



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 1, 2021

Rebecca Clemmer
Regional Regulatory Manager
UPL NA Inc.,
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Registration Review Label Mitigation for CLETHODIM
Product Name: ARY 0411-004 HERBICIDE
EPA Registration Number: 70506-500
Application Date: 04/30/2018
Decision Number: 561156

Dear Ms. Clemmer:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Clethodim Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling 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 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 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 CFR 152.3.

If you have any questions about this letter, please contact Srijana Shrestha by phone at 202-566-2329, or via email at shrestha.srijana@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Linda Arrington', with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure: Stamped Label

ACCEPTED

Dec 01, 2021

[Text in brackets is optional]

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 70506-500

CLETHODIM**GROUP****1****HERBICIDE**

ARY 0411-004 HERBICIDE

[ALTERNATE BRAND NAMES: SHADOW® 3EC HERBICIDE, TRIZENTA™ 3EC
HERBICIDE]

ACTIVE INGREDIENT:**% BY WT.**

Clethodim, (E)-2[1-[[[(3-chloro-2-propenyl)oxy]limino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one 36.7%

OTHER INGREDIENTS*: 63.3%

TOTAL: 100.0%

* Contains Petroleum Distillates

Contains: 3.0 lb Clethodim per gallon

KEEP OUT OF REACH OF CHILDREN**CAUTION / PRECAUCIÓN**

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

See [front][back][side] Panel for First Aid Instructions and [Leaflet][Booklet] for Complete
Precautionary Statements and Directions for Use.

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice
<p>NOTE TO PHYSICIAN: Contains petroleum distillates. Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid, which can cause aspiration pneumonitis.</p>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p>FOR 24- HOUR MEDICAL EMERGENCY ASSISTANCE CALL Rocky Mountain Poison and Drug Safety: 1-866-673-6671.</p> <p>FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure, or accident) CALL CHEMTREC: 1-800-424-9300 or +1-703-527-3887.</p>	

For Product Use Information Call 1-866-761-9397

EPA Reg. No. 70506-500

xxxxxxV001

[Batch Code will be placed on the container.]

UPL NA Inc.

630 Freedom Business Center, Suite 402

King of Prussia, PA 19406

EPA Est. No.:

NET CONTENTS:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Chemical-resistant gloves made of any waterproof material (nitrile rubber \geq 14 mils, butyl rubber \geq 14 mils, viton \geq 14 mils, and/or barrier laminate);
- Shoes plus socks; and
- Protective eyewear.

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

ENGINEERING CONTROLS STATEMENTS

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands 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 change into 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 STATEMENT

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.

Important.

Read these entire **DIRECTIONS FOR USE** and **Warranty and Disclaimer Statement** before using **ARY 0411-004 HERBICIDE**.

PHYSICAL OR CHEMICAL HAZARDS

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

DIRECTIONS FOR USE

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

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.

[Language in brackets within the **DIRECTIONS FOR USE** is optional text specific to the State of California or New York.]

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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

- Coveralls;
- Chemical-resistant gloves made of any waterproof material (nitrile rubber \geq 14 mils, butyl rubber \geq 14 mils, viton \geq 14 mils, and/or barrier laminate);
- Shoes plus socks;
- Protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

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

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

PRODUCT INFORMATION

ARY 0411-004 Herbicide is a selective postemergence herbicide for control of annual and perennial grasses. **ARY 0411-004 Herbicide** does not control sedges or broadleaf weeds. **ARY 0411-004 Herbicide** is a systemic herbicide which is translocated from the treated foliage to the growing points

of the leaves, shoots and roots. Uptake into the plant is primarily through its leaves. Thorough coverage of the foliage is important for consistent grass control. The treated grass weeds show a reduction in vigor and growth. Early chlorosis/necrosis of younger plant tissue is followed by a progressive collapse of the remaining foliage. Depending on grass species treated and environmental conditions, symptoms will generally be observed in 7 to 14 days after application. Avoid contact of this product with desirable grass crops, such as corn, rice, sorghum, small grains, or turf as these and other grass crops will be injured or killed.

Herbicide Resistance Management

For resistance management, **ARY 0411-004 Herbicide** is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to **ARY 0411-004 Herbicide** and other Group 1 herbicides. Weed species with acquired resistance to Group 2 may eventually dominate the weed population if Group 2 herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **ARY 0411-004 Herbicide** or other Group 1 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field. Whenever possible incorporate multiple weed control practices including mechanical cultivation, biological management practices, and crop rotation.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g. higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout fields before application to identify the weed species present and their growth stage to determine if the intended application will be effective. Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action (MOA), if available. Treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes. To the extent possible do not allow weed escapes to produce seeds, roots, or tubers.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed. Contact UPL NA at 1-800-438-6071.

CROPS AND USES

ARY 0411-004 Herbicide is not recommended for use on vegetable crops being grown for seed production unless specific instructions are included in this labeling.

This product is for use on the following crops and uses:

Alfalfa, Asparagus, Canola*, Clover**, Corn (Field)***, Cotton, Flax*, Garlic, Hops, Mint, Mustard Seed*, Peach, Peanuts, Safflower, Sesame, Soybeans, Strawberry, Sunflower, and

Root vegetables Crop Group Subgroup 1B [Beets (Garden), Burdock (edible), Carrot, Celeriac, Chervil (Turnip-rooted), Chicory, Ginseng, Horseradish, Parsley (Turnip-rooted), Parsnip, Radish, Radish (Oriental), Rutabaga, Salsify (Black and Spanish), Skirret, Turnip],

Root vegetables Crop Group Subgroup 1C [Arracacha, Arrowroot, Artichoke* (Globe, Chinese and Jerusalem), Canna (Edible), Cassava (Bitter and Sweet), Chayote (Root), Chufa, Dasheen, Ginger, Leren, Potato, Sweet Potato, Tanier, Tumeric, Turnip, Yam (Bean and True)],

Leaves of Root and Tuber Vegetables Crop Group 2 [Beet (Garden and Sugar), Burdock (edible), Carrot, Cassava (Bitter and Sweet), Celeriac, Chervil (Turnip-rooted), Chicory, Dasheen (Taro), Parsnip, Radish, Radish (Oriental), Rutabaga, Salsify (Black), Sweet Potato, Tanier (Cocovam), Turnip, Yam (True)],

Bulb Vegetables Crop Group 3 [Garlic (Bulb and Great head (Elephant)), Leek, Onion (Dry Bulb and Green, Welsh), and Shallot],

Leafy Greens Crop Group Subgroup 4A [Amaranth, Arugula, Chervil, Chrysanthemum (Edible leaved and Garland), Corn Salad, Cress (Garden and Upland), Dandelion, Dock, Endive, Lettuce, Orach, Parsley, Purslane (Garden and Winter), Radicchio (Red Chicory), Spinach (New Zealand and Vine)],

Leafy Petioles Crop Group Subgroup 4B [Cardoon, Celery, Celery (Chinese), Celtuce, Fennel (Florence), Rhubarb, Swiss Chard],

Head and Stem Brassica Crop Group Subgroup 5A [Broccoli, Broccoli (Chinese), Brussels Sprouts, Cabbage, Cabbage (Chinese (napa) and Chinese Mustard), Cauliflower, Cavalo Broccolo, Kohlrabi],

Leafy Brassica Greens Crop Group Subgroup 5B [Broccoli Raab, Cabbage (Bok Choy), Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens],

Legume Vegetables Crop Group 6 (except soybeans) [Bean (*Lupinus* spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna* spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava bean) (*Vicia faba*), Chickpea (garbanzo bean) (*Cicer arietinum*), Guar (*Cyamopsis tetragonoloba*), Jackbean (*Canavalia ensiformis*), Lablab bean (hyacinth bean) (*Lablab purpureus*), Lentil (*Lens esculenta*), Pea (*Pisum* spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea), Pigeon pea (*Cajanus cajan*), and Sword bean (*Canavalia gladiata*)],

Fruiting Vegetables (Except Cucurbits) Crop Group 8 [Eggplant, Groundcherry, Pepino, Pepper including bell pepper, chili pepper, cooking pepper, pimento and sweet pepper, Tomatillo, and Tomato],

Cucurbit Vegetables Crop Group Melon Subgroup 9A [Citron Melon, Muskmelon, and Watermelon],

Cucurbit Vegetable Crop Group Squash/Cucumber Subgroup 9B [Chayote (fruit), Chinese Waxgourd, Cucumber, Gherkin, Gourd (Edible), *Momordica* spp., Pumpkin, Squash (Summer and Winter)],

Berry and Small Fruit Crop Group Caneberry Subgroup 13-07A* [Blackberry, Loganberry, Raspberry (Red and Black), Wild Raspberry, cultivars, varieties and/or hybrids of these],

Berry and Small Fruit Crop Group Bushberry Subgroup 13-07B* [Aronia Berry, Blueberry (Highbush and Lowbush), Currant (Black, Buffalo, and Red), Guava (Chilean), Elderberry, European Barberry, Gooseberry, Cranberry (Highbush), Honeysuckle (Edible), Huckleberry, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, Sea Buckthorn, Cultivars, varieties and/or hybrids of these],

Herbs and Spice Crop Group, Herbs Subgroup 19A [Angelica, Balm, Basil, Borage, Burnet, Chamomile, Catnip, Chervil (Dried), Chive, Chive (Chinese and Clary), Coriander (Leaf), Costmary, Cilantro (Leaf), Curry, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (Leaf), Marigold, Marjoram (*Origanum* spp.), Nasturtium, Parsley (Dried), Pennyroyal, Rosemary, Rue, Sage, Savory (Summer and Winter), Sweet Bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, and Wormwood].

* Not registered for use in California.

** For use on clover grown in the states of Idaho, Oregon and Washington only.

*** **ARY 0411-004 Herbicide** is for use to control existing stands of field corn.

PRECAUTIONS

- Always read and follow label directions of all products. Always follow the most restrictive label language for all products whether used alone or in a tank-mix. The most restrictive label language of any product used applies in tank-mixtures, including all crop rotational and other crop restrictions.
- This product is not recommended for use on vegetable crops being grown for seed production unless specific use directions are provided.
- While all the vegetable crops on this label have been tested and are tolerant to **ARY 0411-004 Herbicide**, not all specialty varieties of these crops have been tested. Before applying **ARY 0411-004 Herbicide** to specialty varieties of vegetable crops on this label, it is advised that 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.
- Grass crops such as corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to **ARY 0411-004 Herbicide**.
- Optimal perennial grass control can be obtained if rhizomes or stolons are cut up by preplant tillage practices (disking, plowing, etc.) to stimulate maximum emergence of grass shoots. Cultural practices, such as continuous no-tillage in which the perennial grass rhizomes or stolons are not cut up, result in a very staggered, non-uniform weed emergence. No fewer than two (2) **ARY 0411-004 Herbicide** applications per season per year are recommended at the appropriate weed-growth stage rate under continuous no-till conditions, due to this non-uniform weed emergence.
- Tank-mixes of **ARY 0411-004 Herbicide** and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of this product may be necessary.

USE RESTRICTIONS

- Maximum annual application rate is 1.04 lbs ai/A.
- Maximum number of applications is 4.
- Aerial applications for all tree fruits and tree nuts uses are prohibited.
- Do not plant any crop for 30 days after application unless **ARY 0411-004 Herbicide** is registered for use on that crop.
- Do not apply if rain is expected within 1 hour of application, as control may be unsatisfactory.
- [Application in Nassau and Suffolk Counties of New York State is restricted to no more than 10.67 fl oz of **ARY 0411-004 Herbicide** (0.25 lb ai) per acre per season.]
- Do not apply under conditions of stress. Applying **ARY 0411-004 Herbicide** under conditions that do not promote active grass growth will reduce herbicide effectiveness. These conditions include, drought, excessive water, low humidity and extremes in temperature, and grasses either partially controlled or stunted from prior pesticide applications. Grasses under these kinds of stressful conditions will not absorb and translocate **ARY 0411-004 Herbicide** effectively, and will be less susceptible to herbicide activity.
- Do not apply a postemergence broadleaf herbicide within one day following application of **ARY 0411-004 Herbicide** or reduced grass control may result.

MIXING INSTRUCTIONS

1. Fill clean spray-tank 1/2 to 2/3 of desired level with clean water. While agitating, add the correct amount of **ARY 0411-004 Herbicide**, making sure that agitation makes a rippling or rolling action on the water surface.
2. When tank-mixing this product 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 operation.

3. Add any required adjuvants (crop oil concentrate, nonionic surfactant and/or nitrogen solution).
4. Fill spray-tank to desired level with water.

Continue agitation until all spray solution has been applied.

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

APPLICATION INFORMATION

Make applications of **ARY 0411-004 Herbicide** postemergence to actively growing grasses according to the rate table recommendations. Applications to grass plants exceeding recommended growth stages could result in unsatisfactory control.

When irrigation is used to supplement limited rainfall in arid regions, apply **ARY 0411-004 Herbicide** as soon as possible, after an irrigation (within 7 days). A second application of this product will generally provide more effective control of perennial grass weed than a single application in arid regions. Apply a second application to actively growing grass 2 to 3 weeks after emergence of new growth.

Cultivation of treated grasses 7 days prior to or within 7 days after application of this product could reduce weed control.

GROUND APPLICATION

To ensure complete coverage, it is essential to use sufficient spray volumes and pressure. Use a minimum of 5 gallons and a maximum of 40 gallons of spray solution per acre. Ten gallons per acre can improve grass control under certain conditions such as: 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. Set spray pressures to reflect a minimum of 30 psi and a maximum of 60 psi at the nozzle. Do not use flood nozzles.

Spot Treatment

Mix 1/3% to 2/3% (0.44 oz to 0.85 oz per gal) product when using hand sprayers or high-volume sprayers utilizing hand guns. While not allowing runoff of spray solution, apply to wet vegetation.

NOTE: If **ARY 0411-004 Herbicide** is applied as a spot treatment, do not exceed the maximum rate allowed on a "per acre" basis or crop injury could occur. Care must be taken when **ARY 0411-004 Herbicide** is applied as a spot treatment to onions, garlic, shallots, or non-bearing food crops or crop injury could occur.

AERIAL APPLICATION

Use a minimum of 3 gallons of spray solution per acre unless otherwise directed in this label. If grass or crop foliage becomes dense, increase spray volumes up to 10 gallons.

For onions (dry bulbs), garlic or shallots (dry bulbs): do not exceed 5.33 fl oz/A in a single application when applying by air. Do not exceed 2 applications per season on garlic and shallot. In California do not exceed 2 applications per season on onion. Apply a minimum of 20 gallons of spray solution per acre when applying by air to onions, garlic or shallots in the state of California. In states other than California, make air applications to onions, garlic, and shallots in a minimum of 10 gallons per acre.

NOTE: Crop injury can occur when this product is applied to onions, garlic or shallots with aerial equipment.

SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.

- 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 airplane or 75% of the rotor blade diameter for helicopters.
- Applicators must use 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 the 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.

SPRAY DRIFT MANAGEMENT

In addition to the above **SPRAY DRIFT** table and **SPRAY DRIFT ADVISORIES**, the following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees.

When applying **ARY 0411-004 Herbicide** in a tank-mix with other herbicides (e.g. 2,4-D, bromoxynil, MCPA, and sulfonyleurea herbicides) in eastern Washington, observe all applicable Washington State Department of Agriculture herbicide rules.

CHEMIGATION (SPRINKLER IRRIGATION APPLICATION)

ONIONS (dry bulbs) and GARLIC ONLY

May be applied to onions and garlic by sprinkler irrigation systems.

Only apply to onions and garlic using chemigation.

Do not apply by chemigation to any other crop other than Onions and Garlic.

Do not apply this product by chemigation in the states of Idaho, Montana, Oregon, and Washington.

Make application of **ARY 0411-004 Herbicide** in 0.1 to 0.2 acre-inch of water, either at the end of a regular irrigation set or as a separate application not associated with a regular irrigation using the least amount of water that provides proper distribution and coverage. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Use a metering device to inject the **ARY 0411-004 Herbicide** into the irrigation water at a constant flow. Constant agitation must be maintained in the chemical supply tank during the entire period of herbicide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period.

Do not apply ARY 0411-004 Herbicide 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 regular serves an average of at least 25 individuals daily at least 60 days out of the year.

PRECAUTIONS

- Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move system(s). Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

- If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
- A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

RESTRICTIONS

- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

USE RATES AND APPLICATION PROCEDURES

ADJUVANT OR CROP OIL CONCENTRATE RECOMMENDATIONS

ARY 0411-004 Herbicide does not contain an adjuvant system. For its activation adjuvants are required for control. Crop oil concentrate (COC) provides the most consistent activation of **ARY 0411-004 Herbicide**. Crop oil concentrates can cause crop injury with certain tank-mix partners or on sensitive crops. Under these circumstances non-ionic surfactants (NIS) can be used in replace of crop oil concentrate. Reduced weed control may result from use of non-ionic surfactant. Under drought conditions methylated seed oil adjuvants can be used in replacement of COC. Methylated seed oils can increase crop injury potential and care should be taken when considering its use. Ammonium sulfate (AMS) or urea-ammonium nitrate (UAN) can improve control of hard to control grasses and help overcome potential antagonism from tank-mix partners. The use of AMS or UAN is only allowed on specified crops. Follow the **ARY 0411-004 HERBICIDE USE RATES / RESTRICTIONS / LIMITATIONS** table for guidelines. Follow the table below for adjuvant use rates:

Specified Adjuvant use with ARY 0411-004 Herbicide		
Adjuvant	Adjuvant Use Rate	Comment
COC (Crop Oil Concentrate) OR	1% v/v (1 gal/100 gallon finished spray) or 1 Qt/A	Use with ARY 0411-004 Herbicide in most use patterns other than the listed directly below
MSO (Methylated Seed Oil) OR	1% v/v (1 gal/100 gallon finished spray) or 1.5 pt/A	Use for improved control under drought conditions or other weed stress conditions. MSO can

		increase injury with some tank-mix partners
NIS (Non-ionic surfactant)	0.25 - 0.5% v/v (1-2 qt/100 gallon finished spray)	Use when tank-mix partners or crop sensitivity limit the use of oil adjuvants. Grass control from ARY 0411-004 Herbicide will be reduced.
Nitrogen Fertilizer Adjuvant¹	Adjuvant Use Rate	Comment
Ammonium Sulfate (AMS) OR	1 - 4 lb/A or 8.5 - 17 lb/100 gallons of spray solution	Use for improved control of difficult grass species. AMS is not to be used on all crops.
28-32% Urea Ammonium Nitrate (UAN)	1 - 2 Qt/A	Use when a source of AMS is not available.
¹ The addition of liquid fertilizer is not recommended for the following crops: Artichoke, Asparagus, Berry and small fruit crops; Bushberry, Caneberry, Carrot, Cranberry, Cucurbits, Fruiting Vegetables (except Tomato), Garden Beet, Garlic, Head & Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Leek, Mustard Seed, Non-Bearing Food Crops, Onion (Dry Bulb), Peach, Radish, Root Vegetables, Sesame, Shallots (Dry Bulb), Strawberry, Tomato, and Root and Tuber Leaves.		

The use of adjuvants can increase crop injury of tank-mix partners. Consult the tank-mix partner label for further guidance.

When an adjuvant is to be used with this product, UPL NA Inc. recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

APPLICATION RATES BY CROP

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Alfalfa Established including: Sainfoin Holy Clover Birdsfoot trefoil Alfalfa Seedling	15 days before grazing, feeding or harvesting (cutting) for forage or hay. Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. This product can be applied to seedling or established alfalfa grown for seed.
Artichoke* (Globe)	5 day PHI Maintain a 14-day interval for repeat applications.	4-5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Asparagus	1 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Beans ^(A), Dry Shelled including: Bean (<i>Lupinus</i> spp.) Grain Sweet White White Sweet Bean (<i>Phaseolus</i> spp.) Field Kidney Lima (dry) Navy Pinto Runner Snap Tepary Wax Bean (<i>Vigna</i> spp.) Adzuki Asparagus Blackeyed Pea Catjang Chinese longbean Cowpea Crowder Pea Moth Mung Rice Southern Pea Urd Yardlong Broad (dry) Chickpea (garbanzo) Guar Jackbean Lablab Sword	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Bean ^(A), Succulent including: Bean (<i>Phaseolus</i> spp.) Broad Bean (succulent) Lima (dry) Bean (<i>Vigna</i> spp.) Black-eyed Pea Cowpea Southern Pea	21 day PHI	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: AMS 2.5 - 4 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than one (1) application per acre per season.
Beet, Garden	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Beet, Sugar	40 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Berry and Small Fruit Crops; Bushberry* including (for Cranberry refer to the Cranberry specific crop information): Aronia Berry Blueberry (Highbush) Guava, Chilean Currant, Black Currant, Buffalo Currant, Native Currant, Red Elderberry European Barberry Gooseberry Honeysuckle Edible Huckleberry Jostaberry Juneberry Lingonberry Salal Sea Buckthorn	14 day PHI Maintain a 14-day interval for repeat applications.	4 - 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not apply for Bushberry grown for root stock Direct the application towards the base of the plant to avoid contact with leaf tissue. Contact with the upper portions of the plant can result in crop injury.
Caneberry * including: Blackberry Loganberry Raspberry Black Raspberry Red Raspberry	7 day PHI Maintain a 14-day interval for repeat applications.	4 - 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not apply for Caneberry grown for root stock Direct the application towards the base of the plant to avoid contact with leaf tissue. Contact with the upper portions of the plant can result in crop injury.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Canola*	70 day PHI	2.67 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply after crop has begun bolting. Do not exceed 5.33 fl oz/A in a season. Crop injury could occur when this product is applied during the bloom period
Carrot	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Clover	15 day PHI before grazing, feeding, or harvesting (cutting) for forage or hay. Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5-4 lb/A or 8.5- 17.0 lb/100 gallons of spray solution	Do not exceed 10.67 fl oz/A in a season. For use on clover grown in the states of Idaho, Oregon and Washington only.
Cotton	60 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not graze treated fields or feed treated forage or hay to livestock.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Cranberry	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not apply between the “hook” stage and full fruit set.
Cucurbits ^(A), including: Chayote (fruit) Chinese Wax Gourd Citron Melon Cucumber Gherkin Gourd, Edible Muskmelons (all) including: Cantaloupes Honeydew Melon Pumpkin Squash (all) Watermelon	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Fallow Land (and other non-producing agricultural areas) Non-Crop or Non-Planted areas	N/A Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not plant any crop for 30 days following application unless clethodim is registered for use on that crop. See Non-Crop or Non-Planted Areas section for additional information.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Flax*	60 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 10.67 fl oz/A per season. Make application prior to bloom. If applied during bloom, crop injury could occur.
Fruiting Vegetables ^(A) (except Cucurbits) (for Tomatoes refer to Tomato specific crop information) including: Eggplant Groundcherry Pepino Peppers (all) Tomatillo	20 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Garlic Bulb Great head (elephant) Leek Onions (Dry Bulbs Only) Shallots (Dry Bulbs Only)	45 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz For ground application do not exceed 5.33 fl oz/A in a single application to garlic or shallots. For aerial application do not exceed 5.33 fl oz/A in a single application to onion garlic and shallots.	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	California only: do not apply until the crop has at least two full leaves. Minimum 20 gals/A spray volume by ground in entire U.S. Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. See Spot Application and Aerial Application sections for additional information and restrictions.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Leek Onion (Green only) Shallot (Green only)	14 day PHI Maintain a 14- day interval for repeat applications	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application.
Head & Stem Brassica Vegetables ^(A), including: Broccoli (Chinese) Brussels Sprouts Cabbage (Chinese and Chinese Mustard) Cauliflower Cavalo Broccolo Kohlrabi	30 day PHI Maintain a 14- day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Herbs ^(A) including: Angelica Balm Basil Borage Burnet Chamomile Catnip Chervil, (dried) Chive Chinese Chive Chinese Clary Coriander (leaf) Costmary Cilantro (leaf) Curry (leaf) Dill (dillweed) Horehound Hyssop Lavender Lemongrass 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	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. This product has not been tested on all herbs, and herb varieties. It is the responsibility of the user to test this product on a small portion of the crop to be treated before treating the entire field. Verify crop tolerance to this product on a small area of the herb crop, at the desired rate. If no crop response is evident seven (7) days after treatment, this product may be used on the entire field at the same rate tested and with the same crop oil used in the tolerance test.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Hops	21 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Leaf Petioles ^(A) including: Cardoon Celery Chinese Celery Celtuce Fennel (Florence) Rhubarb Swiss chard	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Leafy Brassica Greens ^(A), including: Broccoli Raab Cabbage, Chinese (Bok choy) Collards Kale Mizuna Mustard Greens Mustard Spinach Rape Greens	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Leafy Greens ^(A) including: Amaranth Chinese Spinach Leafy Amaranth Tampala Arugula (roquette) Chervil Chrysanthemum, Edible-leaved Garland Corn Salad Cress Garden Upland Dandelion Dock (sorrel) Endive (escarole) Lettuce (head and leaf) Orach Parsley Purslane Garden Winter Radicchio (red chicory), Spinach New Zealand Vine	14 day PHI Maintain a 14- day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Legume Vegetables, Edible Podded ^(A) including: Bean (<i>Phaseolus</i> spp.) Runner Snap Wax Bean (<i>Vigna</i> spp.) Asparagus Chinese Longbean Moth Yardlong Jackbean Pea (<i>Pisum</i> spp.) Dwarf Edible-pod Snow Sugar Snap Pigeon Sword Bean	21 day PHI	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 5.33 fl oz/A in a single application. Do not apply more than one (1) application per acre per season. For peas apply before bloom, but no later than 21 days before harvest.
Lentils	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Mint	21 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Mustard Seed*	75 day PHI Maintain a 14-day interval for repeat applications.	2.67 – 4.0 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 10.67 fl oz in a season. Do not apply after crop has begun bolting. If applied during the bloom period, crop injury could occur.
Non-Bearing Food Crops	N/A Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: not recommended due to injury to flowers and foliage. Use a non-ionic surfactant (NIS) at 0.25% v/v	Sugar Maples cannot be tapped for syrup within one year of application. Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. See Spot Application and Aerial Application sections for additional information and restrictions. See Non-bearing Food Crops section for specific use sites.
Pea, Dry Shelled^(A) including: Pea (<i>Pisum</i> spp.) Field Pigeon	30 day PHI For peas apply before bloom, but no later than 30 days before harvest.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 5.33 fl oz/A in a single application. Do not apply more than one (1) application per acre per season. Applications of this product to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Pea, Succulent Shelled^(A) including: Pea (<i>Pisum</i> spp.) Dwarf Edible-pod English Garden Green Pigeon Snow Sugar Snap Sword	21 day PHI For peas apply before bloom, but no later than 21 days before harvest.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution.	Do not apply more than 5.33 fl oz/A in a single application. Do not apply more than one (1) application per acre per season. Applications of this product to peas during the bloom period could result in severe crop injury, including loss of yield and delayed maturity.
Peach	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not apply for Peach grown for root stock Direct the application towards the base of the plant to avoid contact with leaf tissue. Contact with the upper portions of the plant can result in crop injury.
Peanut (including perennial)	40 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. For Florida Perennial peanuts do not apply more than 21.33 fl oz/A per year.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Potato	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Radish Radish (Oriental)	15 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 10.67 fl oz/A per season.
Root Vegetables ^(A) (for Carrot and Radish, refer to Carrot and Radish specific crop information), including: Burdock (edible) Celeriac Chervil (Turnip-rooted) Chicory Ginseng Horseradish Parsley (Turnip-rooted) Parsnip Rutabaga Salsify Black Spanish Skirret Turnip	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Safflower	70 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 10.67 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Sesame	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not apply during flowering.
Soybean	60 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season. Do not graze treated fields or feed treated forage or hay to livestock.
Strawberry	4 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.3 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Sunflower	70 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Sweet Potato, Yam and other tuberous and corm vegetables ^(A) (for Potato, refer to Potato specific crop information), including: Arracacha Arrowroot Artichoke* Chinese Jerusalem Canna Cassava Bitter Sweet Chayote Chufa Dasheen Ginger Leren Sweet Potato Tanier Tumeric Turnip Yam	30 day PHI Maintain a 14-day interval for repeat applications.	4 – 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: 2.5 - 4.0 lb/A or 8.5 - 17.0 lb/100 gallons of spray solution	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
Tomato	20 day PHI Maintain a 14-day interval for repeat applications.	4 - 10.67 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 10.67 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.

ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS				
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	CROP OIL CONCENTRATE (COC) and AMMONIUM SULFATE (AMS)	SPECIAL USE INSTRUCTIONS
Root and Tuber Leaves (for Beets, Carrots, and Radish, refer to Beets, Carrot and Radish specific crop information) Burdock (edible) Cassava; bitter and sweet Celeriac Chervil Chicory Dasheen Parsnip Rutabaga Salsify (Black) Sweet potato Tanier Turnip Yam (True)	14 day PHI Maintain a 14-day interval for repeat applications.	4 – 5.33 fl oz	COC: 1% v/v or 1 qt/A by ground. 1% v/v or 1 pt/A by air. AMS: None	Do not apply more than 5.33 fl oz/A per application. Do not apply more than 21.33 fl oz/A per season.
N/A – Not Applicable ^ Refer to Crops and Uses section of this label. * Not registered for use in California.				

ATTENTION

Plant tolerance to **ARY 0411-004 Herbicide** at labeled rates has been found to be acceptable for the indicated genera and species listed below. Due to variability within species, crop growth stage, environmental conditions, and application techniques, it is recommended that the user determine if the herbicide can be used safely on a few plants prior to widespread application. Neither the seller nor the manufacturer of **ARY 0411-004 Herbicide** has investigated the safety factor to plants not listed on this label.

NON-BEARING FOOD CROPS

DO NOT APPLY ARY 0411-004 HERBICIDE TO NON-BEARING FRUIT OR NUT CROPS GROWN FOR ROOT STOCK.

If **ARY 0411-004 Herbicide** is improperly applied, crop injury to non-bearing fruit and nut crops can occur. Do not apply **ARY 0411-004 Herbicide** directly over the top of these plant types. Rather, direct the spray at the base of the plant where grassy weeds are growing near the ground.

Non-bearing fruit and nut crops are plants, which will not bear fruit or nuts for at least one year following an application of **ARY 0411-004 Herbicide**.

NON-BEARING FOOD CROPS

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 fruit	<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 fruit	<i>Prunus</i> spp.
Strawberries	<i>Fragaria</i> spp.
Tree nuts	
Almond	<i>Prunus tribola</i>
Filbert	<i>Corylus maxima</i>
Pecan	<i>Carya illinoensis</i>
Pistachio	<i>Pistacia vera</i>
Walnut	<i>Juglans</i> spp.

NON-CROP OR NON-PLANTED AREAS

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

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

Make application to actively growing grasses at recommended weed heights.

Make application when the first grass weed species in a mixed grass weed population reaches the recommended growth stage for treatment.

Use the higher rate under heavy grass pressure and/or when grasses are at maximum heights.

Grass Species	Scientific Name	Weed Height (inches)	Rate⁽³⁾ FL OZ/A	
Barnyardgrass	<i>Echinochloa crus-galli</i>	2 to 8	4	5.33
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2 to 6	4	5.33
Brome				
California	<i>Bromus carinatus</i>	2 to 6	4	5.33
Cheat	<i>Bromus secalinus</i>	2 to 6	4	5.33
Downy	<i>Bromus tectorum</i>	2 to 6	4	5.33
Ripgut	<i>Bromus diandrus</i>	2 to 6	4	5.33
Canarygrass	<i>Phalaris canariensis</i>	1 to 4	4	5.33
Crabgrass				
Hairy	<i>Digitaria adscendens</i>	2 to 6**	4	5.33
Large	<i>Digitaria sanguinalis</i>	2 to 6**	4	5.33
Smooth	<i>Digitaria ischaemum</i>	2 to 6**	4	5.33
Southern	<i>Digitaria ciliaris</i>	2 to 6**	4	5.33
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2 to 6**	4	5.33
Fall Panicum	<i>Panicum dichotomiflorum</i>	2 to 8	4	5.33

Grass Species	Scientific Name	Weed Height (inches)	Rate ⁽³⁾ FL OZ/A	
Field Sandbur	<i>Cenchrus incertus</i>	2 to 6	4	5.33
Foxtail				
Giant	<i>Setaria faberi</i>	2 to 12	4	5.33
Green	<i>Setaria viridis</i>	2 to 8	4	5.33
Yellow	<i>Setaria glauc</i>	2 to 8	4	5.33
Goosegrass	<i>Eleusine indica</i>	2 to 6**	4	5.33
Itchgrass	<i>Rottboellia cochinchinensis</i>	2 to 6	4	5.33
Junglerice	<i>Echinochloa colona</i>	2 to 6	4	5.33
Lovegrass (Stinkgrass)	<i>Eragrostis cilianensis</i>	2 to 6	4	5.33
Rabbitsfootgrass	<i>Polypogon monspeliensis</i>	1 to 4	4	5.33
Red Rice	<i>Oryza sativa</i>	1 to 3	4	5.33
Ryegrass				
Hardy	<i>Lolium remotum</i>	2 to 6	4	5.33
Italian	<i>Lolium multiflorum</i>	2 to 6	4	5.33
Seedling Johnsongrass	<i>Sorghum halepense</i>	4 to 10	4	5.33
Shattercane	<i>Sorghum bicolor</i>	6 to 18	4	5.33
Southwestern Cupgrass	<i>Eriochloa gracilis</i>	2 to 6	4	5.33
Sprangle top				
Amazon	<i>Leptochloa panicoides</i>	2 to 6	4	5.33
Bearded	<i>Leptochloa fascicularis</i>	2 to 6	4	5.33
Mexican	<i>Leptochloa uninervia</i>	2 to 6	4	5.33
Red	<i>Leptochloa filiformis</i>	2 to 6	4	5.33
Texas Panicum	<i>Panicum texanum</i>	2 to 6	4	5.33
Volunteer Cereals⁽²⁾				
Barley	<i>Hordeum vulgare</i>	2 to 6	4	5.33
Oats	<i>Avena sativa</i>	2 to 6	4	5.33
Rye	<i>Secale cereale</i>	2 to 6	4	5.33
Wheat	<i>Triticum aestivum</i>	2 to 6	4	5.33
Volunteer Corn⁽¹⁾	<i>Zea mays</i>	up to 12	2.67	4
Volunteer Corn⁽¹⁾	<i>Zea mays</i>	up to 24	4	5.33
Volunteer Corn⁽¹⁾	<i>Zea mays</i>	up to 36	5.33	6.67
Volunteer Grain Sorghum	<i>Sorghum bicolor</i>	8 to 12	4	5.33
Wild Oats	<i>Avena fatua</i>	2 to 6	4	5.33
Wild Proso Millet	<i>Panicum miliaceum</i>	2 to 10	4	5.33
Witchgrass	<i>Panicum capillare</i>	2 to 8	4	5.33
Woolly Cupgrass	<i>Eriochloa villosa</i>	2 to 8	4	5.33

* Generally occurs between 3-leaf stage and tillering.

**Length of lateral growth.

¹ Includes Roundup Ready®, Liberty Link®, and IMI-CORN® volunteer corn.

² The minimum **ARY 0411-004 Herbicide** use rate for control when a cereal grain crop (such as wheat) is interseeded for crop establishment or is planted as wind breaks to aid crop establishment is 5.33 fl oz/A.

³ Where experience has shown that higher rates are needed for satisfactory control of annual grasses, rates higher than 5.33 fl oz/A may be applied in certain geographic areas, cropping situations, or environmental conditions. In these situations, rates from 5.33 to 10.67 fl oz/A can be applied. Follow the use rate restrictions in that **ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS** table before applying higher rates.

DIRECTIONS FOR ANNUAL & PERENNIAL GRASS CONTROL IN ESTABLISHED ALFALFA AND MINT WITH ARY 0411-004 HERBICIDE			
GRASS SPECIES	WEED STAGE	RATE FL OZ/A	
Annual & perennial Grasses Listed in Grass Table	See Table	6.67	10.6
<p>Mowing: Achieving the best control of annual grasses can be made by applying ARY 0411-004 Herbicide before grass weeds are mowed. Once grass is mowed it becomes tougher to control, as much of the available leaf surface has been removed. In areas without a killing frost, some annuals can over-winter after having been mowed multiple times. These grasses form large crowns and may contain many viable buds. Even though these grasses may be an annual grass, they may require repeated application of ARY 0411-004 Herbicide for partial or complete control.</p> <p>Irrigated Alfalfa and Mint: Irrigation practices can be very critical to the successful use of ARY 0411-004 Herbicide in established alfalfa and mint and may be necessary to initiate active growth of the weeds prior to application. Generally, applications 2 to 4 days after 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.</p> <p>Aerial Application: When applying by air in established alfalfa and mint, apply ARY 0411-004 Herbicide in a minimum of 10 GPA.</p> <p>Annual Grass Control: Make application at the grass sizes indicated in the Recommendation for Annual Grass Table and rates indicate. If a grass has been cut, make application after active growth has resumed and regrowth has reached the minimum height and before it reaches the maximum height indicated. Make application before the alfalfa/mint canopy covers the grasses and interferes with the spray coverage. Some annual grasses are spring-and summer-germinating plants, while others are fall-germinating plants, and the time they are actively growing and most susceptible to ARY 0411-004 Herbicide may vary from region to region. In addition, some annuals germinate over an extended period of time and because control of small grasses is desired, application after each weed flush may be required. As a general rule spray spring and summer-germinating grasses as early in the season as possible, after initial green-up. Spray fall-germinating weeds in the fall soon after they begin growing but before any damage is done due to frost. Late fall applications may be less effective due to environmental conditions, such as frost, slower plant growth, or the onset of flowering.</p> <p>Perennial Grass Control: ARY 0411-004 Herbicide effectively controls perennial grasses, such as Bermudagrass, Johnsongrass, quackgrass, wirestem muhly, tall fescue, foxtail barley and orchardgrass. Due in part to lack of tillage, perennial grasses are more difficult to control in a perennial crop, such as established alfalfa or mint. A program of repeated applications is usually necessary for best results. The best way to control perennial grasses is to do so in the year of stand establishment before rhizomes and stolons become large and difficult to kill.</p> <p>Use the high rate under heavy grass pressure and/or when grasses are at or near maximum height.</p>			

DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH ARY 0411-004 HERBICIDE			
GRASS SPECIES	WEED STAGE	RATE FL OZ/A	
Annual Bluegrass (<i>Poa annua</i>)	1 to 4-leaf	4*	10.67**
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.			
* Use a minimum of 6.67 fl oz/A to control annual bluegrass in seedling and established alfalfa and mint.			
**See Crop Specific Use Directions , for maximum application rates and restrictions.			

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

**DIRECTIONS FOR SMALL ANNUAL GRASSES
[(REDUCED RATE DIRECTIONS NOT FOR USE IN CALIFORNIA)]**

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

ANNUAL GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE FL OZ/A
Barnyardgrass	<i>Echinochloa crus-galli</i>	1 to 4	2.66
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	1 to 4	3.33
Crabgrass			
Large	<i>Digitaria sanguinalis</i>	1 to 3*	2.66
Large	<i>Digitaria sanguinalis</i>	1 to 4*	3.33
Smooth	<i>Digitaria ischaemum</i>	1 to 3*	2.66
Smooth	<i>Digitaria ischaemum</i>	1 to 4*	3.33
Southern	<i>Digitaria ciliaris</i>	1 to 4*	3.33
Fall Panicum	<i>Panicum dichotomiflorum</i>	1 to 4	2.66
Foxtail			
Giant	<i>Setaria faberi</i>	1 to 4	2.66
Green	<i>Setaria viridis</i>	1 to 4	2.66
Millet	<i>Setaria italica</i>	1 to 4	3.33
Yellow	<i>Setaria glauca</i>	1 to 4	2.66
Seedling Johnsongrass	<i>Sorghum halepense</i>	1 to 6	3.33
Shattercane	<i>Sorghum bicolor</i>	4 to 10	2.66
Texas Panicum	<i>Panicum texanum</i>	1 to 4	3.33
Volunteer Cereals			
Barley	<i>Hordeum vulgare</i>	1 to 4	3.33
Oats	<i>Avena sativa</i>	1 to 4	3.33
Wheat	<i>Triticum aestivum</i>	1 to 4	3.33
Volunteer Corn	<i>Zea Mays</i>	4 to 12	2.66
Wild Proso Millet	<i>Panicum miliaceum</i>	1 to 6	2.66
Wild Oats	<i>Avena fatua</i>	1 to 4	3.33
*Length of lateral growth			

DIRECTIONS FOR PERENNIAL GRASSES

- Make application only to actively growing grasses at the listed weed heights. Make application when the first grass weed species in a mixed grass weed population reaches the listed growth stage for treatment.

PERENNIAL GRASS SPECIES ⁽¹⁾	WEED HEIGHT (inches)	RATE ⁽²⁾ FL OZ/A	
Bermudagrass (<i>Cynodon dactylon</i>)			
First Application	3 (or up to 6 runners)	5.33	10.67
Repeat Application(s) (if regrowth occurs)	3 (or up to 6 runners)	5.33	10.67
Fescue, Tall (<i>Festuca arundinacea</i>)			
First Application	4 to 8	5.33	10.67
Repeat Application(s) if regrowth occurs)	4 to 8	5.33	10.67
Foxtail Barley (<i>Hordeum jubatum</i>)			
First Application	2 to 6	5.33	10.67
Repeat Application(s) (if regrowth occurs)	2 to 6	5.33	10.67
Orchardgrass (<i>Dactylis glomerata</i>)			
First Application	4 to 8	5.33	10.67
Repeat Application(s) (if regrowth occurs)	4 to 8	5.33	10.67
Quackgrass (<i>Elytrigia repens</i>)			
First Application	4 to 12	5.33	10.67
Repeat Application(s) (if regrowth occurs)	4 to 12	5.33	10.67
Rhizome Johnsongrass (<i>Sorghum halepense</i>)			
First Application	12 to 24	5.33	10.67
Repeat Application(s) (if regrowth occurs)	6 to 18	4	5.33
Wirestem Muhly (<i>Muhlenbergia frondosa</i>)			
First Application	4 to 8	5.33	10.67
Repeat Application(s) (if regrowth occurs)	4 to 8	5.33	10.67
Perennial Bluegrass			
Roughstalk (<i>Poa trivialis</i>)			
Kentucky (<i>Poa prantensis</i>)			
First Application	2 to 4	5.33	10.67
Repeat Application(s) (if regrowth occurs)	2 to 4	5.33	10.67
Bentgrass (<i>Agrostis</i> spp.)			
First Application	2 to 4	-	10.67
Repeat Application(s) (if regrowth occurs)	2 to 4	-	10.67
¹ Control of perennial grasses such as quackgrass, perennial bluegrass and bentgrass with this product may be enhanced by adding AMS.			
² Use the higher rate under heavy grass pressure and/or when grasses are at maximum height. Follow the use rate restrictions in that ARY 0411-004 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS table before applying higher rates.			

**TANK-MIXES
INFORMATION**

The labels for each of the herbicides recommended for tank-mixing with **ARY 0411-004 Herbicide** are unique to the characteristics of those products and contain restrictions and limitations that may be more restrictive than **ARY 0411-004 Herbicide** in certain considerations. Those concerns may include, but are not limited to:

- Geographic restrictions – all products are not registered for use in all areas and rates may vary from one region of labeled use to another
- Crop rotation restrictions may differ

- Applicator certification requirements
- Worker safety rules, i.e., personal protective equipment (PPE), reentry time, posting
- Soil characteristics or soil type, e.g. pH, OM
- Number of applications and or maximum dosage per season
- Rain free period required – or
- Application timing, e.g. pre-harvest interval
- Total season rates not to be exceeded.

ALWAYS FOLLOW THE MOST RESTRICTIVE LABELING OF ANY PRODUCT USED IN A TANK-MIX.

DIRECTIONS FOR TANK-MIX APPLICATION OF ARY 0411-004 HERBICIDE AND BROADLEAF HERBICIDES FOR CONTROL OF GRASSES AND BROADLEAF WEEDS

- Make application only to actively growing grass and broadleaf weeds at listed height or growth stage listed on each label.
- Make application when the first grass or broadleaf weed species in a mixed population reaches the listed height or growth stage for treatment.
- Make application under favorable soil moisture and humidity that exist a few days after rainfall or within seven (7) days after irrigation.
- Always add the appropriate adjuvant to the spray mix at the rate directions for each specific tank-mix combination.
- Tank-mix application can sometimes result in reduced grass control and possible increases in crop injury as compared to either product used alone. If regrowth occurs or an additional flush of new grass emerges, apply a second application of **ARY 0411-004 Herbicide** as specified in the respective size and rate tables.
- Do not tank-mix **ARY 0411-004 Herbicide** when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

ANTAGONISM INFORMATION

Tank-mixes of **ARY 0411-004 Herbicide** with postemergence broadleaf herbicides have shown some reduction or failure to control certain grass species, which would have otherwise been controlled by **ARY 0411-004 Herbicide** alone. Activity of the postemergence broadleaf herbicide in the tank-mix is not affected.

ALFALFA ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA (See crop specific tables for application directions)		
TANK-MIX PRODUCT ^{1, 2}	ARY 0411-004 HERBICIDE APPLICATION RATES/A	
	ANNUAL GRASSES	PERENNIAL GRASSES
GLYPHOSATE (for use on Roundup Ready Alfalfa only)	6.67 – 10.67 fl oz	6.67 – 10.67 fl oz
2,4-DB ³		
PURSUIT® DG ⁴ or PURSUIT ⁴		
RAPTOR®		
BUCTRIL® 2L ^{5,6}		

- ¹ If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of **ARY 0411-004 Herbicide** alone – without a tank-mix herbicide, according to the appropriate size and rate directions.
- ² Follow the label of the broadleaf tank-mix partner for specified rates and adjuvant use.
- ³ **ARY 0411-004 Herbicide** plus 2,4-DB may increase the severity of crop injury when tank-mixed. Alfalfa will generally outgrow this temporary crop injury within a few weeks. Do not apply **ARY 0411-004 Herbicide** 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.
- ⁴ Before using this tank-mix, read and understand the PURSUIT or PURSUIT DG labels for geographical restrictions and restrictions regarding alfalfa growth stage and type. Failure to do so can result in crop injury to alfalfa. DO NOT feed, graze or harvest alfalfa for 30 days following an application of PURSUIT to alfalfa.
- ⁵ States of Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming and the western halves of Kansas, Nebraska, North Dakota, South Dakota: The tank-mix of **ARY 0411-004 Herbicide** plus BUCTRIL must be applied in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliate. Unacceptable crop injury can occur to alfalfa seedlings less than the 2 trifoliate leaf stage. BUCTRIL plus **ARY 0411-004 Herbicide** applications made when temperatures are expected to exceed 80°F and days following application can result in unacceptable crop injury. In the states not listed above, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliate leaves. Unacceptable crop injury may occur to alfalfa in the 2 trifoliate or smaller stage growth, when alfalfa stand is uneven and conditions favor leaf burn. When applications of **ARY 0411-004 Herbicide** plus BUCTRIL are made when temperatures are expected to exceed 70°F and three days following such application can result in unacceptable crop injury. Crop leaf burn can occur following **ARY 0411-004 Herbicide** plus BUCTRIL applications. Warm, humid conditions may enhance leaf burn. However, new crop growth will not be affected.
- ⁶ Do not make application when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

CANOLA
REDUCED RATE ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES
 (See crop specific tables for application directions)

TANK-MIX PRODUCT ¹	ARY 0411-004 ² HERBICIDE APPLICATION RATES/A	
	ANNUAL GRASSES ⁴	PERENNIAL GRASSES
Ignite® 280 SL Herbicide ³	2.66 – 4 fl oz	NA

- ¹ Follow the label of the broadleaf tank-mix partner for specified rates and adjuvant use.
- ² Do not apply **ARY 0411-004 Herbicide** tank-mix during or after bolting or flowering or crop injury could occur.
- ³ For use only on LibertyLink® canola.
- ⁴ Annual grasses and sizes controlled with these tank-mixtures are those that are identified in the DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET FOR SMALL ANNUAL GRASSES table.

COTTON ARY 0411-004 HERBICIDE TANK-MIXED WITH COBRA® AND MSMA APPLIED POST DIRECTED			
TANK-MIX PRODUCT ¹	ARY 0411-004 HERBICIDE APPLICATION RATES/A ²		COMMENTS
	ANNUAL GRASSES ³	PERENNIAL GRASSES ³	
COBRA + MSMA (4.0 lbs/gal) or MSMA (6.6 lbs/gal)	4 – 5.33 fl oz	5.33 – 10.67 fl oz	Reduce broadcast rate in proportion to the band area actually treated.
¹ Follow the label of the broadleaf tank-mix partner for specified rates and adjuvant use. ² If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of ARY 0411-004 Herbicide alone – without a tank-mix herbicide – according to the appropriate size and rate directions. ³ 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 ARY 0411-004 Herbicide may be necessary.			

COTTON ARY 0411-004 HERBICIDE TANK-MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN ROUNDUP READY® COTTON AS A BROADCAST APPLICATION		
TANK-MIX PRODUCT ¹	ARY 0411-004 HERBICIDE APPLICATION RATE/A	
	ANNUAL GRASSES	PERENNIAL GRASSES
GLYPHOSATE	4 – 5.33 fl oz	5.33 – 10.67 fl oz
¹ Follow the label of the tank-mix partner for specified rates and adjuvant use.		

COTTON ARY 0411-004 HERBICIDE TANK-MIX- WITH IGNITE 280 SL HERBICIDE FOR THE CONTROL OF GRASSES AND VOLUNTEER CORN IN LIBERTYLINK COTTON		
TANK-MIX PRODUCT ¹	ARY 0411-004 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
IGNITE 280 SL (for use on LIBERTYLINK Cotton only)	2.67 fl oz	Up to 12 inches
	4 fl oz	Up to 24 inches
	5.33 fl oz	Up to 36 inches
¹ Follow the label of the tank-mix partner for specified rates and adjuvant use.		

DRY SHELLED BEANS ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES (See crop specific tables for application directions)		
TANK-MIX PRODUCT ²	ARY 0411-004 HERBICIDE APPLICATION RATES/A ¹	
	ANNUAL GRASSES	PERENNIAL GRASSES
BASAGRAN®	5.33– 6.67 fl oz	6.67 – 10.67 fl oz
RAPTOR		
¹ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of ARY 0411-004 Herbicide alone – without a tank-mix herbicide – according to the appropriate size and rate directions.		
² Follow the label of the tank-mix partner for specified rates and adjuvant use.		

DRY SHELLLED PEAS**ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES**

(See crop specific tables for application directions)

TANK-MIX PRODUCT ²	ARY 0411-004 HERBICIDE APPLICATION RATES/A ¹	
	ANNUAL GRASSES ³	PERENNIAL GRASSES
BASAGRAN	4– 5.33 fl oz	NA
RAPTOR		

¹ Apply prior to bloom.² Follow the label of the tank-mix partner for specified rates and adjuvant use.³ Grass regrowth or incomplete control may occur with these tank-mixes. Make applications to small grasses and if regrowth occurs retreat with another graminicide.**FLAX****REDUCED RATE ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES**

(See crop specific tables for application directions)

TANK-MIX PRODUCT ^{1,2,3}	ARY 0411-004 HERBICIDE APPLICATION RATES/A	
	ANNUAL GRASSES ⁴	PERENNIAL GRASSES
BRONATE ADVANCED™	2.67 – 3.33 fl oz	NA
Bromoxynil + MCPA		
BUCTRIL		
Curtail® M		
MCPA		

¹ Follow the label of the tank-mix partner for specified rates and adjuvant use.² Do Not apply during or after the bud stage or to ornamental flax as crop injury can occur³ Do Not apply tank-mixes when temperatures are expected to exceed 85°F at or for 3 days following application as crop injury can occur.⁴ Annual grasses and sizes controlled with these tank-mixtures are those that are identified in the DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET FOR SMALL ANNUAL GRASSES table.**SOYBEAN BURNDOWN****ARY 0411-004 HERBICIDE TANK-MIX WITH 2,4-D ESTER IN A BURNDOWN APPLICATION IN NO-TILL SOYBEAN FOR CONTROL OF ANNUAL GRASSES.**

TANK-MIX PRODUCT ¹	ARY 0411-004 HERBICIDE APPLICATION RATE/A	ANNUAL GRASS HEIGHT ^{2, 3} (inches)
2,4-D ester	2.67 fl oz	1-3 Inch foxtail
	4 fl oz	1-4 Inch foxtail
	5.33 fl oz	Follow grass chart for heights

¹ Follow the 2,4-D ester label for specified rates and drift control measures required.² Always use Crop Oil Concentrate at 1 qt/A and nitrogen fertilizer for best control of burndown grasses.³ Additional products can be tank-mixed with ARY-0411-004 + 2,4-D Ester for residual control. These include: Valor®, Canopy® XL, metolachlor, Prowl® and metribuzen.

SOYBEAN**ARY 0411-004 HERBICIDE TANK-MIX- WITH GLYPHOSATE FOR THE CONTROL OF VOLUNTEER CORN (INCLUDING ROUNDUP READY) IN SOYBEAN**

TANK-MIX PRODUCT^{1,2}	ARY 0411-004 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
GLYPHOSATE (for use on Roundup Ready Soybean only)	2.67 fl oz	Up to 12 inches
	4 fl oz	Up to 24 inches
	5.33 fl oz	Up to 36 inches

¹ For adjuvant loaded glyphosate formulations add 0.25% v/v of additional non-ionic surfactant. For unloaded glyphosate formulations add 1% v/v Crop Oil Concentrate.

² This tank-mix may be applied postemergence to Roundup Ready soybeans up through full flowering stage. Do not apply less than 60 days before harvest.

SOYBEAN**ARY 0411-004 HERBICIDE TANK-MIX- WITH IGNITE 280 SL HERBICIDE FOR THE CONTROL OF GRASSES AND VOLUNTEER CORN IN SOYBEAN**

TANK-MIX PRODUCT¹	ARY 0411-004 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
IGNITE 280 SL (for use on LIBERTYLINK Soybean only)	2.67 fl oz	Up to 12 inches
	4 fl oz	Up to 24 inches
	5.33 fl oz	Up to 36 inches

¹ Follow the label of the tank-mix partner for specified rates and adjuvant use.

SOYBEAN**ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES (See crop specific tables for application directions)**

TANK-MIX PRODUCT^{2,3,4}	ARY 0411-004 HERBICIDE APPLICATION RATE FOR ANNUAL GRASS CONTROL^{1,5}
COBRA	4-5.33 fl oz/A
FIRSTRATE [®]	
FLEXSTAR [®] HL	
FRONTROW [™]	
HARMONY [®] GT	
PHOENIX [™]	
RESOURCE [®]	
BASAGRAN	5.33-6.67 fl oz/A
PURSUIT	
RAPTOR	
SYNCHRONY [®] STS [®] or SYNCHRONY XP (mp) (STS soybeans only)	

¹ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of **ARY 0411-004 Herbicide** alone – without a tank-mix herbicide – according to the appropriate size and rate directions.

² Follow the label of the tank-mix partner for specified rates and adjuvant use.

³ AMS can be added to all tank-mix partners for improved grass control.

⁴ Refer to the label of the tank-mix partner for geographic and rotational restrictions.

⁵ Annual grasses and sizes controlled with these tank-mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET FOR SMALL ANNUAL GRASSES** table.

PEANUT**ARY 0411-004 HERBICIDE TANK-MIXES WITH BROADLEAF HERBICIDES**

(See crop specific tables for application directions)

TANK-MIX PRODUCT ²	ARY 0411-004 HERBICIDE APPLICATION RATES/A ¹	
	ANNUAL GRASSES	PERENNIAL GRASSES
BASAGRAN	5.33 – 6.67 fl oz	NA
STORM®		
ULTRA BLAZER®		

¹ Make a second application of **ARY 0411-004 Herbicide** alone – without a tank-mix herbicide – according to the appropriate size and rate directions, if grass regrowth occurs or an additional flush of new grass emerges.

² Follow the label of the tank-mix partner for specified rates and adjuvant use.

PEANUT**DIRECTIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY WITH ARY 0411-004 HERBICIDE**

GRASS SPECIES	WEED STAGE	RATE FL OZ/A	
Annual and perennial grasses that exceed height claimed for control on height charts, DIRECTIONS FOR ANNUAL GRASSES” & “DIRECTIONS FOR PERENNIAL GRASSES	Up to and including grasses in the seed head stage	10.67	21.33

Do not apply as part of a tank-mix when applying **ARY 0411-004 Herbicide** for grass suppression.

SUGAR BEET**ARY 0411-004 HERBICIDE TANK-MIXED WITH STINGER® HERBICIDE OR FUNGICIDES**

(See crop specific tables for application directions)

TANK-MIX PRODUCT ²	ARY 0411-004 HERBICIDE APPLICATION RATES/A ¹	
	ANNUAL GRASSES ³	PERENNIAL GRASSES
STINGER	4 – 5.33 fl oz	5.33-10.67 fl oz
GLYPHOSATE (for use on Roundup Ready Sugarbeet only)		
EMINENT®		
HEADLINE®		
GEM™		

¹ Make a second application of **ARY 0411-004 Herbicide** alone – without a tank-mix herbicide – according to the appropriate size and rate directions, if grass regrowth occurs or an additional flush of new grass emerges.

² Follow the label of the tank-mix partner for specified rates and adjuvant use.

³ Annual grasses and sizes controlled with these tank-mixtures are those that are identified in the **DIRECTIONS FOR REDUCED RATE USE IN DRY BEAN, CANOLA, FLAX, MUSTARD SEED, SOYBEAN AND SUGAR BEET FOR SMALL ANNUAL GRASSES** table.

TANK-MIX APPLICATION OF ARY 0411-004 HERBICIDE AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS.

ARY 0411-004 Herbicide can be tank-mixed with insecticides that are registered for use in each specific crop. Certain insecticides can cause temporary phytotoxic symptoms on alfalfa and mint foliage. For further information on tank-mixing with an insecticide, refer to the insecticide product label. Prior to using any of these insecticide/herbicide tank-mixtures, it is recommended to treat a small area of the field and observed for crop injury before treating the entire field with the tank-mixture.

Follow the label of the tank-mix partner for specified rates and adjuvant use.

FALLOW LAND

DIRECTIONS FOR USE

ARY 0411-004 Herbicide can be used to control annual and perennial grasses in land that has been left fallow the previous year and on other non-producing agricultural areas. Make application at 4 – 5.33 fl oz/A for annual grasses and 10.67 – 21.33 fl oz/A for perennial grasses. **ARY 0411-004 Herbicide** can be tanked-mixed with 2,4-D ester or BANVEL® for broad-spectrum control when both grass and broadleaf weeds are the target pest. Apply a minimum of 10.67 fl oz/A **ARY 0411-004 Herbicide** when both annual and perennial grasses occur in the same field.

INFORMATION

Use a minimum spray volume of 5 gal/A for aerial applications and 15 gal/A for ground applications. Make applications only to actively growing grasses when the first grass reaches the recommended weed height as specified by the **Directions for Annual and Perennial Grasses** section of this label.

Do not apply to drought stressed grasses.

Do not apply to grasses that have tillered, formed seed-heads or exceeded recommended growth stage.

Do not plant any crop for 30 days after application unless **ARY 0411-004 Herbicide** is registered for use on that crop.

Annual grasses that emerge after the **ARY 0411-004 Herbicide** application will not be controlled and a second application could be necessary.

Do not mow area for two (2) weeks prior to or after the **ARY 0411-004 Herbicide** application.

Control of perennial grasses may require more than one (1) application in non-tilled areas.

ARY 0411-004 HERBICIDE IN TANK-MIXES TO CONTROL ANNUAL AND PERENNIAL GRASSES IN FALLOW LAND		
TANK-MIX PRODUCT	ARY 0411-004 HERBICIDE APPLICATION RATES/A ^{1,2}	
	ANNUAL GRASSES	PERENNIAL GRASSES
2,4-D ester or BANVEL	4 – 5.33 fl oz	10.67 – 21.33 fl oz.
¹ See the BANVEL and 2,4-D ester labels for use rates, weeds controlled and crop rotation restrictions.		
¹ Always use a crop oil concentrate at 1% v/v.		

ARY 0411-004 HERBICIDE TO CONTROL EXISTING STANDS OF FIELD CORN AND VOLUNTEER FIELD CORN (BURNDOWN)			
Time From Application to Re-seeding corn	Use Rate per Acre	Adjuvant Recommendation	Special Use Instructions and Restrictions
6 days	2 fl oz	COC at 1% v/v plus AMS at 2.5 to 4.0 lb/A	Weed Size – up to 12 inches. Do not make more than 1 application per season.

ARY 0411-004 HERBICIDE TO CONTROL EXISTING STANDS OF FIELD CORN AND VOLUNTEER FIELD CORN (BURNDOWN)			
Time From Application to Re-seeding corn	Use Rate per Acre	Adjuvant Recommendation	Special Use Instructions and Restrictions
			Do not apply more than 2 fl oz/A per season. Care must be taken to avoid in-field boom (spray) overlaps or excessive crop injury may occur. 90 day Pre-Harvest Interval

DIRECTIONS FOR GRASS SUPPRESSION IN NON-CROP AREAS WITH ARY 0411-004 HERBICIDE			
GRASS SPECIES	WEED STAGE	RATE FL OZ/A	
Annual and perennial grasses that exceed height claimed for control on height chart	Up to and including grasses in the seed head stage	8	21.33
Do not apply as part of a tank-mix when applying ARY 0411-004 Herbicide for grass suppression.			

ARY 0411-004 HERBICIDE FOR THE CONTROL AND/OR SUPPRESSION OF TALL FESCUE IN NATIVE PRAIRIE WARM-SEASON GRASS RESTORATION PROJECTS				
PRODUCT	PRODUCT RATES	GRASS WEEDS CONTROLLED/SUPPRESSED		WEED STAGES
		Common Name	Scientific Name	
ARY 0411-004 Herbicide	6.67-8 fl oz/A	Tall Fescue	<i>Festuca arundinacea</i>	4 to 6 inches tall (40-60% green-up)
ADJUVANT: ARY 0411-004 Herbicide must be applied with crop oil concentrate at 1 qt/A and a spray grade ammonium sulfate (AMS) at 2.5 – 4 lb/A or 8.5-17.0 lb/100 gallons of spray solution. Specified Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, then add ARY 0411-004 Herbicide .				

SPECIAL APPLICATION INSTRUCTIONS

- Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue.
- Make application in the spring at 40 – 60% tall fescue green-up, prior to emergence of warm-season grasses.
- Make application in a minimum of 15 – 20 gallons water per acre.
- Make application only to fields that have warm season grasses established for two (2) years.

PRECAUTIONS

- Application of **ARY 0411-004 Herbicide** to emerged warm-season grasses may cause injury.

RESTRICTIONS

- Do not mow area for two (2) weeks after the **ARY 0411-004 Herbicide** application.
- Do not make applications to warm-season grasses grown for seed.
- Do not graze treated fields or feed treated forage and/or hay to livestock.
- Do not plant any crop for 30 days after application, unless clethodim is registered for use on that crop.

ARY 0411-004 HERBICIDE FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NON-PRODUCING AGRICULTURAL AREAS				
PRODUCT	PRODUCT RATE	GRASS WEEDS CONTROLLED/ SUPPRESSED		APPLICATION TIMING
		Common Name	Scientific Name	
ARY 0411-004 Herbicide	1 – 1.33 fl oz/A	Tall Fescue Seed-Heads	<i>Festuca arundinacea</i>	(50 to 90% Tall Fescue green-up)
ADJUVANT: ARY 0411-004 Herbicide must be applied with crop oil concentrate at 1 qt/A and a spray grade ammonium sulfate (AMS) at 2.5 – 4 lb/A or 8.5-17.0 lb/100 gallons of spray solution. Specified Mixing Order: Thoroughly mix spray grade ammonium sulfate in water, then add ARY 0411-004 Herbicide .				

SPECIAL APPLICATION INSTRUCTIONS

- Make application at 50 to 90% tall fescue green-up.
- If less tall fescue green matter is present, use the higher **ARY 0411-004 Herbicide** rate.
- Make application in a minimum of 15 to 20 gallons water per acre at a spray pressure of 40 to 60 PSI at the nozzle. Make application using flat fan or hollow cone nozzles. Do not use flood nozzles.

PRECAUTIONS

- 2,4-D ester, Tordon® 22K, Grazon®, P+D or Crossbow® may be added to this tank-mix for broadleaf control (see the tank-mix label for use rates, and for weeds controlled.)

RESTRICTIONS

- Do not mow area for two (2) weeks after the **ARY 0411-004 Herbicide** 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 clethodim is registered for use on that crop.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE:

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to **PRECAUTIONARY STATEMENTS** on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away.

PESTICIDE DISPOSAL:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Non-refillable container. Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons). Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining

contents into application equipment or a mix-tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix-tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

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

Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

Non-refillable containers. Rigid Non-refillable containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs).

Do not reuse or refill this container. After emptying product from container, either return container to UPL NA Inc. per instructions from UPL service center (1-866-761-9397), or rinse and either recycle or dispose of the container as follows: Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix-tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal.

Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums, and Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or rinsate collection system. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

IMPORTANT INFORMATION

READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of UPL NA Inc or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of UPL NA Inc and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold UPL NA Inc and Seller harmless for any claims relating to such factors.

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