

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

OCT 2 2 2012

Mr. Jonathan A. Janis Arysta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Cary, NC 27513

Subject: ARY 0411-007 Herbicide

EPA Reg. Nos. 66330-395

Resubmission dated July 30, 3012

Dear Mr. Janis:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable. Submit one (1) copy of final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

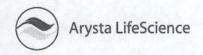
If you have any questions, please contact Hope Johnson at 703-305-5410.

Sincerely,

Kathryn Montague Product Manager 23

Herbicide Branch

Registration Division (7505P)



ARY 0411-007 HERBICIDE

GROUP **HERBICIDE**

IALTERNATE BRAND NAME: SHADOW ULTRA HERBICIDE1

Active Ingredient: Clethodim, (E)-2[1-[(3-chloro-2-propenyl)oxy]limino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2cvclohexen-1-one..... Other Ingredients: 87.1% 100.0%

Contains: 1.0 lb Clethodim per gallon

KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCION

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

	FIRST AID
If on skin or clothing:	Take off contaminated clothing.
	Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN:	Ingestion of this product or subsequent vomiting can result in aspiration of
light hydrocarbon liquid.	which can cause pneumonitis. If ingested, probable mucosal damage may

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24- HOUR MEDICAL EMERGENCY ASSISTANCE CALL PROSAR:

1-866-303-6952 or 1-651-632-8946

contraindicate the use of gastric lavage.

FOR 24-HOUR CHEMICAL EMERGENCY:

Spill, leak, fire, exposure, or accident call CHEMTREC at 1-800-424-9300 or 1-703-527-3887 if calling from outside of the U.S.

FOR PRODUCT INFORMATION CALL: 1-866-761-9397

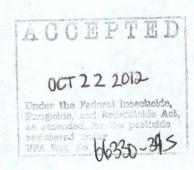
EPA REG. NO.: 66330-395

EPA EST. NO.: xxx-xx-xx

AD

NET CONTENTS:

Produced For: Arvsta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Cary, North Carolina 27513



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

PERSONAL PROTECTIVE EQUIPMENT (PPE) Applicators and other handlers must wear:

Long-sleeved shirt and long pants

- Chemical-resistant gloves, Category G (such as Barrier Laminate or Viton > 14 mils).
 - For more options, follow the instructions for Category G on an EPA chemical-resistance category selection chart.
- Shoes plus socks
- Protective eyewear

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

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

ENVIRONMENTAL HAZARDS

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

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

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

Wild Rice: Hays County, Texas

Important.

Read these entire **DIRECTIONS FOR USE** and **WARRANTY AND DISCLAIMER STATEMENT** before using ARY 0411-007 HERBICIDE.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

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

[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, Category G (such as Barrier Laminate or Viton ≥ 14 mils)
- · Shoes plus socks
- Protective evewear.

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 0411-007 Herbicide is a selective postemergence herbicide for control of annual and perennial grasses. ARY 0411-007 Herbicide does not control sedges or broadleaf weeds. ARY 0411-007 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.

RESISTANCE MANAGEMENT

For resistance management, ARY 0411-007 Herbicide is a Weed Science Society of America Group 1 Herbicide listed under the Herbicide Resistant Action Committee (HRAC). Any weed population may

contain or develop plants naturally resistant to ARY 0411-007 Herbicide and other Group 1 Herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Where possible, rotate the use of ARY 0411-007 Herbicide with herbicides that have a different mode of action.

Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. If poor performance occurs and cannot be attributed to adverse weather or application conditions, a resistant biotype may be present.

The use of ARY 0411-007 Herbicide should conform to resistance management strategies established for the use area. Consult your agricultural advisor for resistance management strategies and recommended pest management practices for your area. Appropriate resistance-management strategies should be followed.

CROPS AND USES

ARY 0411-007 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)],

<u>Leaves of Root and Tuber Vegetables Crop Group 2</u> [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)],

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

<u>Leafy Greens Crop Group Subgroup 4A</u> [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],

<u>Head and Stem Brassica Crop Group Subgroup 5A</u> [Broccoli, Broccoli (Chinese), Brussels Sprouts, Cabbage, Cabbage (Chinese (napa) and Chinese Mustard), Cauliflower, Cavalo Broccolo, Kohlrabi], <u>Leafy Brassica Greens Crop Group Subgroup 5B</u> [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)],

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

<u>Cucurbit Vegetables Crop Group Melon Subgroup 9A</u> [Citron Melon, Muskmelon, and Watermelon], <u>Cucurbit Vegetable Crop Group Squash/Cucumber Subgroup 9B</u> [Chayote (fruit), Chinese Waxgourd, Cucumber, Gherkin, Gourd (Edible), *Momordica* spp., Pumpkin, Squash (Summer and Winter)], <u>Berry and Small Fruit Crop Group Caneberry Subgroup 13-07A</u> [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 for use in California

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

*** ARY 0411-007 Herbicide is for use to control existing stands of field corn.

RESTRICTIONS AND 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.
- Do not plant rotational crops until 30 days after application of ARY 0411-007 Herbicide.
- 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 0411-007
 Herbicide, not all specialty varieties of these crops have been tested. Before applying ARY
 0411-007 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.
- ARY 0411-007 Herbicide contains an adjuvant. Use caution when applying to crops that are sensitive to adjuvants or when mixing with products that caution against the use of adjuvants.
- Do not apply if rain is expected within 1 hour of application, as control may be unsatisfactory.
- Grass crops such as corn, rice, sorghum, small grains, or turf, etc. are highly sensitive to ARY 0411-007 Herbicide.
- [Application in Nassau and Suffolk Counties of New York State is restricted to no more than 32.0 fl oz of ARY 0411-007 Herbicide (0.25 lb ai) per acre per season.]
- Do not apply under conditions of stress. Applying ARY 0411-007 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 0411-007 Herbicide
 effectively, and will be less susceptible to herbicide activity.

- 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 0411-007 Herbicide applications per season per year are recommended at the appropriate weed-growth stage rate under continuous no-till conditions, due to this nonuniform weed emergence.
- Tank mixes of ARY 0411-007 Herbicide and broadleaf herbicides may result in reduced grass control. If grass regrowth occurs, an additional application of this product may be necessary.
- Do not apply a postemergence broadleaf herbicide within one day following application of ARY 0411-007 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 0411-007 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 0411-007 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 0411-007 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 0411-007 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 0411-007 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 gallon.

For onions (dry bulbs), garlic or shallots (dry bulbs): do not exceed 16 fl oz/A in a single application when applying by air. 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.

CHEMIGATION (SPRINKLER IRRIGATION APPLICATION)

ONIONS (Dry Bulbs) AND GARLIC

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

Do not apply by chemigation to any other crop, or to this crop using any other type of irrigation system.

Do not apply this product by chemigation in the states of Idaho, Montana, Oregon, and Washington. Make application of ARY 0411-007 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 0411-007 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 0411-007 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.

- 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.
- 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.
- 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, solenoidoperated 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.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

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 0411-007 Herbicide in a tank mix with other herbicides (e.g. 2,4-D, bromoxynil, MCPA, and sulfonylurea herbicides) in eastern Washington, observe all applicable Washington State Department of Agriculture herbicide rules.

The applicator must be familiar with and take into account the information covered in the **SPRAY DRIFT MANAGEMENT** section.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see *Wind, Temperature and Humidity, and Temperature Inversions*).

Controlling Droplet Size

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream
 produces larger droplets than other orientations and is the recommended practice. Significant
 deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most
 nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.
 Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue in the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

USE RATES AND APPLICATION PROCEDURES

ADJUVANT OR CROP OIL CONCENTRATE RECOMMENDATIONS

ARY 0411-007 Herbicide contains an adjuvant system for its activation and its tank mix partners. ARY 0411-007 applied alone does not require additional surfactant, such as, crop oil concentrate or non-ionic surfactant. Additional crop oil concentrate or non-ionic surfactant can increase crop injury from tank mix partners.

ARY 0411-007 Herbicide has shown improved grass control when mixed with nitrogen fertilizers used as adjuvants. Follow the use rates listed below when using nitrogen fertilizer as adjuvants.

Nitrogen fertilizers should be added to ARY 0411-007 Herbicide for improved control of difficult grass species.

- Liquid fertilizer (10-34-0, 28% N or 32% N) at 1 to 2 qt/A
- AMS (spray grade ammonium sulfate) at 1 to 4.0 lb/A or 8.5 to 17.0 lb/100 gallons of spray solution.

The addition of liquid fertilizer is not recommended for the following crops:

Asparagus, Carrot, Cranberry, Cucurbits, Fruiting Vegetables (except Tomato), Garden Beet, Garlic, Head & Stem Brassica Vegetables, Herbs, Hops, Leaf Petioles, Leafy Brassica Greens, Leafy Greens, Mustard Seed, Non-Bearing Food Crops, Onion (Dry Bulb), Radish, Root Vegetables, Sesame, Shallots (Dry Bulb), Strawberry, Tomato, and Turnip Greens.

When an adjuvant is to be used with this product, Arysta LifeScience North America, LLC recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

APPLICATION RATES BY CROP

ARY 04	411-007 HERBICIDE	USE RATES/R	ESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	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.	9– 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season. This product can be applied to seedling or established alfalfa grown for seed.
Artichoke (Globe)	5 day PHI	9-16 fl oz	None	Do not apply more than 16 fl oz/A per application. Repeat applications must be at least 14 days apart. Do not apply more than 64 fl oz/A per season.
Asparagus	1 day PHI Maintain a 14 day interval for repeat applications.	9– 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season.

ARY 0411-007 HERBICIDE USE RATES/RESTRICTIONS/LIMITATIONS					
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS	
Beans, Dry Shelled (A) including: Bean (Lupinus spp.) Grain Sweet White White Sweet Bean (Phaseolus spp.) Field Kidney Lima (dry) Navy Pinto Runner Snap Tepary Wax Bean (Vigna 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.	9 – 32 fl oz	2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application Do not apply more than 64 fl oz/A per season.	

ARY 0	411-007 HERBICIDE	USE RATES/F	RESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Bean, Succulent (A) including: Bean (Phaseolus spp.) Broad Bean (succulent) Lima (dry) Bean (Vigna spp.) Black-eyed Pea Cowpea Southern Pea	21 day PHI	9 – 16 fl oz	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.	12 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Beet, Sugar	40 day PHI Maintain a 14 day interval for repeat applications.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.

ARY 0	411-007 HERBICIDE		ESTRICTIONS/L	INITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	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 Juneberry Juneberry Lingonberry Salal Sea Buckthorn	14 days PHI	9-16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season. Repeat applications mus be at least 14 days apart 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 Rasberry Black Rasberry Red Rasberry	7 days	9-16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season. Repeat applications must be at least 14 days apart. 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.

CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Canola (not for use in California)	70 day PHI	9 – 12 fl oz	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 12 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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 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.	9 – 32 fl oz	2.5-4 lb/A or 8.5- 17.0 lb/100 gallons of spray solution	Do not exceed 32 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.	9 – 32 fl oz	2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not graze treated fields or feed treated forage or hay to livestock. Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Cranberry	30 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season. Do not apply between the "hook" stage and full fruit set.

CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 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.	9 – 32 fl oz	2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not plant any crop for 30 days following application unless clethodim is registered for use on that crop. Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season. See NON-CROP OR NON-PLANTED AREAS section for additional information.
Flax (not for use in California)	60 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	2.5-4 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 16 fl oz/A per application. Do not apply more than 32 fl oz/A per season. Make application prior to bloom. If applied during bloom, crop injury could occur.

ARY 04	111-007 HERBICIDE	USE RATES/R	ESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Fruiting Vegetables (except Cucurbits)(for Tomatoes refer to Tomato specific crop information) (A) including: Eggplant Groundcherry Pepino Peppers (all) Tomatillo	20 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 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.	9 – 32fl oz	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 32 fl oz/A per application Do not apply more than 64 fl oz/A per season. See Spot Application and Aerial Application sections for additional information and restrictions.
Head & Stem (A) Brassica Vegetables, 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.	9– 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.

ARY 04	411-007 HERBICIDE	USE RATES/R	RESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Herbs including: (A) 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 (Origanum 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.	9 – 16 fl oz	None	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. Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.

ARY 0	411-007 HERBICIDE		RESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Hops	21 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 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.	9– 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.

ARY 0	411-007 HERBICIDE	USE RATES/R	ESTRICTIONS/L	IMITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Leafy Greens (A) including: Amaranth Chinese Spinach Leafy Amaranth Tampala Arugula (roquette) Chervil Chrysanthemum, Edible-leaved Garlan 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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.

CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Legume Vegetables, Edible Podded (A) including: Bean (Phaseolus spp.) Runner Snap Wax Bean (Vigna spp.) Asparagus Chinese Longbean Moth Yardlong Jackbean Pea (Pisum spp.) Dwarf Edible-pod Snow Sugar Snap Pigeon Sword Bean	21 day PHI	9 – 16 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 16 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.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Mint	21 day PHI Maintain a 14 day interval for repeat applications.	12 – 32 fl oz ⁽⁴⁾	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Mustard Seed (Not for use in California)	75 day PHI Maintain a 14 day interval for repeat applications.	9 – 12 fl oz	None	Do not apply more than 12 fl oz in a season. Do not apply after crop has begun bolting. If applied during the bloom period, crop injury could occur.

CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Non-Bearing Food Crops	N/A Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	None	Sugar Maples cannot be tapped for syrup within one year of application. Do not apply more than 16 fl oz/A per application. Do not apply more than 64 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.	9 – 16 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 16 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.
Pea, Succulent Shelled (A) including: Pea (Pisum 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.	9 – 16 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 16 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.

ARYU	411-007 HERBICIDE		ESTRICTIONS/L	ANITATIONS
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Peach	14 day PHI Maintain a 14 day interval for repeat applications.	9 - 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 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
Peanut (including perennial) (Not for use in California)	40 day PHI Maintain a 14 day interval for repeat applications.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	crop injury. Do not apply more than 32 fl oz/A per application Do not apply more than 64 fl oz/A per season. For Florida Perennial peanuts do not apply more than 64 fl oz/A per year.
Potato	30 day PHI Maintain a 14 day interval for repeat applications.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Radish Radish (Oriental)	15 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 32 fl oz/A per season.

CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	USE RATES PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Safflower	70 day PHI Maintain a 14 day interval for repeat applications.	9 – 16 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 16 fl oz/A per application. Do not apply more than 32 fl oz/A per season.
Sesame	14 day PHI Maintain a 14 day interval for repeat applications.	9– 16 fl oz	None	Do not apply during flowering. Do not apply more than 16 fl oz/A per application. Do not apply more than 64 fl oz/A per season.
Soybean	60 day PHI Maintain a 14 day interval for repeat applications.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not graze treated fields or feed treated forage or hay to livestock. Do not apply more than 32 fl oz/A per application. Do not apply more than 64 fl oz/A per season.

ARY 04	APPLICATION	USE RATES	RESTRICTIONS/L	IMITATIONS
CROPS	TIMING AND PRE-HARVEST INTERVAL (PHI)	PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	SPECIAL USE INSTRUCTIONS
Strawberry	4 day PHI Maintain a 14 day interval for repeat applications.	9– 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.
Sunflower	70 day PHI Maintain a 14 day interval for repeat applications.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application Do not apply more than 64 fl oz/A per season.
Sweet Potato, Yam and other tuberous and corm vegetables (for Potato, refer to Potato specific crop information), (A) 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.	9 – 32 fl oz	2.5-4.0 lb/A or 8.5-17.0 lb/100 gallons of spray solution	Do not apply more than 32 fl oz/A per application Do not apply more than 64 fl oz/A per season.
Yam Tomato	20 day PHI Maintain a 14 day interval for repeat applications.	9-32 fl oz	None	Do not apply more than 32 fl oz/A per application Do not apply more than 64 fl oz/A per season.

		USE RATES		
CROPS	APPLICATION TIMING AND PRE-HARVEST INTERVAL (PHI)	PER ACRE ALLOWED FOR EACH CROP	AMMONIUM SULFATE	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.	9 – 16 fl oz	None	Do not apply more than 16 fl oz/A per application Do not apply more than 64 fl oz/A per season.

N/A – Not Applicable

A Refer to Crops and Uses section of this label.

ATTENTION

Plant tolerance to ARY 0411-007 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 0411-007 Herbicide has investigated the safety factor to plants not listed on this label.

NON-BEARING FOOD CROPS

DO NOT APPLY ARY 0411-007 HERBICIDE TO NON-BEARING FRUIT OR NUT CROPS GROWN FOR ROOT STOCK.

If ARY 0411-007 Herbicide is improperly applied, crop injury to non-bearing fruit and nut crops can occur. Do not apply ARY 0411-007 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 0411-007 Herbicide.

NON-BEARING FOOD CROPS

COMMON NAME	SCIENTIFIC NAME
Apples	Malus spp.
Berries	Vaccinium spp.
	Rubus spp.
Cherry, sweet	Prunus avium
Citrus fruit	Citrus spp.
Grapes	Vitis spp.
Olives	Olea spp.
Peach	Prunus persica
Pears	Pyrus communis
Prunes	Prunus spp.
Stone fruit	Prunus spp.
Strawberries	Fragaria spp.
Tree nuts	
Almond	Prunus tribola
Filbert	Corylus maxima
Pecan	Carya illinoinensis
Pistachio	Pistacia vera
Walnut	Juglans 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⁾ F	L OZ/A
Barnyardgrass	Echinochloa crus-galli	2 to 8	9	16
Broadleaf Signalgrass	Brachiaria platyphylla	2 to 6	9	16
Brome				
California	Bromus carinatus	2 to 6	9	16
Cheat	Bromus secalinus	2 to 6	9	16
Downy	Bromus tectorum	2 to 6	9	16
Ripgut	Bromus diandrus	2 to 6	9	16
Canarygrass	Phalaris canariensis	1 to 4	9	16
Crabgrass		Line I Line I Line I Line		a de la composição
Hairy	Digitaria adscendens	2 to 6**	9	16
Large	Digitaria sanguinalis	2 to 6**	9	16
Smooth	Digitaria ischaemum	2 to 6**	9	16
Southern	Digitaria ciliaris	2 to 6**	9	16
Crowfootgrass	Dactyloctenium aegyptium	2 to 6**	9	16

Grass Species	Scientific Name	Weed Height (inches)	Rate ⁽³⁾ F	L OZ/A
Fall Panicum	Panicum dichotomiflorum	2 to 8	9	16
Field Sandbur	Cenchrus incertus	2 to 6	9	16
Foxtail		Live Sufficiency		
Giant	Setaria faberi	2 to 12	9	16
Green	Setaria viridis	2 to 8	9	16
Yellow	Setaria glauc	2 to 8	9	16
Goosegrass	Eleusine indica	2 to 6**	9	16
Itchgrass	Rottboellia cochinchinensis	2 to 6	9	16
Junglerice	Echinochloa colona	2 to 6	9	16
Lovegrass (Stinkgrass)	Eragrostis cilianensis	2 to 6	9	16
Rabbitsfootgrass	Polypogon monspeliensis	1 to 4	9	16
Red Rice	Oryza sativa	1 to 3	9	16
Ryegrass				122 7 95
Hardy	Lolium remotum	2 to 6	9	16
Italian	Lolium multiflorum	2 to 6	9	16
Seedling Johnsongrass	Sorghum halepense	4 to 10	9	16
Shattercane	Sorghum bicolor	6 to 18	9	16
Southwestern	Eriochloa gracilis			1 3 7 7 7
Cupgrass		2 to 6	9	16
Sprangle top				
Amazon	Leptochloa panicoides	2 to 6	9	16
Bearded	Leptochloa fascicularis	2 to 6	9	16
Mexican	Leptochloa uninervia	2 to 6	9	16
Red	Leptochloa filiformis	2 to 6	9	16
Texas Panicum	Panicum texanum	2 to 6	9	16
Volunteer Cereals ⁽²⁾		A Part of the second	4. 7	
Barley	Hordeum vulgare	2 to 6	9	16
Oats	Avena sativa	2 to 6	9	16
Rye	Secale cereale	2 to 6	9	16
Wheat	Triticum aestivum	2 to 6	12	16
Volunteer Corn ⁽¹⁾	Zea mays	up to 12	6	12
Volunteer Corn ⁽¹⁾	Zea mays	up to 24	9	14
Volunteer Corn ⁽¹⁾	Zea mays	up to 36	12	16
Volunteer Grain Sorghum	Sorghum bicolor	8 to 12	9	16
Wild Oats	Avena fatua	2 to 6	9	16
Wild Proso Millet	Panicum miliaceum	2 to 10	9	16
Witchgrass	Panicum capillare	2 to 8	9	16
Woolly Cupgrass	Eriochloa villosa	2 to 8	9	16

^{*} Generally occurs between 3-leaf stage and tillering.

**Length of lateral growth.

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

The minimum ARY 0411-007 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 16 fl oz/A.

Where experience has shown that higher rates are needed for satisfactory control of annual grasses, rates higher than 16 fl oz/A may be applied in certain geographic areas, cropping situations, or environmental conditions. In these situations, rates from 16 to 32 fl oz/A can be applied. Do not apply more than 16 fl oz/A of ARY 0411-007 Herbicide per application to the following crops: asparagus, carrot, cranberry,

Conne Species	Sajantifia Nama	Weed Height	Rate ⁽³⁾ FL OZ/A
Grass Species	Scientific Name	(inches)	Rate FL UZIA

cucurbits, flax, fruiting vegetables (except tomato), garden beet, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry.

Do not apply more than 12 fl oz/A of product per application to canola or mustard seed.

DIRECTIONS FOR ANNUAL & PERENNIAL GRASS CONTROL IN ESTABLISHED ALFALFA AND MINT WITH ARY 0411-007 HERBICIDE GRASS SPECIES WEED STAGE RATE FL OZ/A Annual & perennial Grasses Listed in Grass Table See Table 12 **

Mowing: Achieving the best control of annual grasses can be made by applying ARY 0411-007 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 0411-007 Herbicide for partial or complete control.

Irrigated Alfalfa and Mint: Irrigation practices can be very critical to the successful use of ARY 0411-007 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.

Aerial Application: When applying by air in established alfalfa and mint, apply ARY 0411-007 Herbicide in a minimum of 10 GPA.

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 0411-007 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 summergerminating grasses as early in the season as possible, after initial green-up. Spray fall-germinating weeds in the fall soon after they begin growing but before any damage is done due to frost. Late fall applications may be less effective due to environmental conditions, such as frost, slower plant growth, or the onset of flowering.

Perennial Grass Control: ARY 0411-007 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.

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

**See Crop Specific Use Directions, for maximum application rates and restrictions.

DIRECTIONS FOR ANNUAL BLUEGRASS CONTROL WITH ARY 0411-007 HERBICIDE						
GRASS SPECIES	WEED STAGE	RATE	L OZ/A			
Annual Bluegrass (Poa annua)	1 to 4-leaf	12*	**			

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 17.0 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 SHELLED 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	Echinochloa crus-galli	1 to 4	6
Broadleaf Signalgrass	Brachiaria platyphylla	1 to 4	8
Crabgrass			
Large	Digitaria sanguinalis	1 to 3*	6
Large	Digitaria sanguinalis	1 to 4*	8
Smooth	Digitaria ischaemum	1 to 3*	6
Smooth	Digitaria ischaemum	1 to 4*	8
Southern	Digitaria ciliaris	1 to 4*	8
Fall Panicum	Panicum dichotomiflorum	1 to 4	6
Foxtail			
Giant	Setaria faberi	1 to 4	6
Green	Setaria viridis	1 to 4	6
Millet	Setaria italica	1 to 4	8
Yellow	Setaria glauca	1 to 4	6
Seedling Johnsongrass	Sorghum halepense	1 to 6	8
Shattercane	Sorghum bicolor	4 to 10	6
Texas Panicum	Panicum texanum	1 to 4	8
Volunteer Cereals			
Barley	Hordeum vulgare	1 to 4	8
Oats	Avena sativa	1 to 4	8
Wheat	Triticum aestivum	1 to 4	8
Volunteer Corn	Zea Mays	4 to 12	6
Wild Proso Millet	Panicum miliaceum	1 to 6	6
Wild Oats	Avena fatua	1 to 4	8

ANNUAL GRASS SPECIES	SCIENTIFIC NAME	WEED HEIGHT (inches)	RATE FL OZ/A
*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)		TE ⁽²⁾ OZ/A	
Bermudagrass (Cynodon dactylon)				
First Application	3 (or up to 6 runners)	12	32	
Repeat Application(s) (if regrowth occurs)	3 (or up to 6 runners)	12	32	
Fescue, Tall (Festuca arundinacea)				
First Application	4 to 8	12	32	
Repeat Application(s) if regrowth occurs)	4 to 8	12	32	
Foxtail Barley (Hordeum jubatum)				
First Application	2 to 6	12	32	
Repeat Application(s) (if regrowth occurs)	2 to 6	12	32	
Orchardgrass (Dactylis glomerata)				
First Application	4 to 8	12	32	
Repeat Application(s) (if regrowth occurs)	4 to 8	12	32	
Quackgrass (Elytrigia repens)		Facility of		
First Application	4 to 12	12	32	
Repeat Application(s) (if regrowth occurs)	4 to 12	12	32	
Rhizome Johnsongrass (Sorghum halepense	e)			
First Application	12 to 24	12	32	
Repeat Application(s) (if regrowth occurs)	6 to 18	9	24	
Wirestem Muhly (Muhlenbergia frondosa)				
First Application	4 to 8	12	32	
Repeat Application(s) (if regrowth occurs)	4 to 8	12	32	
Perennial Bluegrass			91 1 1	
Roughstalk (Poa trivialis)				
Kentucky (Poa prantensis)				
First Application	2 to 4	12	32	
Repeat Application(s) (if regrowth occurs)	2 to 4	12	32	
Bentgrass (Agrostis spp.)				
First Application	2 to 4	-	32	
Repeat Application(s) (if regrowth occurs)	2 to 4		32	

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. Do not apply more than 16 fl oz/A of ARY 0411-007 per application to the following crops: asparagus, carrot, cranberry, cucurbits, flax, fruiting vegetables (except tomato), garden beet, head and stem brassica vegetables, herbs, hops, leaf petioles, leafy brassica greens, leafy greens, non-bearing food crops, root vegetables, safflower, sesame and strawberry. Do not apply more than 12 fl oz/A of product per application to canola or mustard seed.

TANK MIXES INFORMATION

The labels for each of the herbicides recommended for tank mixing with ARY 0411-007 Herbicide are unique to the characteristics of those products and contain restrictions and limitations that may be more restrictive than ARY 0411-007 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 0411-007 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 0411-007 Herbicide as specified in the respective size and rate tables.
- Do not tank mix ARY 0411-007 Herbicide when broadleaf weeds are tall and/or dense enough to prevent proper grass coverage.

ANTAGONISM INFORMATION

Tank mixes of ARY 0411-007 Herbicide with postemergence broadleaf herbicides have shown some reduction or failure to control certain grass species, which would have otherwise been controlled by ARY 0411-007 Herbicide alone. Activity of the postemergence broadleaf herbicide in the tank mix is not affected.

ALFALFA

ARY 0411-007 HERBICIDE TANK MIXES WITH BROADLEAF HERBICIDES FOR ALFALFA (See crop specific tables for application directions)

TANK MIX PRODUCT ^{1, 2}	ARY 0411-007 HERBICIDE APPLICATION RATES/A	
	ANNUAL GRASSES	PERENNIAL GRASSES
2,4-DB ³ PURSUIT® DG ⁴ or PURSUIT ⁴ RAPTOR® BUCTRIL® 2L ^{5,6}	20 – 32 fl oz	20 – 32 fl oz

If grass regrowth occurs or an additional flush of new grass emerges, apply a second application of ARY 0411-007 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 0411-007 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 0411-007 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.

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 0411-007 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 0411-007 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 0411-007 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 0411-007 Herbicide plus BUCTRIL applications. Warm, humid conditions may enhance leaf burn. However, new crop growth will not be affected.

Do not make application when alfalfa is under moisture, temperature, insect or disease

stress or has been stressed by other pesticide carryover or application.

NA

CANOLA REDUCED RATE ARY 0411 (See crop specific tables for		WITH BROADLEAF HERBICIDES
TANK MIX PRODUCT1	ARY 0411-007 ² HERBICIDE APPLICATION RATES/A	
TAINK MIX PRODUCT	ANNUAL GRASSES ⁴	PERENNIAL GRASSES
Ignite® 280 SL	8 10 fl oz	NA

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

² Do not apply ARY 0411-007 Herbicide tank mix during or after bolting or flowering or crop injury

8 - 10 fl oz

³ For use only on LibertyLink[®] canola.

Herbicide³

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 0411-007 HERBICID DIRECTED	E TANK MIXED	WITH COBRA® AND	MSMA APPLIED POST
	ARY 0411-007 HERBICIDE APPLICATION RATES/A ²		COMMENTO
TANK MIX PRODUCT ¹	ANNUAL GRASSES ³	PERENNIAL GRASSES ³	COMMENTS
COBRA + MSMA (4.0 lbs/gal) or MSMA (6.6 lbs/gal)	12 – 16 fl oz	16 – 32 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 0411-007 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 0411-007 Herbicide may be necessary.

COTTON ARY 0411-007 HERBICIDE TANK MIXED WITH GLYPHOSATE TO CONTROL EMERGED GRASSES IN ROUNDUP READY® COTTON AS A BROADCAST APPLICATION ARY 0411-007 TANK MIX PRODUCT1 **APPLICATION RATE/A** ANNUAL PERENNIAL GRASSES GRASSES **GLYPHOSATE** 9 - 16 floz12 - 32 fl oz Follow the label of the tank mix partner for specified rates and adjuvant use.

	TANK MIX-WITH IGNITE 280 SL H AND VOLUNTEER CORN IN LIBERT	
TANK MIX PRODUCT1	ARY 0411-007 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
IGNITE 280 SL (for use	6 fl oz	Up to 12 inches
on LIBERTYLINK Cotton	9 fl oz	Up to 24 inches
only)	12 fl oz	Up to 36 inches

	E TANK MIXES WITH BROADLE	AF HERBICIDES
	ARY 0411-007 HERBICIDE APPLICATION RATES/A ¹	
TANK MIX PRODUCT ²	ANNUAL GRASSES	PERENNIAL GRASSES
BASAGRAN® RAPTOR	12- 20 fl oz	20 – 32 fl oz

¹ If grass regrowth occurs or an additional flush of new grass emerges, make a second application of ARY 0411-007 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.

(See crop specific tables	for application directions)	
	ARY 0411-007 HERBICIDE APPLICATION RATES/A ¹	
TANK MIX PRODUCT ²	ANNUAL GRASSES	PERENNIAL GRASSES
BASAGRAN RAPTOR	12– 16 fl oz	NA

	-007 HERBICIDE TANK MIXES Vecific tables for application dire	
	ARY 0411-007 HERBICIDE APPLICATION RATES/A	
TANK MIX PRODUCT ^{1,2,3}	ANNUALGRASSES ⁴	PERENNIAL GRASSES
BRONATE ADVANCED™ Bromoxynil + MCPA		
BUCTRIL Curtail® M	6 – 12 fl oz	NA
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 occur

³ Do Not apply tank mixes when temperatures are expected to exceed 85°F at or for 3 days following application as crop injury can occur.

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
ARY 0411-007 HERBICIDE TANK MIX- WITH GLYPHOSATE FOR THE CONTROL OF
VOLUNTEER CORN (INCLUDING ROUNDLIP READY) IN SOYBEAN

TANK MIX PRODUCT ^{1,2}	ARY 0411-007 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
GLYPHOSATE (for use	6 fl oz	Up to 12 inches
on Roundup Ready	9 fl oz	Up to 24 inches
Soybean only)	12 fl oz	Up to 36 inches

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

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.

	TANK MIX- WITH IGNITE 280 SL H AND VOLUNTEER CORN IN SOYBE	
TANK MIX PRODUCT ¹	ARY 0411-007 HERBICIDE APPLICATION RATE/A	CORN HEIGHT (inches)
IGNITE 280 SL (for use	6 fl oz	Up to 12 inches
on LIBERTYLINK	9 fl oz	Up to 24 inches
Soybean only)	12 fl oz	Up to 36 inches

TANK MIX PRODUCT ^{2,3,4}	ARY 0411-007 HERBICIDE APPLICATION RATE FOR ANNUAL GRASS CONTROL ^{1,5}	
COBRA		
FIRSTRATE®		
FLEXSTAR® HL		
FRONTROW™	9-20 fl oz/A	
HARMONY® GT		
PHOENIX™		
RESOURCE®.		
BASAGRAN		
PURSUIT 70 DG		
RAPTOR	12-20 fl oz/A	
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 0411-007 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 0411-007 HERBICIDE TO (See crop specific tables for	TANK MIXES WITH BROADLEAF r application directions)	HERBICIDES
	ARY 0411-007 HERBICIDE APPLICATION RATES/A1	
TANK MIX PRODUCT ²	ANNUAL GRASSES	PERENNIAL GRASSES
BASAGRAN STORM® ULTRA BLAZER®	9 – 16 fl oz	NA

¹ Make a second application of ARY 0411-007 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.

PEANUT DIRECTIONS FOR GRASS SUPPRESSION FOR HARVEST EFFICIENCY WITH ARY 0411007 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	32	64

Do not apply as part of a tank mix when applying ARY 0411-007 Herbicide for grass suppression.

SUGAR BEET

ARY 0411-007 HERBICIDE TANK MIXED WITH STINGER® HERBICIDE OR FUNGICIDES (See crop specific tables for application directions)

	ARY 0411-007 HERBICIDE APPLICATION RATES/A ¹		
TANK MIX PRODUCT ²	ANNUAL GRASSES ³	PERENNIAL GRASSES	
STINGER			
EMINENT®	9 – 12 fl oz	12-24 fl oz	
HEADLINE®			
GEM™			

¹ Make a second application of ARY 0411-007 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.

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 0411-007 HERBICIDE AND INSECTICIDES FOR CONTROL OF GRASS WEEDS AND INSECTS.

ARY 0411-007 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 0411-007 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 12 – 16 fl oz/A for annual grasses and 16 – 32 fl oz/A for perennial grasses. ARY 0411-007 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 16 fl oz/A ARY 0411-007 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 0411-007 Herbicide is registered for use on that crop.

Annual grasses that emerge after the ARY 0411-007 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 0411-007 Herbicide application.

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

TANK MIX PRODUCT	ARY 0411-007 HERBICIE	DE APPLICATION RATES/A1
TANK MIX PRODUCT	ANNUAL GRASSES	PERENNIAL GRASSES
2,4-D ester or BANVEL	12 – 16 fl oz	16 – 32 fl oz.

ARY 0411-007 HERE VOLUNTEER FIELD			STANDS OF FIELD CORN AND
Time From Application to Reseeding corn	Use Rate per Acre	Adjuvant Recommendation	Special Use Instructions and Restrictions
6 days	6 fl oz	NIS at 0.25% v/v plus AMS at 2.5 to	Weed Size – up to 12 inches. Do not make more than 1 application

Time From Application to Reseeding corn	Use Rate per Acre	Adjuvant Recommendation	Special Use Instructions and Restrictions
		4.0 lbs/A	per season.
			Do not apply more than 6 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

GRASS SPECIES	WEED STAGE		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	24	32

	PRODUCT	RM-SEASON GRASS RESTORATI GRASS WEEDS CONTROLLED/SUPRESSED		WEED STAGES
PRODUCT RATES	Common Name	Scientific Name		
ARY 0411-007 Herbicide	12 – 16 fl oz/A	Tall Fescue	Festuca arundinacea	4 to 6 inches tall (40- 60% green-up)

ADJUVANT: ARY 0411-007 Herbicide must be applied with 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 0411-007 Herbicide.

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

Burn or mow fields a minimum of 3 weeks prior to application to remove excess crop residue. Make application in the spring at 40-60% tall fescue green-up, prior to emergence of warm-season grasses. Do not mow area for two (2) weeks after the ARY 0411-007 Herbicide application.

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. Application of ARY 0411-007 to emerged warm-season grasses may cause injury. Do not make applications to warm-season grasses grown for seed.

Do not graze treated fields or feed treated forage and/or hay to livestock. Do not plant any crop for 30 days after application, unless clethodim is registered for use on that crop.

ARY 0411-007 HERBICIDE FOR THE SUPPRESSION OF TALL FESCUE SEED-HEADS IN NONPRODUCING AGRICULTURAL AREAS

PRODUCT PRODUCT	GRASS WEEDS CONTROLLED/ SUPRESSED		APPLICATION TIMING	
PRODUCT	RATE	Common Name	Scientific Name	APPLICATION TIMING
ARY 0411-007 Herbicide	3 – 4 fl oz/A	Tall Fescue Seed-Heads	Festuca arundinacea	(50 to 90% Tall Fescue green-up)

ADJUVANT: ARY 0411-007 Herbicide must be applied with 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 0411-007 Herbicide.

SPECIAL APPLICATION INSTRUCTIONS/PRECAUTIONS

Make application at 50 - 90% tall fescue green-up.

If less tall fescue green matter is present, use the higher ARY 0411-007 Herbicide rate.

Do not mow area for two (2) weeks after the ARY 0411-007 Herbicide application.

Make application in a minimum of 15 - 20 gallons water per acre at a spray pressure of 40 - 60 PSI at the nozzle. Make application using flat fan or hollow cone nozzles. Do not use flood nozzles.

2,4-D ester, 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.)

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. For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC (800) 424-9300 or (703) 527-3887 if calling from outside of the U.S.

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:

Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons). Non-refillable container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, 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.

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

Non-refillable containers

Do not reuse or refill this container. After emptying product from container, either return container to Arysta LifeScience per instructions from Arysta LifeScience North America 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.

Refillable Containers

Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Refilling or Returning Containers

If refilling or returning container is planned, end users are not authorized to remove tamper evident cables, one way valves or clean container.

Recycle or Disposal of Containers

End users are authorized to remove tamper evident cable as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned. Instructions for container rinsing and either recycling or disposal are 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. Cleaning before refilling is the responsibility of the refiller. 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. Cleaning before refilling is the responsibility of the refiller. To triple rinse the containers before final disposal, empty the remaining contents from this container into application equipment or mix tank. 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.

Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer. Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES. EXPRESSED OR IMPLIED. INCLUDING ANY WARRANTY MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION. STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.

Arysta LifeScience and the Arysta LifeScience logo are registered trademarks of Arysta LifeScience Corporation.

SHADOW® is a registered trademarks of Arysta LifeScience North America, LLC

HARMONY®, STS®, and SYNCHRONY® are registered trademarks of E.I. du Pont de Nemours & Co., Inc.

BASAGRAN®, HEADLINE®, IMI-CORN®, PURSUIT®, and RAPTOR®, are registered trademarks of BASE Corp.

BUCTRIL®, IGNITE®, and LIBERTYLINK® are registered trademarks and BRONATE ADVANCED™ - and GEM™ are trademarks of Bayer CropScience

 COBRA^{\otimes} and $\mathsf{RESOURCE}^{\otimes}$ - are registered trademarks and $\mathsf{PHOENIX}^{\mathsf{TM}}$ is a trademark of Valent U.S.A. Corp.

CROSSBOW®, CURTAIL®, FIRSTRATE®, GRAZON®, STINGER®, and TORDON® are registered trademarks and FRONTROW™ is a trademark of Dow AgroSciences LLC.

EMINENT® - is a registered trademark of ISAGRO S.P. A.

FLEXSTAR® - are registered trademarks of Syngenta Group Company.

ROUNDUP READY® - is a registered trademark of Monsanto Technology Company, LLC STORM® and ULTRA BLAZER® are registered trademarks of United Phosphorus, Inc ARY 0411-007 (MASTER) AD041910, NOTIFICATION 03/11/11-AMEND (30July12).