock (sorrel); [*]Dol-nam-mul; Ebolo; Endive; Escarole; [*]Fameflower; [*]Feather Cockscomb; [*]Good King Henry; [*]Huauzontle; [*]Jute (leaves);	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
[*]Lettuce (Bitter); Lettuce (Head and Leaf); Orach; [*]Parsley (fresh leaves); [*]Plantain, Buckhorn; [*]Primrose, English; Purslane (garden, winter); Radicchio (red chicory); Spinach; Spinach (New Zealand); Spinach (Vine [Indian and Malabar]); [*]Spinach (Tanier); [*]Swiss Chard; [*]Violet (Chinese) (leaves); [*]cultivars, varieties, and/or hybrids of these commodities [*]Not for use in CA.]			
<b>Legume Vegetables, Edible Podded</b> Subgroup 6A including: Bean ( <i>Phaseolus</i> spp.): Runner, Snap, Wax Bean ( <i>Vigna</i> spp.): Asparagus, Chinese Longbean, Moth, Yardlong, Jackbean Pea ( <i>Pisum</i> spp.): Dwarf, Edible-pod, Snow, Sugar Snap, Pigeon, Sword Bean	6-8 (0.094 – 0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt per acre) by air <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• For peas, apply before bloom, but no later than 21- days before harvest.</li> <li>• The Preharvest Interval (PHI) is 21 days.</li> </ul>
<b>Melon</b> Subgroup 9A including:	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume.	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Citron melon; Muskmelon (including cantaloupe); Honeydew Melon; Watermelon			<ul style="list-style-type: none"> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Peppermint/ Spearmint Tops</b>	6-16 <sup>(4)</sup> (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt per acre by air)	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 21 days.</li> </ul>
<b>[*]Mustard Seed</b> [*Not for use in CA.]	4-6 (0.063 – 0.094 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 6 fl oz (0.094 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 12 fl oz (0.188 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply after crop has begun bolting. Crop injury can occur when Arrow 2EC is applied during the bloom period.</li> <li>• For Reduced Rate Control for Small Annual Grasses: <b>DO NOT</b> make more than 3 applications at 4 fl oz (0.0625 lb ai) per acre per year.</li> <li>• The Preharvest Interval (PHI) is 75 days.</li> </ul>
<b>Okra</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> </ul>
<b>Bulb Onion, Onion (Dry Bulb Only), Subgroup 3-07A including: Daylily, Bulb; Fritillaria, Bulb; Garlic, Bulb;</b>	6-16 (0.094 – 0.25 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.250 lb ai) per acre per application.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Garlic, Great headed, Bulb; Garlic, Serpent, Bulb; Lily, Bulb; Onion, Chinese, Bulb; Onion, Bulb; Onion, Pearl; Onion, Potato, Bulb; Shallots (Dry Bulbs Only); Cultivars, varieties, and/or hybrids of these			<ul style="list-style-type: none"> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• When applying by air, <b>DO NOT</b> exceed 8 fl oz (0.125 lb ai) per acre per application and 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• If Arrow 2EC is applied as a spot treatment to onion or garlic, <b>DO NOT</b> exceed the maximum rate allowed on a "per acre" basis.</li> <li>• In California, <b>DO NOT</b> apply Arrow 2EC to garlic or onion until the crop has at least two full leaves. Use a 14 day spray interval between the application of Arrow 2EC and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.</li> <li>• The Preharvest Interval (PHI) is 45 days.</li> <li>• For Garlic: When applying by ground, <b>DO NOT</b> exceed 8 fl oz (0.125 lb ai) per acre per application or 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• Minimum of 20 gals/A spray volume by ground in entire U.S.</li> <li>• Minimum of 20 gals/A spray volume by air in California</li> <li>• In states other than California, make air applications to onions, garlic or shallots in a minimum of 10 gals per acre.</li> </ul>
<b>Onion, Green</b> Subgroup 3-07B including: Chive (fresh leaves); Chive, Chinese (fresh leaves); [*]Elegans Hosta; Fritillaria (leaves); [*]Kurrat; [*]Lady's Leek; Leek; [*]Leek, wild; [*]Onion, Beltsville (bunching);[*]Onion (fresh); Onion, Green; [*]Onion, Macrostem; [*]Onion, Tree (tops); Onion, Welsh (tops);	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• For air applications to onion, <b>DO NOT</b> exceed 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• Minimum of 14 days between applications</li> <li>• In California for air applications to onion, <b>DO NOT</b> exceed 2 applications per year.</li> <li>• If Arrow 2EC is applied as a spot treatment to onion or garlic, <b>DO NOT</b> exceed the maximum rate allowed on a "per acre" basis.</li> <li>• In California, <b>DO NOT</b> apply Arrow 2EC to onion or garlic until the crop has at least two full leaves. Use a 14-day spray interval</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Shallot (fresh leaves); [*]Cultivars, varieties, and/or hybrids of these commodities [*Not for use in CA.]			<p>between the application of Arrow 2EC and liquid nitrogen or other herbicide applications. Injury to crop may occur when shorter intervals are observed.</p> <ul style="list-style-type: none"> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Ornamentals</b>	6-16 (0.094 – 0.25 lb ai)	<b>DO NOT</b> use crop oil concentrate since it can injure flowers and foliage. See Special Use Instructions.	<p>Add a non-ionic surfactant containing at least 80% active ingredient at the rate of 1 pt per 50 gals (0.25%v/v).</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• For ornamentals, <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• For non-bearing food crops, <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz., per year</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• Sugar maples cannot be tapped for syrup within one year of Arrow 2EC application.</li> </ul>
<b>Non-Bearing Food Crops</b>	6-8 (0.094 – 0.125 lb ai)		

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Pea, Dry Shelled</b> Subcrop 6C including: Pea ( <i>Pisum</i> spp.) Field, Pigeon	6-8 (0.094 – 0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt per acre) by air. <sup>(3)</sup>	<p>Refer to appropriate Table for reduced rate prescribed for the control of small annual grasses.</p> <p>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.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 application per acre per year.</li> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• Apply before bloom but not later than 30 days prior to harvest.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> <li>• Applications of Arrow 2EC to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.</li> </ul>
<b>Pea, Succulent Shelled</b> Subgroup 6B including: Pea ( <i>Pisum</i> spp.): English pea, Garden pea, Green pea, Pigeon pea	6-8 (0.094 – 0.125 lb ai)	1 qt by ground or 1% v/v (but not less than 1 pt per acre) by air. <sup>(3)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 1 application per acre per year.</li> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per year.</li> <li>• Apply before bloom but not later than 21 days prior to harvest.</li> <li>• The Preharvest Interval (PHI) is 21 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Peanut (including Perennial)</b>	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.425 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate at 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz. per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 40 days.</li> </ul>
<b>Pome Fruit Crop Group 11-10 including:</b> Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear; Pear, Asian; Quince; Quince, Chinese; Quince, Japanese; Tejocote	4-8 (0.063 – 0.125 lb ai)	Non-ionic surfactant (NIS) at 0.25% v/v	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Potato</b>	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(3)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 64 fl oz (1 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Radish</b> [*]Radish Leaves [*Not for use in CA.]	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 15 days.</li> </ul>
<b>Root Vegetables (except Sugar Beet and Radish)</b> Subgroup 1B including: Burdock (Edible), Celeriac, Chervil (Turnip-Rooted), Chicory, Ginseng, Horseradish,  Parsley (Turnip-Rooted), Parsnip, Radish (Oriental), Rutabaga, Salsify, Salsify (Black), Salsify (Spanish), Skirret, Turnip	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Safflower</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 70 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Sesame</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> apply during flowering</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Soybean</b>	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>Restrictions</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz., per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> graze treated fields or feed treated forage or hay to livestock.</li> <li>• The Preharvest Interval (PHI) is 60 days.</li> </ul>
<b>Squash/Cucumber</b> Subgroup 9B including: Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron Melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra); Momordica spp. (includes balsam apple, balsam pear, bittermelon,	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Chinese cucumber); Pumpkin; Squash, Summer; Squash, Winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash)			
[*] <b>Stalk and Stem Vegetable</b> Subgroup 22A including: Agave; Aloe Vera; Asparagus; Bamboo Shoots; Fennel, Florence (fresh leaves and stalk);Fern, Fiddlehead (edible); Kale, Sea; Kohlrabi; Palm Hearts; Prickly Pear (pads); Prickly Pear, Texas (pads); Cultivars, varieties, and/or hybrids of these commodities	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 1 day.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Stevia, dried leaves</b>	4-8 (0.063 – 0.125 lb ai)	Non-ionic Surfactant (NIS) at 0.25% v/v	<p>Arrow 2EC has not been tested on all varieties. It is the responsibility of the user to test Arrow 2EC on a small portion of the crop to be treated before treating the entire field.</p> <p>Verify crop safety to Arrow 2EC on a small area of the crop, at the desired rate and with the same non-ionic surfactant (NIS) that will be used on the field. If no crop response is evident 7 days after treatment, Arrow 2EC may be used on the entire field at the rate tested and with the same NIS used in the crop safety test.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>
<b>Stone Fruit Crop Group 12-12 including:</b> Apricot; Apricot, Japanese; Capulin; Cherry, Black; Cherry, Nanking; Cherry, Sweet; Cherry, Tart; Jujube, Chinese; Nectarine; Peach; Plum; Plum, American; Plum, Beach; Plum, Canada; Plum, Cherry; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plum, Klamath; Plum, Prune; Plumcot; Sloe	4-8 (0.063 – 0.125 lb ai)	Non-ionic Surfactant (NIS) at 0.25% v/v	<p><b>See Use Directions for Bushberry, Caneberry and Peach.</b></p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Strawberry	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 4 days.</li> </ul>
Sugar Beet	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz., per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 40 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Sunflower</b> Subgroup 20B <b>(except Safflower)</b> including: Calendula, Castor Oil Plant, Chinese Tallowtree, Euphorbia, Evening Primrose, Jojoba, Niger Seed, Rose Hip, Stokes Aster, Tallowood, Tea Oil Plant, Vernoia	6-16 (0.094 – 0.25 lb ai)	1 qt by ground or 1.0% v/v (but not less than 1 pt/A) by air <sup>(5)</sup>	<p>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.</p> <p>Verify crop safety to Arrow 2EC on a small area of the crop, at the desired rate and with the same crop oil concentrate that will be used on the field. If no crop response is evident 7 days after treatment, Arrow 2EC may be used on the entire field at the rate tested and with the same crop oil used in the crop safety test.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz., per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 70 days.</li> </ul>
<b>Tomato</b>	6-16 (0.094 – 0.25 lb ai)	1% v/v in the finished spray volume	<p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> apply more than 4 applications at the lowest rate, 6-8 fl. oz., or 2 applications at the highest rate at 16 fl. oz., per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 20 days.</li> </ul>
<b>Tree Nuts</b> Crop Group 14-12 including: African Nut-tree, Almond; Beechnut; Brazil Nut; Brazilian Pine; Bunya; Bur Oak; Butternut; Cajou Nut; Candlenut;	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 14 days.</li> </ul>

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
Cashew; Chestnut; Chinquapin; Coconut; Coquito Nut; Dika Nut; Ginkgo; Guiana Chestnut; Hazelnut (Filbert); Heartnut; Hickory Nut; Japanese Horse-chestnut; Macadamia Nut; Mongongo Nut; Monkey-pot; Monkey Puzzle Nut; Okari Nut; Pachira Nut; Peach Palm Nut; Pecan; Pequ; Pili Nut; Pine Nut; Pistachio; Sapucala Nut; Tropical Almond; Walnut, Black; Walnut, English; Yellowhorn; Cultivars, varieties, and/or hybrids of these.			

CROPS <sup>(1)</sup>	USE RATE IN FL OZ PER ACRE	CROP OIL CONCENTRATE RATES PER ACRE <sup>(2)</sup>	SPECIAL USE INSTRUCTIONS
<b>Tuberous and corm vegetables Subgroup 1C (except potato) including:</b> Arracacha; Arrowroot; Chinese Artichoke; Jerusalem Artichoke; Edible Canna; Cassava, Bitter And Sweet; Chayote (Root); Chufa; Dasheen (Taro); Ginger; Leren; Sweet Potato; Tanier; Turmeric; Bean Yam; True Yam; Yam	6-16 (0.094 – 0.25 lb ai)	1% v/v in the finished spray volume	<p>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.</p> <p>Refer to appropriate table for reduced rate specifications for the control of small annual grasses.</p> <p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 16 fl oz (0.25 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval (PHI) is 30 days.</li> </ul>
<b>Turnip Greens</b>	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• The Preharvest Interval is 14 days.</li> </ul>
<b>[*]Watercress</b> [*Not for use in CA]	6-8 (0.094 – 0.125 lb ai)	1% v/v in the finished spray volume	<p><b>RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 fl oz (0.125 lb ai) per acre per application.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply more than 32 fl oz (0.5 lb ai) per acre per year.</li> <li>• Minimum of 14 days between applications.</li> <li>• <b>DO NOT</b> apply when watercress is under flood conditions.</li> <li>• <b>DO NOT</b> apply Arrow 2EC when water is in the field and hold water for at least 24 hours after application.</li> <li>• The Preharvest Interval is 30 days.</li> </ul>

N/A= Not Applicable

(1) Arrow 2EC is not to be used 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) Arrow 2EC can 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 (peppermint and spearmint tops), the minimum use rate is 10 fl oz (0.156 lb ai) per acre.
- (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) can be added to Arrow 2EC applications in addition to the specified rate of crop oil concentrate.
- (6) **Restriction:** DO NOT apply Arrow 2EC 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) Other non-producing agriculture areas can be found under the NON-CROP OR NON-PLANTED AREAS Directions for Use.

**IMPORTANT:** Plant tolerance to Arrow 2EC 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, determine if herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of Arrow 2EC have investigated the safety factor to plants not listed on the label.

#### NON-BEARING FOOD CROPS

**RESTRICTION: DO NOT APPLY ARROW 2EC TO NON-BEARING FRUIT OR NUT CROPS WHICH ARE GROWN FOR ROOT STOCK.** Crop injury to non-bearing fruit and nut crops can occur if Arrow 2EC is improperly applied. DO NOT apply Arrow 2EC directly over the top of these plant types. Instead, direct the spray at the base of the plant where grassy weeds are growing near the ground.

Non-bearing fruit and nut crops are plants which will not bear fruit or nuts for at least one year following Arrow 2EC application.

COMMON NAME	SCIENTIFIC NAME
Apples	<i>Malus</i> spp.
Berries	<i>Vaccinium</i> spp.
	<i>Rubus</i> spp.
Cherry, Sweet	<i>Prunus avium</i>
Citrus Fruits	<i>Citrus</i> spp.
Grapes	<i>Vitis</i> spp.
Olives	<i>Olea</i> spp.
Peach	<i>Prunus persica</i>
Pears	<i>Pyrus communis</i>
Prunes	<i>Prunus</i> spp.
Stone Fruits	<i>Prunus</i> spp.
Strawberries	<i>Fragaria</i> spp.

COMMON NAME	SCIENTIFIC NAME
<b>Tree Nuts:</b>	
Almonds	<i>Prunus dulcis</i>
Filbert	<i>Corylus maxima</i>
Pecan	<i>Carya illinoinensis</i>
Pistachio	<i>Pistacia vera</i>
Walnut	<i>Juglans</i> spp.

## CONIFER TREES

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

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

## NON-CROP OR NON-PLANTED AREAS

The following areas are considered non-crop or non-planted areas: rights-of-way including railroads, highways, roads, dividers, medians, pipelines, public utility lines, pumping stations, transformer stations and substations, around airports, electric utilities, commercial buildings, manufacturing plants, storage yards, rail yards, fence lines, parkways, wildlife food plots and post-harvest croplands, also beneath greenhouse benches and around golf courses.

### DIRECTIONS FOR ANNUAL GRASSES

#### (EXCEPT IN ESTABLISHED ALFALFA AND PEPPERMINT/SPEARMINT TOPS)

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

#### Restrictions

- **DO NOT** exceed the maximum rate per application listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.
- **DO NOT** exceed the maximum number of applications per year listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.
- **DO NOT** exceed the maximum yearly rate listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT* INCHES	RATE FL OZ/ACRE	HIGH RATE ( <sup>1</sup> )
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Brome				
California	<i>Bromus carinatus</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Cheat	<i>Bromus secalinus</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Downy	<i>Bromus tectorum</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Ripgut	<i>Bromus diandrus</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	6 (0.094 lb ai)	8 (0.125 lb ai)
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)
Large	<i>Digitaria sanguinalis</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)
Southern	<i>Digitaria ciliaris</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Foxtail				
Giant	<i>Setaria faberi</i>	2 to 12	6 (0.094 lb ai)	8 (0.125 lb ai)
Green	<i>Setaria viridis</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)
Yellow	<i>Setaria glauca</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)
Goosegrass	<i>Eleusine indica</i>	2 to 6**	6 (0.094 lb ai)	8 (0.125 lb ai)

Itchgrass	<i>Rottboellia cochinchinensis</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Junglerice	<i>Echinochloa colona</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Lovegrass (Stinkgrass)	<i>Eragrostis ciliaris</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Rabbitfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	6 (0.094 lb ai)	8 (0.125 lb ai)
Red Rice	<i>Oryza sativa</i>	1 to 3	6 (0.094 lb ai)	8 (0.125 lb ai)
Ryegrass				
Hardy	<i>Lolium remotum</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Italian	<i>Lolium multiflorum</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	6 (0.094 lb ai)	8 (0.125 lb ai)
Shattercane	<i>Sorghum bicolor</i>	6 to 18	6 (0.094 lb ai)	8 (0.125 lb ai)
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Sprangletop				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Mexican	<i>Leptochloa uninervia</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Red	<i>Leptochloa filiformis</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Texas Panicum	<i>Panicum texanum</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Volunteer Cereals <sup>(2)</sup>				
Barley	<i>Hordeum vulgare</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Oats	<i>Avena sativa</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Rye	<i>Secale cereale</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Wheat	<i>Triticum aestivum</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Volunteer Corn <sup>(3)</sup>	<i>Zea mays</i>	4 to 12	4 (0.063 lb ai)	6 (0.094 lb ai)
Volunteer Corn <sup>(3)</sup>	<i>Zea mays</i>	12 to 24	6 (0.094 lb ai)	8 (0.125 lb ai)
Volunteer Corn S.R. <sup>(4)</sup>	<i>Zea mays</i>	4 to 12	8 suppression only (0.125 lb ai)	
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	6 (0.094 lb ai)	8 (0.125 lb ai)
Wild Oats	<i>Avena fatua</i>	2 to 6	6 (0.094 lb ai)	8 (0.125 lb ai)
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	6 (0.094 lb ai)	8 (0.125 lb ai)
Witchgrass	<i>Panicum capillare</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	6 (0.094 lb ai)	8 (0.125 lb ai)

\*Occurs between 3-leaf stage and tillering

\*\*Length of lateral growth

- (1) Rates higher than 8 fl oz/A (0.125 lb ai/A) can be applied in certain geographic areas, cropping situations, or environmental conditions 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 (0.125 – 0.25 lb ai/A) can be applied.
- (2) When a cereal grain crop (for example, wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment, the minimum Arrow 2EC use rate for control is 8 fl oz/A (0.125 lb ai/A).
- (3) Includes Roundup Ready®, LibertyLink®, and IMI-CORN VOLUNTEER CORN.
- (4) Sethoxydim-resistant volunteer corn.

**DIRECTIONS FOR ANNUAL & PERENNIAL GRASS CONTROL  
IN ESTABLISHED ALFALFA AND PEPPERMINT/SPEARMINT TOPS WITH ARROW 2EC**

GRASS SPECIES	WEED STAGE	RATE FL OZ ACRE	HIGH RATE
Annual & Perennial Grasses Listed in Grass Table	See Table	10 (0.156 lb ai)	16 (0.25 lb ai)
<b>Mowing:</b> The best control of annual grasses can be achieved by applying Arrow 2EC 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 over-winter 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 applications of Arrow 2EC for partial or complete control.			
<b>Irrigated Alfalfa and Peppermint/Spearmint Tops:</b> Irrigation practices can be very critical to the successful use of Arrow 2EC in established alfalfa and peppermint/spearmint tops and may be necessary to initiate active growth of the weeds prior to application. Applications 2 to 4 days after an irrigation are most effective. Irrigation made shortly after application (2 days) can be effective, but more consistent grass control occurs when the irrigation is made before the application.			
<b>Aerial Application:</b> Apply Arrow 2EC in a minimum of 10 GPA in established alfalfa and peppermint/spearmint tops when applying by air.			

**Annual Grass Control:** Apply Arrow 2EC at the grass sizes indicated in the **DIRECTIONS FOR ANNUAL GRASS TABLE** and rates indicated. If a grass has been cut, apply Arrow 2EC after active growth has resumed and regrowth has reached the minimum height and before it reaches the maximum height indicated. Apply before the alfalfa; peppermint/spearmint mint tops 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 Arrow 2EC 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 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 can be less effective due to environmental conditions including frost, slower plant growth, or the onset of flowering.

**Perennial Grass Control:** Arrow 2EC effectively controls perennial grasses including 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 (for example, established alfalfa or peppermint/spearmint tops). A program of repeated applications is usually necessary for best results. The best way to control perennial grasses is to do so in the year of stand establishment before rhizomes and stolons become large and difficult to kill.

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

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

#### **DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH ARROW 2EC**

GRASS SPECIES	WEED STAGE	RATE FL OZ/ACRE	HIGH RATE
Annual Bluegrass ( <i>Poa annua</i> )	to 4-leaf	6* (0.094 lb ai)	16 (0.25 lb ai)
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.			
Always add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.			

\* Use a minimum of 10 fl oz (0.156 lb al) per acre to control annual bluegrass in seedling and established alfalfa and peppermint/spearmint tops.

#### **DIRECTIONS FOR REDUCED RATE TO CONTROL SMALL ANNUAL GRASSES IN CANOLA, DRY SHELLED BEAN AND PEA (INCLUDING SOYBEAN), EDIBLE PODDED LEGUME VEGETABLES, FLAX, MUSTARD SEED, SUCCULENT BEAN AND PEA AND SUGARBEET [(REDUCED RATE SPECIFICATIONS NOT FOR USE IN CA)]**

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

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (INCHES)	RATE FL OZ/ACRE <sup>(1)</sup>
Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 4	4 (0.063 lb ai)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	1 to 4	5 (0.078 lb ai)
Crabgrass			
Large	<i>Digitaria sanguinalis</i>	1 to 3*	4 (0.063 lb ai)
Large	<i>Digitaria sanguinalis</i>	1 to 4*	5 (0.078 lb ai)
Smooth	<i>Digitaria ischaemum</i>	1 to 3*	4 (0.063 lb ai)
Smooth	<i>Digitaria ischaemum</i>	1 to 4*	5 (0.078 lb ai)
Southern	<i>Digitaria ciliaris</i>	1 to 4*	5 (0.078 lb ai)
Fall Panicum	<i>Panicum dichotomiflorum</i>	1 to 4	4 (0.063 lb ai)
Foxtail			
Giant	<i>Setaria faberi</i>	1 to 4	4 (0.063 lb ai)
Green	<i>Setaria viridis</i>	1 to 4	4 (0.063 lb ai)
Millet	<i>Setaria italica</i>	1 to 4	5 (0.078 lb ai)
Yellow	<i>Setaria glauca</i>	1 to 4	4 (0.063 lb ai)
Seedling Johnsongrass	<i>Sorghum halepense</i>	1 to 6	5 (0.078 lb ai)

GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (INCHES)	RATE FL OZ/ACRE <sup>(1)</sup>
Shattercane	<i>Sorghum bicolor</i>	4 to 10	4 (0.063 lb ai)
Texas Panicum	<i>Panicum texanum</i>	1 to 4	5 (0.078 lb ai)
Volunteer Cereals			
Barley	<i>Hordeum vulgare</i>	1 to 4	5 (0.078 lb ai)
Oats	<i>Avena sativa</i>	1 to 4	5 (0.078 lb ai)
Wheat	<i>Triticum aestivum</i>	1 to 4	5 (0.078 lb ai)
Volunteer Corn**	<i>Zea mays</i>	4 to 12	4 (0.063 lb ai)
Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 6	4 (0.063 lb ai)
Wild Oats	<i>Avena fatua</i>	1 to 4	5 (0.078 lb ai)

\*Length of lateral growth

\*\*Not S. R. Corn

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

#### DIRECTIONS FOR PERENNIAL GRASSES

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

#### Restrictions

- **DO NOT** exceed the maximum rate per application listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.
- **DO NOT** exceed the maximum number of applications listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.
- **DO NOT** exceed the maximum yearly rate listed in the CROP-SPECIFIC RESTRICTIONS AND LIMITATIONS FOR ARROW 2EC table.

GRASS SPECIES	WEED HEIGHT (INCHES)	RATE FL OZ/ACRE	HIGH RATE
<b>Bermudagrass (<i>Cynodon dactylon</i>)</b>			
First Application	3 (or up to 6" runners)	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Fescue, tall (<i>Festuca arundinacea</i>)</b>			
First Application	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Foxtail Barley (<i>Hordeum jubatum</i>)</b>			
First Application	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Orchardgrass (<i>Dactylis glomerata</i>)</b>			
First Application	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Quackgrass* (<i>Elytrigia repens</i>)</b>			
First Application	4 to 12	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 12	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Rhizome Johnsongrass (<i>Sorghum halepense</i>)</b>			
First Application	12 to 24	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	6 to 18	6 (0.094 lb ai)	8 (0.125 lb ai)
<b>Wirestem Muhly (<i>Muhlenbergia frondosa</i>)</b>			
First Application	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Perennial Bluegrass* [Roughstalk (<i>Poa trivialis</i>)]/[Kentucky (<i>Poa pratensis</i>)]</b>			
First Application	2 to 4	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	2 to 4	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Bentgrass* (<i>Agrostis</i> spp.)</b>			
First Application	2 to 4	-	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	2 to 4	-	16 (0.25 lb ai)

\*Control of quackgrass and perennial bluegrass and bentgrass with Arrow 2EC can be enhanced by adding AMS at 2.5 to 4.0 lbs/A.

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

GRASS SPECIES	WEED STAGE	RATE FL OZ/ACRE*
Field corn ( <i>Zea mays</i> )	Up to 12 inches	3 (0.047 lb ai)

\*Rate when applied alone or with glyphosate.  
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.  
Adjuvants: NIS at 0.25% v/v plus AMS at 2.5 to 4 lbs/A (**DO NOT** use a COC or MSO with Arrow 2EC in this use pattern).

#### TANK MIXES PRODUCT INFORMATION

The labels for each of the herbicides specified for tank mixing with Arrow 2EC are unique to the characteristics of those products and contain restrictions and limitations that can be more restrictive than the Arrow 2EC label in certain considerations. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Other concerns can include, but are not limited to:

1. Geographic restrictions-all products are not 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 (e.g. protective clothing, reentry time, posting);
5. Soil type or soil characteristics (e.g. pH, OM);
6. Maximum dosage or number of applications per year;
7. Rain free period required; or
8. Application timing (e.g. pre-harvest interval);
9. **DO NOT** exceed the total yearly rates.

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

#### TANK MIX APPLICATION OF ARROW 2EC AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROADLEAF WEEDS

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

#### MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, add the correct amount of Arrow 2EC. During agitation create a rippling or rolling action of the water surface.
3. If tank mixing, Arrow 2EC with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions. Prepare no more spray mixture than is required for the immediate spray operations.
4. Add any required adjuvants (crop oil concentrates, non-ionic surfactant and/or nitrogen solution).

5. Fill spray tank to desired level with water. Continue agitation until all spray solution has been applied.

Failure to agitate the spray solution can result in improper mixing of the herbicides and unsatisfactory weed control. Verify mixing and compatibility qualities by a jar test.

#### INFORMATION ON ANTAGONISM

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

#### ALFALFA

#### TABLE 1. ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA

(Refer to the specific tables above for specific grasses and growth stages.)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + 2,4-DB <sup>(4)</sup>	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to 2,4-DB label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to 2,4-DB label	1%	1%
Arrow 2EC + imazethapyr <sup>(5)</sup>	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to imazethapyr product label	---	1%	1%
Arrow 2EC + bromoxynil <sup>(6)(7)</sup>	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to bromoxynil product label	---	0.5%	0.5%
Arrow 2EC + clopyralid	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to clopyralid product label	---	1%	1%

<sup>(1)</sup>If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide), according to the appropriate size and rate specifications.

<sup>(2)</sup>Broadleaf weed control can be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix in these situations.

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

<sup>(4)</sup>Arrow 2EC plus 2,4-DB can increase the severity of crop injury when tank mixed. Alfalfa plants will outgrow this temporary crop injury within a few weeks.

<sup>(5)</sup>Before using this tank mix, read and understand the imazethapyr 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 imazethapyr to alfalfa.

<sup>(6)</sup> **Restriction:** 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 Arrow 2EC plus bromoxynil 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 can occur to alfalfa seedlings less than the 2 trifoliolate leaf stage. Arrow 2EC plus bromoxynil applications made when temperatures are expected to exceed 80° F at (and 3 days following) application can result in unacceptable crop injury. In the states not listed above, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leaf burn, unacceptable crop injury can occur to alfalfa in the 2 trifoliolate or smaller stage of growth. Arrow 2EC plus bromoxynil applications made when temperatures are expected to exceed 70°F at (and 3 days following) application can result in unacceptable crop injury. Crop leaf burn can occur following Arrow 2EC plus bromoxynil application. Warm, humid conditions can enhance leaf burn. New crop growth will not be affected.

<sup>(7)</sup> **Restriction:** **DO NOT** apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

#### USE DIRECTIONS FOR BUSHBERRY, CANEBERRY AND PEACH

Apply Arrow 2EC postemergence to actively growing grasses according to rate table. Crop injury to bushberry, caneberry and peach can occur if Arrow 2EC is improperly applied. Arrow 2EC must not be applied directly over the top of these plant types. Instead, direct spray at the base of the plant where grassy weeds are growing near the ground.

**Restriction: DO NOT** apply Arrow 2EC to bushberry, caneberry or peach grown for root stock.

#### CANOLA (EXCEPT FLAX)

Rapeseed Subgroup 20A (except flax seed, mustard seed and sesame seed)

**TABLE 2. REDUCED RATE ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR CANOLA**  
(Refer to the specific tables above for specific grasses and growth stages).

PRODUCT	APPLICATION RATES/ ACRE		CROP OIL CONC. <sup>(4)</sup> V/V	AMMONIUM SULFATE	
	ANNUAL GRASSES <sup>(1)</sup>	PERENNIAL GRASSES		GROUND	AIR
Arrow 2EC <sup>(2)</sup> + glufosinate <sup>(3)</sup>	4 to 5 fl oz (0.063 – 0.078 lb ai) + Refer to glufosinate label	---	---	3.0 lbs	3.0 lbs
Arrow 2EC <sup>(2)</sup> + clopyralid	4 to 5 fl oz (0.063 – 0.078 lb ai) + Refer to clopyralid label	---	1%	---	---

<sup>(1)</sup> 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**.

<sup>(2)</sup> **Restriction: DO NOT** apply Arrow 2EC tank mix during or after bolting or flowering or crop injury can occur.

<sup>(3)</sup> For use only on LibertyLink® canola.

<sup>(4)</sup> Always use a crop oil concentrate at the listed rate (but not less than 1 pt/A) in the finished spray volume.

#### COTTON

**TABLE 3. ARROW 2EC TANK MIXED WITH LACTOFEN AND MSMA APPLIED POST DIRECTED TO COTTON**

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONC. <sup>(3)</sup> V/V	COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES		
Arrow 2EC <sup>(4)</sup> + lactofen + MSMA (4.0 lbs/gal) OR MSMA (6.6 lbs/gal)	6 to 8 fl oz (0.094 – 0.125 lb ai)	8 to 16 fl oz (0.125 – 0.25 lb ai)	1%	Reduce broadcast rate in proportion to the band area actually treated.
	See lactofen label for rates to control broadleaf weeds and height limitations for cotton. Refer to the Arrow 2EC label for weed height and species controlled.			
	See MSMA label for rates to control broadleaf weeds and height limitations for cotton. Refer to the Arrow 2EC label for weed height and species controlled.			

<sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide), according to the appropriate size and rate specifications.

<sup>(2)</sup> Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix in these situations.

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

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

TABLE 4. ARROW 2EC TANK MIXED WITH BROMOXYNIL TO CONTROL EMERGED WEEDS IN BXN COTTON AS A BROADCAST APPLICATION

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>	CROP OIL CONC. PER ACRE <sup>(3)</sup>	COMMENTS <sup>(7)</sup>
	ANNUAL GRASSES		
Arrow 2EC + bromoxynil <sup>(4,5,6)</sup>	8 to 16 fl oz (0.125 – 0.25 lb ai) See bromoxynil 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 Arrow 2EC at the specified rate with the appropriate amount of crop oil concentrate in a non-bromoxynil tank mix.
- (2) Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage.
- (3) Always add a crop oil concentrate at 1 qt/A by ground in the finished spray solution.
- (4) Applications of bromoxynil can be made only to cotton that has been genetically modified for crop tolerance to postemergence over-the-top applications of bromoxynil.
- (5) **Restriction:** DO NOT apply the Arrow 2EC plus bromoxynil tank mix within 75 days of harvest.
- (6) **Restriction:** DO NOT exceed two applications of bromoxynil before cotton is 12-inches tall and one application after 12-inches tall.
- (7) Use a minimum of 10 gals of spray solution per acre.

TABLE 5. ARROW 2EC TANK MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN COTTON AS A BROADCAST APPLICATION.

PRODUCT	APPLICATION RATE/ACRE <sup>(1)</sup>		ADJUVANT		COMMENTS
	ANNUAL GRASSES	PERENNIAL GRASSES	Glyphosate formulation with built in adjuvant	Glyphosate formulation without built in adjuvant	
Arrow 2EC + glyphosate	6 to 8 fl oz (0.094 – 0.125 lb ai) See glyphosate label for rates to control broadleaf weeds and height limitations for cotton.	8 to 16 fl oz (0.125 – 0.25 lb ai) See glyphosate label for rates to control broadleaf weeds and height limitations for cotton.	Non-ionic surfactant at 0.125 to 0.25% v/v plus ammonium sulfate at 8.5 to 17 lbs per 100 gals of carrier	Crop oil concentrate at 1 pt /A plus ammonium sulfate at 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.

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC at the specified rate with the appropriate amount of crop oil concentrate.

**DRY SHELLLED AND SUCCULENT BEANS**  
**Succulent Shelled Pea and Bean Subgroup 6B**  
**Dried Shelled Pea and Bean (except Soybean 6C)**

TABLE 6. ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR DRY SHELLLED AND SUCCULENT BEANS (Refer to the specific tables above for specific grasses and growth stages).

PRODUCT <sup>(2)</sup>	APPLICATION RATES PER/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + bentazon	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to bentazon label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to bentazon label	1%	1%
Arrow 2EC + imazamox	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to imazamox label	---	1%	1%

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide), according to the appropriate size and rate specifications.
- (2) Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix 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

**TABLE 7. REDUCED RATE ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR FLAX. (Refer to the specific tables above for specific grasses and growth stages).**

PRODUCT	APPLICATION RATES PER/ACRE		CROP OIL CONCENTRATE	
	ANNUAL GRASSES <sup>(1)</sup>	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC+ bromoxynil <sup>(2,3)</sup>	4 to 5 fl oz (0.063 – 0.078 lb ai) + Refer to bromoxynil label	---	1 pt	1 pt
Arrow 2EC + clopyralid <sup>(2,3)</sup>	4 to 5 fl oz (0.063 – 0.078 lb ai) + Refer to clopyralid label	---	1 pt	1 pt

<sup>(1)</sup> 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**.

<sup>(2)</sup> **Restriction:** **DO NOT** apply Arrow 2EC tank mix during or after the bud stage or to ornamental flax or crop injury can occur.

<sup>(3)</sup> **Restriction:** **DO NOT** apply tank mixes if temperatures are expected to exceed 85°F at (or 3 days following) application or crop injury can occur.

### SOYBEANS

**TABLE 8. ARROW 2EC TANK MIXES TO CONTROL ANNUAL GRASSES WHEN USED AS A BURNDOWN IN NO-TILL SOYBEANS [(NOT FOR USE IN CA)]**

PRODUCT	PRODUCT ACRE RATE <sup>(1)</sup>	GRASS HEIGHT	CROP OIL CONC. <sup>(2)</sup>	28%N OR 32%N QTS/A OR 2.5 TO 4.0 LBS AMS
Arrow 2EC + 2,4-D Ester*	3 floz (0.047 lb ai)	Foxtail 1 to 3" Fall Panicum 1 to 3"	1 qt/A	1 to 2 qts/A <b>or</b> 2.5 to 4.0 lbs AMS
	4 fl oz (0.063 lb ai)	Foxtail 1 to 4" Fall Panicum 1 to 4"	1 qt/A	1 to 2 qts/A <b>or</b> 2.5 to 4.0 lbs AMS
	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to 2,4-D ester label	(See Grass Chart for grasses claimed)	1 qt/A	1 to 2 qts/A <b>or</b> 2.5 to 4.0 lbs AMS

\***Restriction:** **DO NOT** use 2,4-D where drift-sensitive crops can be grown.

- (1) If regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC according to the appropriate size and rate specifications.
- (2) Always use a crop oil concentrate at the listed rate in the finished spray volume.

**TABLE 9. ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEANS**  
 (Refer to the specific tables above for specific grasses and growth stages)[(NOT FOR USE IN CA)]

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONC. <sup>(3)</sup> (V/V)	
			GROUND	AIR
Refer to tank mix herbicide labels for geographic and rotational restrictions.				
Arrow 2EC + lactofen	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to lactofen label	0.5 to 1%	1% (but not less than 1 pt/A)
Arrow 2EC + bentazon	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to bentazon label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to bentazon label	1%	1% (but not less than 1 pt/A)
Arrow 2EC + glyphosate (For use on Roundup Ready soybean only)	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to glyphosate (For use on Roundup Ready soybean only) label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to glyphosate (For use on Roundup Ready soybean only) label	0.5 to 1% <sup>(4)</sup>	1% (but not less than 1 pt/A) <sup>(4)</sup>
Arrow 2EC + acifluorfen	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to acifluorfen label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to acifluorfen label	0.5 to 1%	1% (but not less than 1 pt/A)
Arrow 2EC + fomesafen	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to the fomesafen label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to fomesafen label	1%	1% (but not less than 1 pt/A)
Arrow 2EC + chlormuron	8 - 10 fl oz (0.125 – 0.156 lb ai) + Refer to chlormuron label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to chlormuron label	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + imazethapyr	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to imazethapyr label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to imazethapyr label	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen + chlormuron	8 - 10 fl oz (0.125 – 0.156 lb ai) + Refer to lactofen label+ Refer chlormuron label	-	0.5%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen+ bentazon	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to lactofen label+ Refer to bentazon label	-	0.5%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen + imazethapyr	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to lactofen label + Refer to imazethapyr label	-	0.5%	1% (but not less than 1 pt/A)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONC. <sup>(3)</sup> (V/V)	
		GROUND	AIR	
Refer to tank mix herbicide labels for geographic and rotational restrictions.				
Arrow 2EC <sup>(5)</sup> + bentazon and acifluorfen	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to bentazon and acifluorfen label	-	0.5%	1% (but not less than 1 pt/A)
Arrow 2EC + flumiclorac + imazethapyr	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to flumiclorac label + Refer to imazethapyr label	-	1%	-
Arrow 2EC + flumiclorac + bentazon	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to flumiclorac label + Refer to bentazon label	-	1%	1% (but not less than 1 pt/A)
Arrow 2EC + flumiclorac+ chlorimuron	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to flumiclorac label + Refer to chlorimuron label	-	1%	1% (but not less than 1 pt/A)
Arrow 2EC + lactofen+ flumiclorac	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label+ Refer to flumiclorac label	-	0.5 – 1%	-
Arrow 2EC <sup>(5)</sup> + cloransulam	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to cloransulam label	8 to 16 fl oz (0.125 – 0.25 lb ai) + 0.3 oz	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen+ cloransulam	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label + Refer to cloransulam label	8 to 16 fl oz (0.125 – 0.25 lb ai) + 6 to 12.5 fl oz + 0.3 oz	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + imazamox	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to imazamox label	-	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen + imazamox	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label + Refer to imazamox label	-	1%	1% (but not less than 1 pt/A)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONC. <sup>(3)</sup> (V/V)	
		GROUND	AIR	
Refer to tank mix herbicide labels for geographic and rotational restrictions.				
Arrow 2EC <sup>(5)</sup> + chlorimuron thifensulfuron and	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to chlorimuron and thifensulfuron label		0.5 - 1 qt/A	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + chlorimuron and thifensulfuron (STS Soybeans only)	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to chlorimuron and thifensulfuron label	-	0.5 - 1 qt/A	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + lactofen + chlorimuron and thifensulfuron	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to lactofen label + Refer to chlorimuron and thifensulfuron label	-	1 pt/A	-
Arrow 2EC <sup>(5)</sup> + flumiclorac	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to flumiclorac label	-	1 qt/A	-
Arrow 2EC <sup>(5)</sup> + cloransulam flumetsulam and	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to cloransulam and flumetsulam label	-	1%	1% (but not less than 1 pt/A)
Arrow 2EC <sup>(5)</sup> + cloransulam + fomesafen	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to cloransulam label + Refer to fomesafen label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to cloransulam label + Refer to fomesafen label	1%	1% (but not less than 1 pt/A)
Arrow 2EC + thifensulfuron	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to thifensulfuron label	-	0.25% NIS	-
Arrow 2EC + lactofen+ thifensulfuron	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to lactofen label + Refer to thifensulfuron label	-	NIS at 0.125 to 0.25% v/v plus COC at 0.125%	-
Arrow 2EC + lactofen+ flumiclorac + cloransulam	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to lactofen label + Refer to flumiclorac label + Refer to cloransulam label	-	0.5 – 1%	-

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>			
	ANNUAL GRASSES	PERENNIAL GRASSES	CROP OIL CONC. <sup>(3)</sup> (V/V)	
		GROUND	AIR	
Refer to tank mix herbicide labels for geographic and rotational restrictions.				
Arrow 2EC + lactofen+ chlorimuron and thifensulfuron	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label + Refer to chlorimuron and thifensulfuron label	-	0.5 – 1%	1% (but not less than 1 pt/A)
Arrow 2EC + lactofen+ chlorimuron and thifensulfuron (STS SOYBEANS ONLY)	6 to 10 fl oz (0.094 – 0.156 lb ai) + Refer to lactofen label + Refer to chlorimuron and thifensulfuron (STS SOYBEANS ONLY) label	-	0.5 – 1%	1% (but not less than 1 pt/A)

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide) according to the appropriate size and rate specifications.
- (2) Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix 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 product 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 adjuvant system, add 0.5 to 1.0 % crop oil concentrate for ground application and 1.0% V/V for aerial application.
- (5) Add 1 to 2 qts per acre of liquid fertilizer (10-34-0, 28%N, or 32%N) when Arrow 2EC is tank mixed with imazethapyr, flumiclorac, bentazon and acifluorfen, cloransulam, chlorimuron, imazamox, cloransulam and flumetsulam, lactofen plus chlorimuron, lactofen plus bentazon, lactofen plus imazethapyr, lactofen plus cloransulam, lactofen plus chlorimuron, and lactofen plus imazamox. An equivalent amount (2.5 to 4.0 lbs/acre) of spray grade ammonium sulfate (AMS) can be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

**TABLE 10. REDUCED RATE ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR SOYBEAN**  
 (Refer to table for reduced rate use in canola, dry shelled bean & pea, edible podded legume vegetables, flax, mustard seed, soybean, succulent bean & pea and sugarbeet specifications for small annual grasses for specific grasses and growth stages)[(NOT FOR USE IN CA)]

PRODUCT	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3,4)</sup> (V/V)	
	ANNUAL GRASSES <sup>(2)</sup>	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + cloransulam	4 to 8 fl oz (0.063 – 0.125 lb ai) + Refer to cloransulam label	---	1%	1%
Arrow 2EC + imazethapyr	4 to 6 fl oz (0.063 – 0.094 lb ai) + Refer to imazethapyr label	---	1%	1%

- (1) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide), according to the appropriate size and rate specifications.
- (2) 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**.
- (3) **Restriction:** Always use a crop oil concentrate at the listed rate (but not less than 1 pt per acre) in the finished spray volume.

(4) The addition of 1 to 2 qts per acre of liquid fertilizer (10-34-0, 28% N, or 32%N) is required when Arrow 2EC is tank mixed at reduced rates. An equivalent amount (2.5 to 4.0 lbs/A) of spray grade ammonium sulfate (AMS) can be added in place of liquid fertilizer. Fertilizer adjuvants are to be added in addition to the crop oil concentrate.

#### PEANUT (INCLUDING PERENNIAL)

TABLE 11. ARROW 2EC TANK MIXES WITH BROADLEAF HERBICIDES FOR PEANUT

(Refer to the specific tables above for specific grasses and growth stages.)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> (V/V)	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + bentazon	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to bentazon label	---	1%	1%
Arrow 2EC + acifluorfen	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to acifluorfen label	---	1%	1%
Arrow 2EC + bentazon and acifluorfen	8 to 10 fl oz (0.125 – 0.156 lb ai) + Refer to bentazon and acifluorfen label	---	1%	1%

<sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide), according to the appropriate size and rate specifications.

<sup>(2)</sup> Broadleaf weed control can be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix in these situations.

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

#### INSTRUCTIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY IN PEANUT (INCLUDING PERENNIAL) WITH ARROW 2EC

GRASS SPECIES	WEED STAGE	RATE FL OZ / ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height charts <b>"DIRECTIONS FOR ANNUAL GRASSES"</b> and <b>"DIRECTIONS FOR PERENNIAL GRASSES"</b>	Up to and including grasses in the seed head stage.	16 (0.25 lb ai)	32 (0.5 lb ai)
<b>Restriction:</b> <b>DO NOT</b> apply as part of a tank mix when applying Arrow 2EC for grass suppression. Add a crop oil concentrate at 1 qt/A by ground to the finished spray volume.			

#### SUGARBEETS

TABLE 12. ARROW 2EC TANK MIXED WITH CLOPYRALID APPLIED TO SUGARBEETS (Refer to the specific tables above for specific grasses and growth stages)

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONC. <sup>(3)</sup>	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + clopyralid	6 to 8 fl oz (0.094 – 0.125 lb ai) See clopyralid label for rates.	8 to 16 fl oz (0.125 – 0.25 lb ai)	1% v/v	

<sup>(1)</sup> If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix herbicide) according to the appropriate size and rate specifications.

<sup>(2)</sup> Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix in these situations.

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

**TABLE 13. ARROW 2EC TANK MIXED WITH ETHOFUMESATE APPLIED TO SUGARBEETS**

PRODUCT <sup>(2)</sup>	WEEDS CONTROLLED		WEED HEIGHT	APPLICATION RATE/ACRE <sup>(1)</sup>
	Common Name	Scientific Name		
Arrow 2EC <sup>(3)</sup> + ethofumesate	Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 3"	8 fl oz (0.125 lb ai)
	Foxtail	<i>Setaria spp.</i>	1 to 3"	
	Foxtail Millet	<i>Setaria italica</i>	1 to 3"	
	Wild Oat	<i>Avena fatua</i>	1 to 3"	
	Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 3"	
				See ethofumesate label for rates to control broadleaf weeds. <b>DO NOT put additives in the tank mix.</b>

(1) **Restriction:** **DO NOT** use crop oil concentrate. **DO NOT** put additives in the tank mix if ethofumesate is in the tank.

(2) Broadleaf weed control can be reduced when grass populations are tall enough or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix in these situations.

(3) If grass regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC at full label rate with appropriate rate of crop oil concentrate.

**TABLE 14. ARROW 2EC PLUS ETHOFUMESATE OR CLOPYRALID OR TRIFLUSULFURON TANK MIX FOR THREE SEQUENTIAL APPLICATIONS FOR ANNUAL GRASS CONTROL (MICRO-RATE APPLICATION).**

PRODUCT	APPLICATION RATES/ACRE <sup>(1)</sup>		METHYLATED SEED OIL <sup>(2)</sup> (V/V)	
	ANNUAL GRASSES	GRASSES CONTROLLED (inches)	GROUND	AIR
Arrow 2EC + ethofumesate or clopyralid or triflusulfuron	2 to 3 fl oz (0.031 – 0.047 lb ai) +  Refer to ethofumesate label or Refer to clopyralid label or Refer to triflusulfuron label	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 can be reduced when grass populations are tall or dense enough to intercept the spray pattern and prevent them from receiving complete coverage. **DO NOT** tank mix 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.

#### 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. Set spray pressures at 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.

**TABLE 15. TANK MIX APPLICATION OF ARROW 2EC AND FUNGICIDES FOR CONTROL OF GRASS WEEDS AND DISEASES IN SUGARBEET.**

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(3)</sup> (V/V)
	Annual Grasses	Perennial Grasses	
Arrow 2EC + tetaconazole	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to tetaconazole label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to tetaconazole label	1%
Arrow 2EC + pyraclostrobin	6 to 8 fl oz + Refer to pyraclostrobin label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to pyraclostrobin label	1%
Arrow 2EC + trifloxystrobin	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to trifloxystrobin label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to trifloxystrobin label	1%

<sup>(1)</sup> If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix fungicide) according to the appropriate size and rate specifications.

<sup>(2)</sup> Refer to Arrow 2EC and fungicide label for rates and weeds and diseases controlled.

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

**ALFALFA, COTTON, PEPPERMINT/SPEARMINT TOPS, PEANUT (INCLUDING PERENNIAL)[\*], SOYBEANS[\*], AND SUNFLOWER**

**TABLE 16. TANK MIX APPLICATION OF ARROW 2EC AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS IN ALFALFA, COTTON, PEPPERMINT/SPEARMINT TOPS, PEANUT (INCLUDING PERENNIAL), SOYBEANS, AND SUNFLOWER**

[\*NOT FOR USE IN CA]

PRODUCT <sup>(2)</sup>	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONC. <sup>(3)</sup> V/V	CROP					
	ANNUAL GRASSES	PERENNIAL GRASSES		Alfalf a <sup>(4)</sup>	Cotton	Mint <sup>(4,5)</sup>	Peanut	Soybean	Sunflower
Arrow 2EC + acephate	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to acephate label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to acephate label	1%		X	X	X	X	
Arrow 2EC + fenpropathrin	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to fenpropathrin label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to fenpropathrin label	1%		X		X		
Arrow 2EC + esfenvalerate	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to esfenvalerate label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to esfenvalerate label	1%					X	X

Arrow 2EC + lambda cyhalothrin	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to lambda cyhalothrin label	8 to 16 fl oz (0.125 – 0.25 lb ai) + Refer to lambda cyhalothrin label	1%					X	X
Arrow 2EC + lambda cyhalothrin	10 to 16 fl oz <sup>(7)</sup> (0.156 – 0.25 lb ai) + Refer to lambda cyhalothrin label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to lambda cyhalothrin label	1%	X					
Arrow 2EC + beta-cyfluthrin	10 to 16 fl oz <sup>(7)</sup> (0.156 – 0.25 lb ai) + Refer to beta-cyfluthrin label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to beta-cyfluthrin label	1%	X				X	
Arrow 2EC + dimethoate	10 to 16 fl oz <sup>(7)</sup> (0.156 – 0.25 lb ai) + Refer to dimethoate label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to dimethoate label	1%	X				X	
Arrow 2EC + chlorpyrifos	10 to 16 fl oz <sup>(7)</sup> (0.156 – 0.25 lb ai) + Refer to chlorpyrifos label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to chlorpyrifos label	1 to 2 pt <sup>(8)</sup>	X				X	
Arrow 2EC + permethrin	10 to 16 fl oz <sup>(7)</sup> (0.156 – 0.25 lb ai) + Refer to permethrin label	10 to 16 fl oz (0.156 – 0.25 lb ai) + Refer to permethrin label	1%	X				X	

- (1) If grass regrowth occurs, or an additional flush of new grass emerges, make a second application of Arrow 2EC alone (without a tank mix insecticide) according to the appropriate size and rate specifications.
- (2) Refer to the Arrow 2EC 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 can cause temporary phytotoxic symptoms on alfalfa and mint (peppermint and spearmint tops) foliage. Refer to the insecticide label for further information. It is suggested that prior to using any of these insecticide/herbicide tank mixtures, that a small area of the field be treated first and observations for crop injury be made prior to treating the whole field.
- (5) Use a rate of 6 to 8 fl oz /A Arrow 2EC (0.094 – 0.125 lb ai) for annual grass control in baby mint (peppermint and spearmint tops), minimum of 8 fl oz/A Arrow 2EC (0.125 lb ai) for annual grass control in established mint (peppermint and spearmint tops) and 8 to 16 fl oz/A Arrow 2EC (0.125 – 0.25 lb ai) for perennial grass control. Add Crop oil concentrate at the rate of 1.0 to 2.0 pts/A.
- (6) Insecticide tank mix use with acephate in soybeans is permitted only in a state having an approved Section 24(c) registration for acephate use in soybeans.
- (7) Use a rate of 6 to 8 fl oz /A Arrow 2EC (0.094 – 0.125 lb ai) for annual grass control in seedling alfalfa.

(8) For the Arrow 2EC plus clopyrifos tank mix, reduce the adjuvant rate down to 1.0 pt /A when the clopyrifos rate is 1.0 pt /A or higher.

**TABLE 17. DIRECTIONS FOR ROUNDUP READY® VOLUNTEER CORN CONTROL IN ROUNDUP READY SOYBEANS WITH ARROW 2EC TANK MIX  
[(NOT FOR USE IN CA)]**

Roundup Ready Volunteer Corn Height (inches)	ARROW 2EC Rate fl oz/A	Glyphosate <sup>(1)</sup> rate for formulations <u>with</u> built in adjuvant	Adjuvant
< 12	4 (0.063 lb ai)	Refer to glyphosate label	Non-ionic surfactant at 0.125 to 0.25% v/v plus ammonium sulfate at 8.5 to 17 lbs per 100 gals of carrier
12 to 18	5 (0.078 lb ai)		
18 to 24	6 (0.094 lb ai)		
Roundup Ready Volunteer Corn Height (inches)	ARROW 2EC Rate fl oz / A	Glyphosate <sup>(1)</sup> rate for formulations <u>without</u> built in adjuvant	Adjuvant
< 12	4 (0.063 lb ai)	Refer to glyphosate label	Crop oil concentrate at 1 pt/A plus ammonium sulfate @ 8.5 to 17 lbs per 100 gals of carrier
12 to 18	5 (0.078 lb ai)		
18 to 24	6 (0.094 lb ai)		

<sup>(1)</sup> Glyphosate formulation must be labeled for use on Roundup Ready soybean.

**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 specified 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 can sometimes result in reduced grass control. If regrowth occurs or an additional flush of new grass emerges, make a second application of Arrow 2EC as specified in the respective size and rate tables.

**Restrictions**

- **DO NOT** tank mix Arrow 2EC when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.
- This tank mix can 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 Arrow 2EC 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 including combinations of spray pressure and nozzle type that will result in fine particles (mist) that are likely to drift.

**FALLOW LAND  
DIRECTIONS FOR USE**

Arrow 2EC can 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 Arrow 2EC at 6 to 8 fl oz/A (0.094 – 0.125 lb ai) for annual grasses and 8 to 16 fl oz/A (0.125 – 0.25 lb ai) for perennial grasses. When both grass and broadleaf weeds are the target pest, Arrow 2EC can be tank mixed with 2,4-D ester or dicamba for broad spectrum control. When both annual and perennial grasses occur in the same field, use a minimum of 8 fl oz/A Arrow 2EC (0.125 lb ai).

**PRODUCT INFORMATION**

- Use a minimum spray volume of 5 gals/A for aerial applications and 15 gals/A for ground applications.
- Apply only to actively growing grasses when the first grass reaches the specified weed height as specified by the **DIRECTIONS FOR ANNUAL AND PERENNIAL GRASSES** section of this label.

- Annual grasses which emerge after the Arrow 2EC 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.

#### Restrictions

- **DO NOT** apply more than 8 fl oz (0.125 lb ai) Arrow 2EC per application to Annual Grasses and 16 fl oz (0.25 lb ai) Arrow 2EC per application to Perennial Grasses.
- **DO NOT** exceed 5 applications at the 6 fl oz rate (0.094 lb ai) use rate for Annual Grasses and **DO NOT** exceed 4 applications at the 8 fl oz (0.125 lb ai) rate for Perennial Grasses.
- For repeat applications make on a minimum of a 14 day interval.
- **DO NOT** apply more than 32 fl oz (0.500 lb ai) Arrow 2EC per acre per year.
- **DO NOT** plant any crop for 30 days after application unless Arrow 2EC is registered for use in that crop.
- **DO NOT** apply to grasses that have tillered, formed seedheads, or exceeded specified 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 the Arrow 2EC application.

#### ARROW 2EC IN TANK MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND

PRODUCT	APPLICATION RATES/ACRE <sup>(1)</sup>		CROP OIL CONCENTRATE <sup>(2)</sup>	
	ANNUAL GRASSES	PERENNIAL GRASSES	GROUND	AIR
Arrow 2EC + 2,4-D ester or dicamba	6 to 8 fl oz (0.094 – 0.125 lb ai) + Refer to 2,4-D ester label or See dicamba label for rates.	8 to 16 fl oz (0.125 – 0.25 lb ai)		1% v/v

<sup>(1)</sup> Refer to Arrow 2EC label for weed height and species control. Review dicamba and 2,4-D labels for crop restrictions, use rates, and weeds controlled.

<sup>(2)</sup> 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.

DIRECTIONS FOR GRASS SUPPRESSION IN NON-CROP AREAS WITH ARROW 2EC			
GRASS SPECIES	WEED STAGE	RATE FL OZ /ACRE	HIGH RATE
Annual and perennial grasses that exceed height claimed for control on height chart above.	Up to and including grasses in the seed head stage.	12 (0.188 lb ai)	16 (0.25 lb ai)
<b>Restriction:</b> <b>DO NOT</b> apply as part of a tank mix when applying Arrow 2EC for grass suppression. Add a crop oil concentrate at 1 qt/A. by ground to the finished spray volume.			

#### ARROW 2EC FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM-SEASON GRASS RESTORATION PROJECTS

PRODUCT	PRODUCT RATE	GRASS WEEDS CONTROLLED/SUPPRESSED		WEED STAGE
		COMMON NAME	SCIENTIFIC NAME	
Arrow 2EC	10 to 12 fl oz/A (0.156 – 0.188 lb ai/A)	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 in. (40 to 60% green-up)

**Adjuvant:** Arrow 2EC must be applied with crop oil concentrate at 1 qt/A, plus a spray grade ammonium sulfate at 2.5 to 4 lbs/A.

**Mixing Order:** Thoroughly mix spray grade ammonium sulfate in water, add Arrow 2EC, then add crop oil concentrate.

## SPECIAL APPLICATION INSTRUCTIONS

### Special Application 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% tall fescue green-up, prior to emergence of warm-season grasses. 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 using flat fan or hollow cone nozzles.

Apply only to fields that have warm-season grasses established for two years. Applications of Arrow 2EC to emerged warm-season grasses can cause injury.

Arrow 2EC applications are most effective if applied when average nighttime temperatures are consistently greater than or equal to 47 degrees Fahrenheit.

### Special Application Restrictions:

- **DO NOT** mow area for 2 weeks after the Arrow 2EC application.
- **DO NOT** use flood jet nozzles.
- **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 Arrow 2EC is registered for use in that crop.

## ARROW 2EC FOR THE SUPPRESSION OF TALL FESCUE SEEDHEADS IN NON-PRODUCING AGRICULTURAL AREAS

PRODUCT	PRODUCT RATE	SUPPRESSION	APPLICATION TIMING
Arrow 2EC	1½ to 2 fl oz/A (0.008 – 0.031 lb ai/A)	Tall Fescue SeedHeads ( <i>Festuca arundinacea</i> )	(50 to 90% Tall Fescue green-up)

**Restriction:** Arrow 2EC must be applied with crop oil concentrate at 1 qt/A plus a spray grade ammonium sulfate at 2.5 to 4 lbs/A.

**Mixing Order:** Thoroughly mix spray grade ammonium sulfate in water, add Arrow 2EC, then add crop oil concentrate.

## SPECIAL APPLICATION INSTRUCTIONS

### Special Application Precautions:

Apply at 50 to 90% tall fescue green-up. Use the Arrow 2EC rate if less tall fescue green matter is present.

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 using flat fan or hollow cone nozzles.

2,4-D ester can be added to this tank mix for broadleaf control (see 2,4-D ester label for weeds controlled).

### Special Application Restrictions

- **DO NOT** use flood nozzles.
- **DO NOT** mow area for 2 weeks after the Arrow 2EC application.
- **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 Arrow 2 EC is registered for use in that crop.

## DIRECTIONS FOR USE IN ORNAMENTALS

For ornamental plant uses, Arrow 2EC can be used to control labeled grass weeds in greenhouses, lathhouses, shadehouses, and around outdoor ornamentals, including nurseries, parks, roadside plantings, and structure landscapes.

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

### Restrictions:

- Arrow 2EC must not be applied to non-bearing fruit or nut crops which are grown for root stock.
- **DO NOT** apply 16 fl oz (0.25 lb ai) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- For repeat applications make on a minimum of a 14 day interval.
- **DO NOT** apply more than 32 fl oz (0.5 lb ai) per acre per year.

**IMPORTANT:** Arrow 2EC controls weeds in newly transplanted and established non-grassy ornamentals. Plant tolerance to Arrow 2EC 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, determine if herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of Arrow 2EC has investigated the safety factor to ornamental plants not listed on the label.

The following plants have shown a tolerance for Arrow 2EC applications:

**ORNAMENTAL TREES**

COMMON NAME	SCIENTIFIC NAME
Alder, Red	<i>Alnus rubra</i>
Ash	<i>Fraxinus</i> spp.
Basswood	<i>Tilia</i> spp.
Birch, European White	<i>Betula pendula</i>
Birch, River	<i>Betula nigra</i>
Birch, White	<i>Betula papyrifera</i>
Crabapple, Flowering	<i>Malus halliana</i>
Dogwood, Flowering	<i>Cornus florida</i>
Golden Chain Tree	<i>Laburnum anagyroides</i>
Maples	<i>Acer</i> spp.
Mulberry, White	<i>Morus alba</i>
Oaks	<i>Quercus</i> spp.
Olive, Wild	<i>Elaeagnus angustifolia</i>
Redbud, Eastern	<i>Cercis canadensis</i>
Sweet Gum, American	<i>Liquidambar styraciflua</i>

**GARDEN FLOWERS AND PLANTS**

COMMON NAME	SCIENTIFIC NAME
Ageratum	<i>Ageratum</i> spp.
Alyssum*, Sweet	<i>Lobularia maritima</i>
Asparagus Fern	<i>Asparagus setaceus</i>
Bleeding Heart	<i>Dicentra spectabilis</i>
Cast Iron Plant	<i>Aspidistra elatior</i>
Chrysanthemum	<i>Chrysanthemum</i> spp.
Cinquefoil	<i>Potentilla</i> spp.
Coleus	<i>Coleus</i> spp.
Coralbells	<i>Heuchera sanguinea</i>
Cranesbill	<i>Geranium</i> spp.
Dahlia	<i>Dahlia</i> spp.
Daisy, African	<i>Osteospermum fruticosum</i>
Daylily	<i>Hemerocallis</i> spp.
Dusty Miller	<i>Senecio cineraria</i>
Euonymus	<i>Euonymus</i> spp.
Gazania	<i>Gazania</i> spp.
Geranium, House	<i>Pelargonium hortorum</i>
Heather, False	<i>Cuphea hyssopifolia</i>
Hosta	<i>Hosta fortunei</i>
Iris	<i>Iris</i> spp.
Jasmine Tobacco	<i>Nicotiana alata</i>
Loosestrife	<i>Lythrum salicaria</i>
Marigold	<i>Tagetes</i> spp.
Partridgeberry	<i>Mitchella repens</i>
Petunia*	<i>Petunia hybrida</i>
Phlox	<i>Phlox</i> spp.
Pinks	<i>Dianthus</i> spp.
Portulaca	<i>Portulaca grandiflora</i>
Salvia	<i>Salvia</i> spp.
Saxifrage	<i>Saxifraga</i> spp.
Sedum	<i>Sedum</i> spp.
Selloum	<i>Philodendron selloum</i>
Snapdragon*	<i>Antirrhinum majus</i>
Sweet Flag	<i>Acorus gramineus</i>
Tickseed	<i>Coreopsis grandiflora</i>
Touch-Me-Not	<i>Impatiens</i> spp.

COMMON NAME	SCIENTIFIC NAME
Verbena	<i>Verbena</i> spp.
Violet	<i>Viola</i> spp.
Yarrow, Common	<i>Achillea millefolium</i>
Zinnia	<i>Zinnia elegans</i>

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

#### GROUND COVERS

COMMON NAME	SCIENTIFIC NAME
Bugleweed, Carpet	<i>Ajuga reptans</i>
Ivy, English	<i>Hedera helix</i>
Japanese Spurge	<i>Pachysandra terminalis</i>
Lilyturf	<i>Liriope muscari</i>
Moneywort	<i>Lysimachia nummularia</i>
Mondo Grass, White	<i>Ophiopogon jaburan</i>
Mondo Grass, Dwarf	<i>Ophiopogon japonicus</i>
Periwinkle, Lesser	<i>Vinca minor</i>

#### SHRUBS

COMMON NAME	SCIENTIFIC NAME
Abelia	<i>Abelia</i> spp.
Anise, Purple	<i>Illicium floridanum</i>
Aucuba	<i>Aucuba</i> spp.
Azalea*	<i>Rhododendron</i> spp.
Bamboo	<i>Bambusa</i> spp.
Barberry, Japanese	<i>Berberis thunbergii</i>
Barberry, Magellan	<i>Berberis buxifolia</i>
Bayberry	<i>Myrica pensylvanica</i>
Bottlebrush	<i>Callistemon citrinus</i>
Boxwood, Common	<i>Buxus sempervirens</i>
Camellia, Common	<i>Camellia japonica</i>
Candytuft	<i>Iberis sempervirens</i>
Cleyera	<i>Cleyera japonica</i>
Coralberry	<i>Ardisia crenata</i>
Crape Myrtle	<i>Lagerstroemia indica</i>
Coyote Brush	<i>Baccharis pilularis</i>
Fig, Creeping	<i>Ficus pumila</i>
Gardenia	<i>Gardenia</i> spp.
Holly	<i>Ilex</i> spp.
Honeysuckle	<i>Lonicera pileata</i>
Indian Hawthorn	<i>Raphiolepis indica</i>
Jasmine	<i>Jasminum</i> spp.
Jasmine, Asiatic	<i>Trachelospermum asiaticum</i>
Jasmine, Star	<i>Trachelospermum jasminoides</i>
Juniper	<i>Juniperus</i> spp.
Lantana	<i>Lantana</i> spp.
Nandina* Bamboo, Heavenly	<i>Nandina domestica</i>
Oleander, Common	<i>Nerium oleander</i>
Oregon Grape	<i>Mahonia aquifolium</i>
Photinia	<i>Photinia</i> spp.
Pittosporum	<i>Pittosporum</i> spp.
Podocarpus	<i>Podocarpus</i> spp.
Privet	<i>Ligustrum</i> spp.
Pyracantha	<i>Pyracantha</i> spp.
Rhododendron	<i>Rhododendron</i> spp.
Rose	<i>Rosa</i> spp.
Spiraea	<i>Spiraea bumalda</i>

COMMON NAME	SCIENTIFIC NAME
Sweet Olive	<i>Osmanthus fragrans</i>
Tea Olive	<i>Osmanthus fragrans</i>
Viburnum	<i>Viburnum tinus</i>
Wisteria	<i>Wisteria</i> spp.
Yellow Sage/Shrub Verbena	<i>Lantana camara</i>

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

#### DIRECTIONS FOR ANNUAL GRASSES IN ORNAMENTALS

- Apply only to actively growing grasses at specified weed heights.
- Apply when the first grass weed species in a mixed grass weed population reaches the specified growth state 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 <sup>(1)</sup>	HIGH RATE <sup>(2)</sup>
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Brome				
California	<i>Bromus carinatus</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Cheatgrass	<i>Bromus secalinus</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Downy	<i>Bromus tectorum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Ripgut	<i>Bromus diandrus</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	8 (0.125 lb ai)	16 (0.25 lb ai)
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Large	<i>Digitaria sanguinalis</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Southern	<i>Digitaria ciliaris</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Foxtail				
Giant	<i>Setaria faberii</i>	2 to 12	8 (0.125 lb ai)	16 (0.25 lb ai)
Green	<i>Setaria viridis</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Yellow	<i>Setaria glauca</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Foxtail Barley	<i>Hordeum jubatum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Goosegrass	<i>Eleusine indica</i>	2 to 6**	8 (0.125 lb ai)	16 (0.25 lb ai)
Itchgrass	<i>Rottboellia exaltata</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Junglerice	<i>Echinochloa colona</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Lovegrass (Stinkgrass)	<i>Eragrostis ciliaris</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	8 (0.125 lb ai)	16 (0.25 lb ai)
Red Rice	<i>Oryza sativa</i>	1 to 3	8 (0.125 lb ai)	16 (0.25 lb ai)
Ryegrass				
Hardy	<i>Lolium remotum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Italian	<i>Lolium multiflorum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	8 (0.125 lb ai)	16 (0.25 lb ai)
Shattercane	<i>Sorghum bicolor</i>	6 to 18	8 (0.125 lb ai)	16 (0.25 lb ai)
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Sprangletop				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Mexican	<i>Leptochloa uninervia</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Red	<i>Leptochloa filiformis</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Texas Panicum	<i>Panicum texanum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Volunteer Cereals				
Barley	<i>Hordeum vulgare</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Oats	<i>Avena sativa</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Rye	<i>Secale cereale</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)

GRASS SPECIES	SCIENTIFIC NAME	WEED* HEIGHT INCHES	RATE FL OZ/ACRE <sup>(1)</sup>	HIGH RATE <sup>(2)</sup>
Wheat	<i>Triticum aestivum</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Volunteer Corn	<i>Zea mays</i>	4 to 12	6 (0.094 lb ai)	8 (0.125 lb ai)
Volunteer Corn	<i>Zea mays</i>	12 to 24	8 (0.125 lb ai)	16 (0.25 lb ai)
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	8 (0.125 lb ai)	16 (0.25 lb ai)
Wild Oats	<i>Avena fatua</i>	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	8 (0.125 lb ai)	16 (0.25 lb ai)
Witchgrass	<i>Panicum capillare</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)

\*Occurs between 3-leaf stage and tillering.

\*\*Length of lateral growth.

(1) 8 fl oz/A (0.125 lb ai)=approximately 0.2 fl oz/1000 sq ft

(2) 16 fl oz/A (0.25 lb ai)=approximately 0.4 fl oz/1000 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).

#### DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH ARROW 2EC IN ORNAMENTALS

GRASS SPECIES	WEED STAGE	RATE FL OZ ACRE	HIGH RATE
ANNUAL BLUEGRASS ( <i>Poa annua</i> )	to 4-leaf	6 (0.094 lb ai)	16 (0.25 lb ai)

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).

#### Restrictions:

- **DO NOT** apply more than 16 fl oz (0.25 lb ai) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- For repeat applications make on a minimum of a 14 day interval
- **DO NOT** apply more than 32 fl oz (0.5 lb ai) per acre per year.

#### DIRECTIONS FOR PERENNIAL GRASSES

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

#### Restrictions

- **DO NOT** apply more than 16 fl oz (0.25 lb ai) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- For repeat applications make on a minimum of a 14 day interval
- **DO NOT** apply more than 32 fl oz (0.5 lb ai) per acre per year.

GRASS SPECIES	WEED HEIGHT INCHES	RATE FL OZ/ACRE <sup>(1)</sup>	HIGH RATE <sup>(2)</sup>
<b>Bermudagrass (<i>Cynodon dactylon</i>)</b>			
First Application	3 (or up to 6" runners)	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	3 (or up to 6" runners)	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Foxtail Barley (<i>Hordeum jubatum</i>)</b>			
First Application	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	2 to 6	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Quackgrass (<i>Agropyron repens</i>)</b>			
First Application	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
<b>Rhizome Johnsongrass (<i>Sorghum halepense</i>)</b>			
First Application	12 to 24	8 (0.125 lb ai)	16 (0.25 lb ai)

Repeat Application(s) (if regrowth occurs)	6 to 18	6 (0.094 lb ai)	8 (0.125 lb ai)
<b>Wiresstem Muhy (<i>Muhlenbergia frondosa</i>)</b>			
First Application	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)
Repeat Application(s) (if regrowth occurs)	4 to 8	8 (0.125 lb ai)	16 (0.25 lb ai)

(1) 8 fl oz/A=approximately 0.2 fl oz/1000 sq ft

(2) 16 fl oz/A=approximately 0.4 fl oz/1000 sq ft

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

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal or cleaning of equipment. Open dumping is prohibited.

**STORAGE:** Keep pesticide in original container. **DO NOT** put concentrate or dilute into food or drink containers. Store in cool, dry place. **DO NOT** store diluted spray.

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

### CONTAINER HANDLING:

**Nonrefillable Container (five gallons or less):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Nonrefillable Container (greater than five gallons):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Refillable Container (greater than 55 gallons):** Refillable container. Refill this container with clethodim only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. For final disposal, offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

## LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

ADAMA warrants that at the time of delivery, this product will conform to its chemical description on the label, that it is reasonably fit for the purposes of formulation referred to in the Directions for Use, and that the product will be delivered free from any lawful security interest, lien or encumbrance. This is the only warranty made on this product.

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