



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 04, 2025

Kristen Cianni  
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ATTICUS, LLC

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - This is a label amendment for A229.01 EPA Reg. No. 91234-226. The proposed amendment is to correct typographical errors and make minor label revisions.  
Product Name: A229.01  
Admin Number: 91234-226  
EPA Receipt Date: 03/14/2023  
Action Case Number: 00478866

Dear Kristen Cianni:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

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

If you have questions, please contact Celeste Bollini by telephone at (202) 564-2255 or via email at [bollini.celeste@epa.gov](mailto:bollini.celeste@epa.gov).

Sincerely,

*Kable Bo Davis*

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

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}  
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}  
{BOOKLET FRONT PANEL LANGUAGE}

OXYFLUORFEN	GROUP	14	HERBICIDE
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# A229.01

[Alternate Brand Name: Scroll 2 XL]

Contains oxyfluorfen, the active ingredient used in [Goal® 2XL Herbicide].

ACTIVE INGREDIENT:	(% by weight)
oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)4-(trifluoromethyl)benzene.....	22.3%
OTHER INGREDIENTS: .....	77.7%
TOTAL .....	100.0%

Contains 2 pounds active ingredient per gallon.  
Contains petroleum distillates

KEEP OUT OF REACH OF CHILDREN

## WARNING / AVISO

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 [below] [inside label booklet] for [additional] [First Aid,] [and] [Precautionary Statements] [and] [Directions for Use].

Shake Well Before Using

[A229.01™] is not manufactured, or distributed by Nufarm Americas, Inc., seller of [Goal® 2XL Herbicide].

EPA Reg. No.: 91234-226

EPA Est. No.:

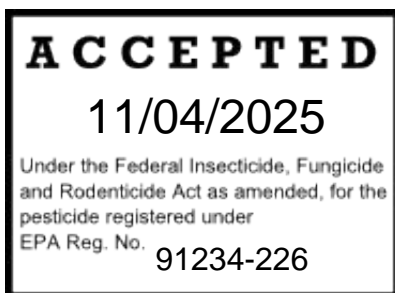
Net Contents:

Manufactured for:

**Atticus, LLC**

940 NW Cary Parkway, Suite 200

Cary, NC 27513



## {LANGUAGE INSIDE BOOKLET}

FIRST AID	
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Immediately call a poison control center or doctor.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li><li>• <b>DO NOT</b> give any liquid to the person.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Note to Physician: contains petroleum distillates. Vomiting may cause aspiration pneumonia.	
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at <b>1-844-685-9173</b> for emergency medical treatment information.	

**For Chemical Emergency:**  
**Spill, Leak, Fire, Exposure, or Accident,**  
**Call CHEMTREC Day or Night**  
**Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### WARNING

Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Do not get on skin or on clothing. Avoid contact with eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**DO NOT** get on skin or on clothing. Avoid contact with eyes.

#### **Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below.

**Mixers, loaders and applicators using engineering controls (see Engineering Controls requirements below) must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (including Barrier Laminate, Viton) when mixing and loading
- Chemical-resistant apron when mixing and loading

**All other mixers, loaders, applicators and other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves (including Barrier Laminate, Viton)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when exposed to the product concentrate

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

**Engineering Controls:** Mixers and loaders supporting aerial applications to fallow land or ground applications to corn, cotton, or soybeans must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:

- Wear the personal protective equipment required above for mixers/loaders using engineering controls
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in case of emergency, including a broken package, spill, or equipment breakdown, coveralls and chemical-resistant footwear.

Handlers performing applications to corn must use an enclosed cab that meets the definition in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- Wear the personal protective equipment required above for applicators using engineering controls
- Be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemical-resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure.
- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, including a plastic bag, to prevent contamination of the inside of the cab.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

When handlers use closed systems or enclosed cabs 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:**

- 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**

This product is toxic to aquatic invertebrates and wildlife. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. **DO NOT** contaminate water when disposing of equipment wash water.

### **Physical and Chemical Hazards**

Do not mix or allow coming in contact with Oxidizing agents. Hazardous chemical reaction may occur.

## **DIRECTIONS FOR USE**

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

Read all Directions for Use carefully before applying. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

### Agricultural Use Requirements

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

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours, except for the following:

- Onions, garlic and horseradish: The REI is 48 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, including plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

### Non-Agricultural Use Requirements:

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

**DO NOT enter or allow others to enter until sprays have dried.**

### PRODUCT INFORMATION

**A229.01** is a herbicide for postemergence and preemergence residual weed control in labeled crops. Directions provided in the PRODUCT INFORMATION section of this label apply to all uses of this product. Use directions for listed crops are provided in the Crop-Specific Use Directions section of this label.

#### Use Restrictions

The following use restrictions apply to all labeled uses of **A229.01** (Refer to directions for use for individual crops for additional crop-specific use restrictions.):

- **DO NOT** graze or harvest plants from areas treated with **A229.01** for feed or forage.
- Apply **A229.01** only with ground equipment unless otherwise specified in crop-specific use directions.
- **A229.01** is phytotoxic to plant foliage. Avoid accidental spray contact or drift with established crops.
- **DO NOT** apply when weather conditions favor drift to non-target areas.
- Some labeled crops are resistant to over-the-top applications of **A229.01** if applied during dormancy.
- **DO NOT** make over-the-top applications unless specifically allowed in crop-specific use directions.
- **DO NOT** treat ditch banks or waterways with **A229.01** or contaminate water used for irrigation or domestic purposes.
- **DO NOT** apply **A229.01** in enclosed greenhouses as foliage injury will result.

### Weed Resistance Management

For resistance management, **A229.01** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **A229.01** and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **A229.01** or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available use the less resistance-prone partner at a rate that will control the target weeds equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation and that considers tillage or other mechanical control methods, cultural, biological and other management practices.
- It is recommended to scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
  - A spreading patch of non-controlled plants of a particular weed species.
  - Surviving plants mixed with controlled individuals of the same species.If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance contact Atticus at 984-465-4800.

### **MANDATORY SPRAY DRIFT**

#### **Aerial Applications**

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Ground Applications**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**Boom-less Ground Applications:**

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.”

**Spray Drift Advisories**

**THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.**

**IMPORTANCE OF DROPLET SIZE**

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

**Controlling Droplet Size - Ground Boom**

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

**Controlling Droplet Size - Aircraft**

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

**BOOM HEIGHT - Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

**RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

**SHIELDED SPRAYERS**

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

**TEMPERATURE AND HUMIDITY**

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

**TEMPERATURE INVERSIONS**

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



## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### Boom-less Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications:

Take precautions to minimize spray drift.

### Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- **DO NOT** allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.
- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

### Rotation Crop Restrictions

- **DO NOT** rotate to small-grain crops (includes barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following an application of **A229.01**.
- **DO NOT** direct seed any crop, other than a crop labeled for use with **A229.01**, within 60 days following application.
- **DO NOT** transplant seedlings of crops, other than crops labeled for use with **A229.01**, within 30 days following application.
- **IMPORTANT: Unless otherwise specified elsewhere in this label, treated soil must be thoroughly mixed to a depth of 4 inches after harvest (or abandoning) of the treated crop but prior to planting of the rotational crop. Failure to achieve thorough and complete mixing or to follow the required minimum plant-back interval may result in crop injury, stand reduction and/or vigor reduction of the plant-back crop.** See specific fallow bed labeling instructions for required treatment-to-planting intervals following application of **A229.01** to fallow beds or fallow fields.

### Weeds Controlled

Common Name	Scientific Name
ageratum	<i>Ageratum conyzoides</i>
amaranth, spiny	<i>Amaranthus spinosus</i>
Balsam apple	<i>Momordica charantia</i>
barnyardgrass (watergrass) <sup>1</sup>	<i>Echinochloa crus-galli</i>
bedstraw, catchweed	<i>Galium aparine</i>
bittercress, lesser	<i>Cardamine oligosperma</i>
bluegrass, annual <sup>1</sup>	<i>Poa annua</i>
buckwheat, wild	<i>Polygonum convolvulus</i>
burclover	<i>Medicago hispida</i>
buttercup, smallflower	<i>Ranunculus abortivus</i>
buttonweed	<i>Borreria laevis</i>
camphorweed	<i>Heterotheca subaxillaris</i>
canarygrass (annual)	<i>Phalaris canariensis</i>

carpetweed	<i>Mollugo verticillata</i>
cheeseweed (malva)	<i>Malva parviflora</i>
clover, red <sup>1</sup>	<i>Trifolium pratense</i>
clover, white <sup>1</sup>	<i>Trifolium repens</i>
cocklebur, common	<i>Xanthium pensylvanicum</i>
crabgrass, large (hairy) <sup>1</sup>	<i>Digitaria sanguinalis</i>
crotalaria	<i>Crotalaria species</i>
croton, tropic	<i>Croton glandulosus</i>
cudweed, narrowleaf	<i>Gnaphalium falcatum</i>
evening primrose, cutleaf	<i>Oenothera laciniata</i>
fiddleneck, coast <sup>1</sup>	<i>Amsinckia intermedia</i>
filaree, broadleaf	<i>Erodium botrys</i>
filaree, redstem	<i>Erodium cicutarium</i>
filaree, whitestem	<i>Erodium moschatum</i>
fireweed (from seed)	<i>Epilobium angustifolium</i>
flixweed	<i>Descurainia sophia</i>
foxtail, giant <sup>1</sup>	<i>Setaria faberi</i>
foxtail, green	<i>Setaria viridis</i>
foxtail, yellow	<i>Setaria lutescens</i>
geranium, Carolina	<i>Geranium carolinianum</i>
goosegrass <sup>1</sup>	<i>Eleusine indica</i>
groundcherry, cutleaf	<i>Physalis angulata</i>
groundcherry, Wright	<i>Physalis wrightii</i>
groundsel, common	<i>Senecio vulgaris</i>
henbit	<i>Lamium amplexicaule</i>
horseweed (marestail)	<i>Conyza canadensis</i>
jimsonweed	<i>Datura stramonium</i>
johnsongrass, seedling	<i>Sorghum halepense</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
ladysthumb (smartweed)	<i>Polygonum persicaria</i>
lambsquarters, common	<i>Chenopodium album</i>
lettuce, prickly (china lettuce)	<i>Lactuca serriola</i>
mallow, little (malva)	<i>Malva parviflora</i>
mayweed (dog fennel)	<i>Anthemis cotula</i>
miner's lettuce	<i>Montia perfoliata</i>
morningglory species, annual	<i>Ipomoea species</i>
morningglory, ivyleaf <sup>1</sup>	<i>Ipomoea hederacea</i>
morningglory, tall <sup>1</sup>	<i>Ipomoea purpurea</i>
mustard, black	<i>Brassica nigra</i>
mustard, blue (purple mustard)	<i>Chorispora tenella</i>
mustard, common yellow	<i>Brassica campestris</i>
mustard, hedge	<i>Sisymbrium officinale</i>
mustard, tumble (Jim hill mustard)	<i>Sisymbrium altissimum</i>
mustard, wild	<i>Brassica kaber</i>
nettle, burning	<i>Urtica urens</i>
nightshade, American black	<i>Solanum americanum</i>
nightshade, black	<i>Solanum nigrum</i>
nightshade, hairy	<i>Solanum sarrachoides</i>
oats, wild	<i>Avena fatua</i>
orach, red	<i>Atriplex rosea</i>
oxalis (bermuda buttercup)	<i>Oxalis pes-caprae</i>
panicum, fall	<i>Panicum dichotomiflorum</i>
pepperweed, Virginia	<i>Lepidium virginicum</i>
pepperweed, yellowflower	<i>Lepidium perfoliatum</i>
pigweed, prostrate	<i>Amaranthus blitoides</i>

pigweed, redroot	<i>Amaranthus retroflexus</i>
pimpernel, scarlet	<i>Anagallis arvensis</i>
poinsettia, wild	<i>Euphorbia heterophylla</i>
puncturevine	<i>Tribulus terrestris</i>
purslane, common	<i>Portulaca oleracea</i>
pusley, Florida	<i>Richardia scabra</i>
ragweed, common	<i>Ambrosia artemisiifolia</i>
redmaids	<i>Calandrinia caulescens</i>
rocket, London	<i>Sisymbrium irio</i>
ryegrass, Italian	<i>Lolium multiflorum</i>
sage, lanceleaf	<i>Salvia reflexa</i>
sandbur, field	<i>Cenchrus incertus</i>
sandspurry, red	<i>Spergularia rubra</i>
sesbania, hemp	<i>Sesbania exaltata</i>
shepherdspurse <sup>1</sup>	<i>Capsella bursa-pastoris</i>
sicklepod	<i>Cassia obtusifolia</i>
sida, prickly (teaweed)	<i>Sida spinosa</i>
signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>
sorrel, red (from seed)	<i>Rumex acetosella</i>
sowthistle, annual	<i>Sonchus oleraceus</i>
speedwell, birdseye	<i>Veronica persica</i>
spurge, garden	<i>Euphorbia hirta</i>
spurge, prostrate <sup>2</sup>	<i>Euphorbia supina</i>
spurge, spotted <sup>2</sup>	<i>Euphorbia maculata</i>
spurry, corn	<i>Spergula arvensis</i>
tansymustard	<i>Descurainia pinnata</i>
thistle, bull <sup>2</sup>	<i>Cirsium vulgare</i>
thistle, Russian	<i>Salsola kali</i>
velvetleaf	<i>Abutilon theophrasti</i>
witchgrass	<i>Panicum capillare</i>
witchweed	<i>Striga asiatica</i>
woodsorrel, common yellow <sup>2</sup>	<i>Oxalis stricta</i>

<sup>1</sup> Highest rate and/or multiple applications may be required for acceptable control.

<sup>2</sup> Preemergence control only.

## Application Methods and Cultural Practices

### Preemergence Weed Control

Apply the specified rate in a broadcast spray volume of 15 or more gallons of water per acre using calibrated spray equipment capable of uniform application to the soil surface. Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence. Preemergence weed control is most effective when **A229.01** is applied to soil surfaces that are clean (free of crop or weed residues or clippings) and weed-free. Prior to application, weed or crop residues must be removed by thorough incorporation into the soil using tillage equipment or by blowing the area to be treated. At least 0.25 inch of irrigation or rainfall is required to activate **A229.01** and must occur within 3 to 4 weeks after application. For optimum results, **A229.01** must be applied to prepared beds or soil surfaces that will be left undisturbed during the time period for which weed control is desired. Cultural practices that disturb or redistribute surface soil following treatment with **A229.01** including cutting water furrows will reduce weed control effectiveness.

**Application Rates and Rate Ranges:** Where rate ranges are given, use the lower rate in the rate range on coarse texture soils with less than 1% organic matter and lighter weed infestations. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, heavy weed infestations, or for extended residual preemergence weed control.

## Postemergence Weed Control

Apply the specified rate in a broadcast spray volume of 20 or more gallons of water per acre (a minimum 10 gallons if applying **A229.01** in tank mix with glyphosate). Because **A229.01** is a contact herbicide, complete and uniform coverage of weed foliage is essential for optimum postemergence control. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases or in the presence of heavy trash (weed or crop residue). Postemergence applications of **A229.01** are most effective when made to weeds at the seedling stage. Applications made later than the 4-inch or 4 leaf stage may result in partial control or suppression. Postemergence applications must be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% v/v (2 pints per 100 gallons of spray) of an 80% active non-ionic surfactant, labeled for application to growing crops, will enhance herbicidal effectiveness in controlling emerged weeds.

**Postemergence Application Rates:** Where a rate range is given, use a higher rate in the rate range for heavy weed infestations, weeds in advanced stages of growth or for extended residual preemergence weed control following control of existing emerged weeds.

## Ground Application

**Ground Broadcast:** Apply **A229.01** using conventional low-pressure ground spray equipment with flat fan spray nozzles. Follow manufacturer's specifications for spraying pressure and boom height. An off-center (OC) nozzle positioned at the end of the boom may be desired. Check calibration of spray equipment before each use.

**Directed Sprays:** Apply **A229.01** as a coarse low-pressure spray in a spray volume of 20 or more gallons of spray per acre (broadcast basis). Follow manufacturer's specifications for nozzle spacing and operating pressure. Spray must be directed toward the soil at the base of the crop. In row crops, use a minimum of 2 flat fan nozzles per row (one on each side) and for optimum spray coverage use 4 flat fan nozzles per row (two on each side). The 2 forward nozzles must point forward and downward while the rear nozzles must point to the rear and downward. With either sprayer system, nozzles must be adjusted to cover the weed foliage but minimize contact with the crop. **DO NOT** apply with hollow cone nozzles.

**IMPORTANT: A229.01 is a contact herbicide. Contact of sprays or drift with foliage or green stems can cause severe crop injury. Use directed sprays and spray shields and/or leaf lifters as necessary to minimize contact of spray or drift with crop foliage or stems. Young green stems of woody plants are also susceptible to injury from spray contact. Potential for injury to woody stems diminishes with loss of green color and the development of relatively impervious non-living corky tissue (bark) on the surface of the stem.**

**Band Application:** Application rates listed in this label are for broadcast application. For band application, the rate per broadcast acre must be reduced according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Broadcast Acre} = \text{Amount Needed per Acre for Banded Application}$$

## Spot Application

For spot application, apply sprays uniformly to soil for preemergence weed control or on a spray-to-wet basis for postemergence weed control. Mix the required amount of **A229.01** with the specified amount of water. For preemergence weed control, use one-half to one gallon of spray per 1000 sq ft. For postemergence weed control use a minimum of 1 gallon of spray per 1000 sq ft and add an 80% non-ionic surfactant at the rate of 0.5 fl oz (1 Tbs) per gallon of spray. If making spot applications within an established crop, use coarse low-pressure sprays and direct the spray to the soil beneath the plants. To avoid crop injury, **DO NOT** allow spray to contact leaves and stems of herbaceous plants or leaves or green stems of woody plants.

Amount of A229.01 Required to Treat 1000 sq ft at Specified Application Rate					
0.5 pt/acre	1.0 pt/acre	2.0 pt/acre	3.0 pt/acre	4.0 pt/acre	8.0 pt/acre
0.2 fl oz (5.5 ml)	0.4 fl oz (11 ml)	0.75 fl oz (22 ml)	1.1 fl oz (33 ml)	1.5 fl oz (44 ml)	3.0 fl oz (88 ml)

1 pint = 16 fl oz; 1 fl oz = 29.6 (30) ml

### Aerial Application

Use aerial boom equipment designed for use with herbicides and a minimum spray volume of 10 gallons per acre (5 gallons per acre if tank mixed with glyphosate). **DO NOT aerially apply A229.01 unless crop-specific use directions specifically allow and provide directions for aerial application.**

**AVOID DRIFT:** Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result. Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Adhere to the following guidelines when aerial applications are to be made.

**Spray Drift Management (Aerial Application):** Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is controlled by the interaction of many equipment-and-weather-related factors. 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.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must adhere to the following requirements when **A229.01** is aerially applied:

1. **DO NOT** apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except the following:  
Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant tree fruit/nut/vine crops and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any non-targeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control effectiveness.

**Important:** Aerial applicators must be familiar with the label for **A229.01** and follow all applicable use precautions. Applying **A229.01** in a manner other than specified in this label is done at the user's risk. Users are responsible for all loss or damage resulting from aerial spraying. In addition, aerial applicators must follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive limitations apply.

**For Aerial Application in Fresno County, California Only  
(From February 15 through March 31 Only)**

In addition to the directions for use for aerial application appearing above, the following guidelines are required between the dates of February 15 and March 31 for applications in the following geographic area:

North: Fresno County line  
South: Fresno County line  
East: State Highway 99  
West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of **A229.01**.  
Minimization of off-site movement is the responsibility of the grower, pest control advisor and aerial applicator.

A written recommendation must be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation must state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial application of **A229.01** is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates are being applied during the commercial use season. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "fly-ins" constitutes such documentation; or other written records showing calculations and measurements of flight and spray parameters acceptable.

**DO NOT** apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

**Chemigation Instructions**

**DO NOT** apply this product through any irrigation system unless the instructions for chemigation are followed. **DO NOT apply A229.01 through chemigation equipment unless chemigation is allowed by Crop-Specific Use Directions.**

Apply this product only through sprinkler (center pivot, solid set, portable lateral, or low-volume (microsprinkler)), drip (trickle), or flood (basin) irrigation systems. Refer to use directions for specific crops for instructions as to which type of irrigation system may be used. **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.

**Sprinkler Chemigation (Foliar Spray Uses)**

For sprinkler irrigation, sufficient water must be applied at the beginning of the irrigation period to insure uniform wetting of the plant and/or soil surfaces. Meter **A229.01** into the sprinkler irrigation system at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to target weeds and/or soil

surface. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. During sprinkler irrigation, sufficient water must be applied to insure water penetration to a depth of two inches.

**AVOID DRIFT: Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Use the following guidelines when applications of A229.01 are made through sprinkler irrigation equipment:**

1. **DO NOT** apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except for the following:  
Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant tree fruits, dormant vines and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any vegetable fallow bed, crop, or desirable vegetation.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, including 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.

### **Flood (Basin) Chemigation (Soil Drench Uses)**

**A229.01** must be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results from **A229.01** applied through flood (basin) irrigation systems are obtained when a uniform distribution and flow of irrigation water is maintained over level land.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity including drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, including 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.

### **Drip (Trickle) Chemigation (Soil Drench Uses)**

To achieve optimum distribution of **A229.01** in the soil surface, meter **A229.01** at a continuous uniform rate during the middle 1/3 of the irrigation period. For best results, **A229.01** must be uniformly distributed across the wetted area to help reduce the "ring effect" of weed escapes. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system.

To apply a pesticide using drip (trickle) chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pipe 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 including 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.

### **Chemigation Calibration: For Low-Volume Sprinklers (Microsprinklers) and Drip (Trickle) Irrigation Systems**

Calculation of use rate is based on wetted area around emitters - NOT on grove acres. To determine correct amount of **A229.01**, use the following formula:

1. Treated area per each emitter = A  
 $A = 3.14 \times (\text{radius} \times \text{radius})$

**Example:** If the average distance from emitter to perimeter of wetted area measured at the soil surface is 13 inches, then

$$A = 3.14 \times (13" \times 13")$$

$$A = 3.14 \times (169")$$

$$A = 530.7 \text{ square inches}$$

2. The area in square feet wet in each acre = B  
 $B = \frac{A \times \text{emitters/acre}}{144}$



**Example:** If there are 300 emitters per acre, then  
 $B = \frac{530.7 \times 300}{144} = B = 1105.6$  square feet wetted per acre

3. The total area (in square feet) wet by your system = C  
 $C = B \times \text{acres covered by system}$

**Example:** If the system covers 20 acres, then  
 $C = 1105.6 \text{ square feet per acre} \times 20 \text{ acres}$   
 $C = 22,112$  square feet wetted by system

4. Amount of **A229.01** to inject = S

Rate per treated acre of **A229.01** = R

$$S = \frac{C \times R}{43,560} = \text{quarts of } \mathbf{A229.01}$$

**Example:** If the desired application rate per treated acre is 1 quart of **A229.01**, then

$$S = \frac{22,112 \times 1.0}{43,560} = S = 0.507 \text{ quarts of } \mathbf{A229.01} \text{ must be injected into system.}$$

**Note:** Select the proper rate based on weed spectrum and desired length of control (See Rate Ranges section below).

### Chemigation Systems Connected to Public Water Systems

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, including 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.

### Mixing Directions

**Shake well before use.** Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the specified amount of herbicides to the spray tank. The order of addition to the spray tank must be (1) wettable powders, (2) flowables and (3) soluble liquids. Complete filling of the spray tank with water.

**Use of Surfactants:** For all applications of **A229.01** where postemergence weed control is desired (**except garlic and onions**), add a minimum of 2 pints of 80% active non-ionic surfactant (cleared for application to growing crops) per each 100 gallons of spray. The addition of 4 pints of non-ionic surfactant is advised to enhance postemergence activity when hard water (greater than 600 ppm) is used. Maintain agitation until spraying is completed.

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

**Tank Mixing Precautions:**

- Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

**Restrictions**

- **DO NOT** exceed specified application rates.
- **DO NOT** tank mix this product with another pesticide that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

**Tank Mix Compatibility Testing:** Perform a jar test prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination must not be used.

**Sprayer Clean-up:** Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after each use. Residues of **A229.01** remaining in spray equipment may damage other crops. To aid in removal of residues of **A229.01**, add a non-ionic surfactant to equipment flushing waters at the rate of 1 quart per 100 gallons.

**Crop-Specific Use Directions**

**Artichoke (Globe)**

**Post-Directed Spray Application**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 - 6 (1.0 – 1.5 lb ai)	<b>Application Method:</b> Apply as a directed spray to the soil surface between the rows and at the base of artichoke plants in a minimum spray volume of 40 gallons per acre. <b>Timing to Crop:</b> Apply after completion of ditching operations. Separate applications of up to 4 pt (1 lb ai)/acre may be made 8 to 10 weeks apart or a single application of up to 6 pt (1.5 lb ai)/acre may be made. <b>Timing to Weeds:</b> Preemergence up to 8 leaf stage.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• Application of <b>A229.01</b> to artichoke plantings must be delayed a minimum of 60 days after cutting back or transplanting.</li> </ul>		
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply over-the-top. Contact with direct spray or drift will cause injury to artichoke fronds or severe injury to buds or flowers.</li> <li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year</li> <li>• <b>DO NOT</b> make more than 2 applications of <b>A229.01</b> per year when using reduced application rates.</li> <li>• <b>DO NOT</b> make second application within 8 weeks of the first.</li> <li>• <b>Preharvest Interval: DO NOT</b> apply within 5 days of harvest.</li> </ul>		

**Key Weeds Controlled:**

Preemergence	Postemergence
cheeseweed (malva) groundsel, common lambsquarters, common mustard, common yellow oxalis (bermuda buttercup)* shepherdspurse sowthistle, annual	cheeseweed (malva) groundsel, common mustard, common yellow nettle, burning oxalis (bermuda buttercup) shepherdspurse sowthistle, annual

\*Suppression

**Primocane Suppression in Blackberry and Raspberry****For Use Only in Oregon and Washington**

Crop	Rate (pt/acre)*	Specific Use Directions
Blackberry	1.6 – 3.2 (0.4 – 0.8 lb ai)	Apply <b>A229.01</b> in a minimum spray volume of 50 gallons per broadcast acre to primocanes which have emerged 4 to 6 inches. Proper timing of the spray application is essential. Application to primocanes greater than 6 inches may result in unacceptable cane growth (bent canes).
Raspberry	0.75 – 3.0 (0.187 – 0.75 lb ai)	The highest use rate and/or additional applications may be required to achieve acceptable suppression of vigorous early season primocane growth. On shorter season plantings (in higher elevations) or plantings grown on light (sandy) textured soils, reduced rates may provide acceptable primocane suppression. Primocane suppression from <b>A229.01</b> may last from 3 to 6 weeks, therefore, timing, rate, and number of applications must be adjusted according to plant health and vigor and the desired length of primocane suppression.  The addition of 2 pints of an 80% active non-ionic surfactant cleared for application to growing crops per 100 gallons of spray solution is advised.

**Precautions:**

- Occasionally, after the use of **A229.01**, a spotting, crinkling or flecking may appear on the leaves of the fruiting canes. Some blackberry varieties may be more sensitive than others. This is to be expected and does not affect performance or yield. Leaves of the fruiting canes which receive direct or indirect (drift) spray contact will be injured.

**Restriction:**

- DO NOT** use **A229.01** on blackberry plantings which are weak or under stress, due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture, as primocane growth may be insufficient for the following year's crop.

**Crop-Specific Restrictions:**

- Chemigation: DO NOT** apply this product through any type of irrigation system.
- A229.01** must be applied only by ground application equipment.
- A229.01** is phytotoxic to plant foliage. Avoid accidental spray contact or drift with established crops. **DO NOT** apply when weather conditions favor drift to non-target areas.
- DO NOT** treat ditch banks or waterways with **A229.01** or contaminate water used for irrigation or domestic purposes.

**Blackberry**

- **DO NOT** apply more than 3.2 pints (0.8 lb. ai) per broadcast acre of **A229.01** per application.
- **DO NOT** apply more than 6 pints (1.5 lbs. ai) per broadcast acre per year.
- **DO NOT** make more than 4 applications per acre per year when using reduced application rates.
- **DO NOT** apply **A229.01** within 15 days of harvest.

**Raspberry**

- **DO NOT** apply more than 3 pints (0.75 lb. ai) per broadcast acre of **A229.01** per application.
- **DO NOT** apply more than 5 pints (1.25 lbs ai) of **A229.01** per broadcast acre per year.
- **DO NOT** make more than 2 applications of **A229.01** per year.
- **DO NOT** apply **A229.01** within 50 days of harvest.

\*Dosages listed are for broadcast application. See Ground Application section of this label for conversion to band application rates.

### Primocane Suppression During Nonbearing Year of Alternate Year Blackberry Production

#### For Use Only in Oregon

Crop	Rate (pt/acre)*	Specific Use Directions
Blackberry	2 – 4 (0.5 – 1.0 lb ai)	<p>Apply <b>A229.01</b> to the unwanted vegetative growth at the base of the blackberry plants. The addition of 2 pints of an 80% active non-ionic surfactant cleared for application to growing crops per 100 gallons of spray solution is advised.</p> <p><b>A229.01</b> must be applied after a sufficient number of canes have been bundled and trained to the trellis wire. The first application is made when the primocanes to be saved have reached either the bottom wire or approximately 4 feet in length (typically early to mid-June). <b>A229.01</b> must be directed to the lower portion of the canes to reduce unwanted lateral growth and excessive foliage that normally develops at the base of each plant. The primocanes to be saved must be trained at an adequate height above the directed spray. A second application (typically mid-June to mid-September after the primocanes are trellised and wrapped on wire) may be applied to suppress new growth, leaves and lateral spurs that develop at the base of the plant. Application timing will vary according to location and vigor of planting.</p> <p>Spray coverage is essential for optimum activity on unwanted vegetation. <b>A229.01</b> must be applied at a minimum of 30 gallons of water per broadcast acre in a 3-foot band directed towards the lower portion of the blackberry canes in the primocane row. Use a low-pressure spray system (suggested 30 to 60 psi). Mounted nozzles are to be used to deliver the spray solution. Spray equipment must be calibrated carefully before each use.</p>
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• Occasionally, after the use of <b>A229.01</b>, a spotting, crinkling or flecking may appear on the leaves of the vegetative canes. This is to be expected and does not affect plant health, performance or yield. Leaves of the vegetative canes that receive direct or indirect (drift) spray contact will be injured.</li> </ul>		

**Crop-Specific Restrictions:**

- **Chemigation:** **DO NOT** apply this product through any type of irrigation system.
- **A229.01** must be applied only by ground application equipment.
- **A229.01** is phytotoxic to plant foliage. Avoid accidental spray contact or drift with established crops. **DO NOT** apply when weather conditions favor drift to non-target areas.
- **DO NOT** apply more than 4 pints (1 .0 lb. ai) of **A229.01** broadcast acre per application.
- **DO NOT** apply more than 8 pints (2.0 lbs. ai) of **A229.01** per broadcast acre per year.
- **DO NOT** make more than 2 applications per acre per year.
- For application only during the nonbearing year of blackberries grown using Alternate Year (AY) management system.
- **DO NOT** apply **A229.01** to blackberries during the bearing season.
- **DO NOT** use **A229.01** on blackberry plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

\*Dosages listed are for broadcast application. See Ground Application section of this label for conversion to band application rates.

**Broccoli / Cabbage / Cauliflower****Pre-Transplant (Preplant) Application for Preemergence Broadleaf Weed Control**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1 – 2 (0.25 – 0.5 lb ai)	<p><b>Pre-Transplant Application Only:</b> Apply broadcast to final seedbed prior to transplanting. Use lower rate in the rate range on coarse-textured soils with less than 1% organic matter. Use the highest rate in the rate range on medium to fine-textured soils or soils containing greater than 1% organic matter.</p> <p>Transplanting must be accomplished with minimal soil disturbance and soil left undisturbed during the time weed control is desired.</p>

**Precautions:**

- Pre-transplant applications may result in initial, but temporary, crop injury (leaf cupping or crinkling) and is enhanced if crop leaves come in direct contact with treated soil. Crop will rapidly outgrow this condition and develop normally. Severe crop injury may result if transplants are under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides or storage conditions. The use of transplants less than 5 weeks old or use of extremely succulent transplants grown in containers less than 1 inch square may increase the severity of crop injury. Hardening off, increasing the age of transplants or increasing the size of the rooting containers will lessen the possibility and/or severity of potential crop injury.
- **A229.01** will assist in early season annual grass control, however, a herbicide program for preemergence or postemergence control of annual grasses is advised.
- Applications to muck soils may result in partial weed control or suppression. Furrow and drip irrigation immediately after transplanting and under high temperatures can result in increased crop injury. Sprinkler irrigation is advised during early establishment of transplants. If these conditions cannot be met, **A229.01** must not be used.

**Crop-Specific Restrictions:**

- **DO NOT** apply more than 2 pints (0.5 lb ai) of **A229.01** per treated acre per year.
- **DO NOT** apply more than 2 pints (0.5 lb ai) of **A229.01** per acre per application.
- **DO NOT** make more than 1 application of **A229.01** per acre per year.

- **DO NOT** apply **A229.01** if an acetanilide herbicide including Dual Magnum herbicide (S-metolachlor, 100-816) or Lasso herbicide (alachlor, 524-314) has been applied to the field during the current growing season as severe crop injury may occur.
- **DO NOT** apply **A229.01** as a preemergence treatment to direct-seeded broccoli, cabbage or cauliflower.
- **DO NOT** apply **A229.01** post-transplant or over-the-top of broccoli, cabbage or cauliflower.

**Key Weeds Controlled:**

Preemergence
carpetweed pigweed, redroot purslane, common smartweed, Pennsylvania

**Cacao (Bearing and Nonbearing)**

**(For Use Only in Hawaii)**

**A229.01** may be applied as a pre-transplant treatment or to established or recently transplanted cacao.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 – 8 (0.5 – 2.0 lb ai)	<b>Pre-transplant Application:</b> Up to 4 pints (1.0 lb ai) per broadcast acre may be applied as a pre-transplant application. <b>Application to Established Plantings:</b> In established plantings, including recently transplanted cacao plants, apply as a directed spray to the orchard floor. Use higher rates in rate range and increase spray volume to control dense growth of existing weeds or for extended residual preemergence weed control.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• <b>A229.01</b> must be applied to only healthy growing trees/transplants of suitable size to allow directed sprays. Avoid spray contact with foliage.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 pints (2 lbs ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 24 pints (6 lb ai) per acre per year.</li> <li>• <b>DO NOT</b> make more than 4 applications of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> apply preplant or preemergence to direct-seeded cacao.</li> <li>• <b>Preharvest Interval: DO NOT</b> apply <b>A229.01</b> within 1 day of harvest.</li> </ul>		

**Key Weeds Controlled:**

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

## Citrus (Nonbearing)

Citrus, including Calamondin, Chironja, Citrus Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Pummelo, Satsuma Mandarin, Sour Orange, Sweet Orange, Tangelo, Tangerine, Tangor

**A229.01** may be applied only in non-bearing citrus orchards. Apply only as a directed spray to the orchard floor avoiding contact with citrus foliage.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	6 (1.5 lb ai)	<b>Preemergence Weed Control:</b> Up to 6 pt (1.5 lb ai)/acre may be applied for residual preemergence weed control. <b>Postemergence Weed Control:</b> The 6 pints (1.5 lb ai)/acre rate will control weeds up to 4 inches tall. Weeds greater than 4-leaf or 4 inches tall may be partially controlled. Use sufficient spray volume for complete and uniform coverage of weeds. Increase the spray volume with increased weed height and density to ensure complete coverage.
Postemergence	2 – 6 (0.5 – 1.5 lb ai)	
<b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. <ul style="list-style-type: none"><li>• <b>Preemergence Use:</b> For residual control of grass weeds, <b>A229.01</b> may be tank mixed with grass herbicides labeled for use in citrus.</li><li>• <b>Postemergence Use:</b> For broader spectrum postemergence control of emerged grass and broadleaf weeds, <b>A229.01</b> may be tank mixed with paraquat or glyphosate.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li>• Apply <b>A229.01</b> only to nonbearing citrus (trees that will not bear fruit for one year).</li><li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li><li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year.</li><li>• <b>DO NOT</b> make more than 3 applications of <b>A229.01</b> per acre per year when using reduced application rates.</li><li>• <b>DO NOT</b> apply during periods of new citrus foliage growth. Applications must be made after foliage has fully expanded and hardened off. Avoid direct spray contact with citrus foliage.</li></ul>		

(Arizona and California)		(Florida, Louisiana and Texas)	
Preemergence	Postemergence	Preemergence	Postemergence
burclover cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem groundsel, common henbit knotweed, prostrate lambsquarters, common lettuce, prickly pigweed, redroot purslane, common redmaids rocket, London shepherdspurse sowthistle, annual spurge, prostrate spurge, spotted	cheeseweed (malva) fiddleneck, coast filaree, broadleaf* filaree, redstem* filaree, whitestem* groundsel, common henbit minerslettuce nettle, burning pigweed, redroot redmaids shepherdspurse sowthistle, annual	cudweed, narrowleaf eveningprimrose, cutleaf** groundcherry, cutleaf lambsquarters, common nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild pusley, Florida sida, prickly (teaweed) smartweed, Pennsylvania sowthistle, annual spurge, prostrate spurge, spotted	balsamapple cudweed, narrowleaf*** eveningprimrose, cutleaf** groundcherry, cutleaf groundcherry, Wright lambsquarters, common morningglory, annual nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild purslane, common pusley, Florida sida, prickly (teaweed) smartweed, Pennsylvania sowthistle, annual

\***A229.01** at the 6 pt/acre will provide control of filaree and other weeds up to 4-inch stage. Applications to weeds beyond the 4-inch stage may result in partial control.

\*\*Highest rate and/or multiple applications may be required for acceptable control.

\*\*\*Maximum 0.5-inch diameter.

## Clary Sage

### Clary Sage (*Salvia sclarea*) Grown and Utilized in the Essence Industry

(For Use Only in North Carolina)

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.5 – 1 (0.125 - 0.25 lb ai)	<b>A229.01</b> may be applied to established clary sage for control of henbit ( <i>Lamium amplexicaule</i> ) and other winter annual broadleaf weeds during the winter and spring season.  Apply shortly after the first flush of henbit is in the 2- to 4-leaf stage of growth. Additional applications may be required to control subsequent weed flushes through the spring season. After treatment, henbit will stop growing and slowly die. Increase the spray volume if weed growth is dense.
<b>Precautions:</b> <ul style="list-style-type: none"><li>Clary sage may respond to the topical application of this product with some marginal leaf burn, but recovery is rapid.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year.</li><li><b>DO NOT</b> apply more than 1 pint (0.25 lb ai) of <b>A229.01</b> per acre per application.</li><li><b>DO NOT</b> make more than 6 applications per acre per year of <b>A229.01</b>.</li></ul>		

## Coffee (Bearing and Nonbearing)

(For Use Only in Hawaii)

**A229.01** may be applied to established coffee, recently transplanted coffee, or as a pre-transplant treatment. In established non-dormant coffee, apply as a directed spray avoiding contact with crop foliage. Newly established transplants must be healthy and well established and of sufficient size to allow use of directed sprays without contacting crop foliage.

**A229.01** may be applied over-the-top of dormant coffee transplants. Transplants are considered to be dormant when active terminal growth has ceased and terminal buds have formed. Application over-the-top of coffee plants after buds start to swell (a sign that new growth has resumed) may result in crop injury.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 – 8 (0.5 – 2.0 lb ai)	<b>Preemergence Weed Control:</b> <ul style="list-style-type: none"><li>Apply as a directed spray to the orchard floor beneath established coffee plants.</li><li>Up to 4 pints (1.0 lb ai) per acre may be applied as a pre-transplant application prior to transplanting coffee plants.</li></ul> <b>Postemergence Weed Control:</b> Increase the spray volume when weed growth is dense or trash is present; or use a higher rate within the rate range for extended residual preemergence weed control.
<b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. Apply tank mixes only as a directed sprays.		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li><b>DO NOT</b> apply preplant or preemergence to direct-seeded coffee.</li><li><b>DO NOT</b> apply more than 8 pints (2 lb ai) per broadcast acre of <b>A229.01</b> per application.</li></ul>		



- **DO NOT** apply more than 24 pints (6 lb ai) of **A 229.01** per broadcast acre per year.
- **DO NOT** make more than 4 applications of **A229.01** per acre per year.
- **Preharvest Interval: DO NOT** apply **A229.01** within one (1) day of harvest.
- To prevent foliar injury, **DO NOT** apply during periods of rapid new growth or allow spray or drift to contact actively growing foliage.

#### Key Weeds Controlled:

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

#### Conifer Seedbeds, Transplants, Container Stock and Selected Field-Grown Deciduous Trees

**A229.01** is effective as a preemergence and/or postemergence herbicide for the control of certain annual grassy and broadleaf weeds in conifer seedbeds. The most effective postemergence weed control is achieved when **A229.01** is applied to seedling weeds less than four inches in height. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Treated soil surfaces must not be disturbed as the herbicidal effectiveness of **A229.01** may be decreased. Seedling weeds are controlled during emergence as they come in contact with the soil-applied herbicide.

#### Restrictions:

- **DO NOT** apply **A229.01** in an enclosed greenhouse structure as injury to plant foliage may result.
- **DO NOT** store or transport treated container stock in an enclosed structure until completion of 4 irrigations (minimum 21 days) as injury to non-labeled plants may occur.
- Apply **A229.01** only to healthy conifer stock. **DO NOT** apply **A229.01** to conifers that are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.
- **DO NOT** graze or harvest livestock forage from treated areas.

**Key Weeds Controlled:** When **A229.01** is applied preemergence or postemergence at specified dosages and weed stages.

Barnyardgrass <sup>1</sup>	mustard, blue
bedstraw, catchweed	mustard, tumble
bittercress, lesser	mustard, wild
bluegrass, annual <sup>1</sup>	nettle, burning
buckwheat, wild	nightshade, black
burclover	nightshade, hairy
carpetweed	oats, wild
clover, red <sup>1</sup>	orach, red
clover, white <sup>1</sup>	pepperweed, yellowflower
cocklebur, common	pigweed, prostrate
crabgrass, large <sup>1</sup>	pigweed, redroot
fiddleneck, coast <sup>1</sup>	pimpernel, scarlet
filaree, broadleaf	purslane, common
filaree, redstem	redmaids
fireweed (from seed)	rocket, London
flixweed	sandspurry, red
foxtall, giant <sup>1</sup>	shepherdspurse <sup>1</sup>
goosegrass <sup>1</sup>	sida, prickly
groundcherry, cutleaf	smartweed, Pennsylvania

groundcherry, Wright	sorrel, red (from seed)
groundsel, common	sowthistle, annual
henbit	speedwell, birdseye
jimsonweed	spurge, prostrate <sup>2</sup>
knotweed, prostrate	spurge, spotted <sup>2</sup>
ladysthumb	spurry, corn
lambsquarters, common	tansymustard
lettuce, prickly	thistle, bull <sup>2</sup>
mallow, little	thistle, Russian
mayweed	velvetleaf
minerslettuce	witchgrass
morningglory, ivyleaf <sup>1</sup>	woodsorrel, yellow <sup>2</sup>
morningglory, tall <sup>1</sup>	

<sup>1</sup>Highest rate and/or multiple applications may be required for acceptable control.

<sup>2</sup>Preemergence control only.

### Conifer Seedbeds

**Agricultural Use Requirements: 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, including plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

**A229.01** provides both postemergence and residual preemergence control of many broadleaf weeds and annual grass species.

Seeded conifers are resistant to preemergence and postemergence applications of **A229.01**. For weed control during the establishment of conifer seedlings, **A229.01** can be applied after seeding of conifers, but prior to emergence. For weed control in emerged conifers, **A229.01** may be applied over-the-top, but application must be delayed a minimum of 5 weeks after seedling emergence. If application is made during cool, cloudy weather, make certain that seedlings have hardened-off prior to spraying.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1 – 4 (0.25 – 1.0 lb ai)	<b>Application after planting, but prior to emergence of conifer seedlings:</b> Where grass weeds are present, apply 2 to 4 pints (0.5 – 1.0 lb ai) of <b>A229.01</b> per acre. In known areas of high weed competition, apply 4 pints of <b>A229.01</b> per acre. Broadcast to beds and irrigate with ½ to ¾ inch of sprinkler irrigation before weed emergence. <b>A229.01</b> is most effective on annual grasses when applied preemergence.
Postemergence	1 – 2 (0.25 – 0.5 lb ai)	<b>Application after emergence of conifer seedlings:</b> Application must be made to seedling weeds less than 4 inches in height (seedling grasses not exceeding the 2-leaf stage). Depending on subsequent weed flushes, multiple applications may be necessary to achieve season-long weed control.

**Chemigation: A229.01** may be applied at labeled rates through sprinkler irrigation systems. For center pivot irrigation systems, apply the specified dosage of **A229.01** per acre metered at a continuous uniform rate during the entire irrigation period, otherwise meter **A229.01** at a continuous uniform rate during the middle 1/3 of the irrigation period. When applying by sprinkler irrigation, follow directions given in the Chemigation Instructions section of this label.

**Precautions:**

- Occasionally spotting, crinkling, or flecking may appear on leaves of conifers. Leaves that receive direct spray or drift may be injured, but typically outgrow this condition rapidly and develop normally.

**Crop-Specific Restrictions:**

- DO NOT** apply more than 8 pints (2 lbs ai) of **A229.01** per acre per year.
- DO NOT** apply more than 4 pints (1 lb ai) or **A229.01** per acre per application.
- DO NOT** apply more than 4 applications of **A229.01** per acre per year.

**A229.01 may be applied to conifer seedbeds of the following species:**

Important: When applied as directed, the conifer species listed on this label have shown resistance to **A229.01**. It is impossible, however, to evaluate this product on all varieties, biotypes and cultivars of listed species under all possible growing conditions. Until familiar with results under local growing conditions, the user must exercise reasonable judgment and caution with this product. Limit application of this product to a few plants in a small area to determine plant resistance and extent of injury if such occurs, prior to initiating large-scale applications.

Douglas Fir	<i>Pseudotsuga menziesii</i>
Fir	Fraser ( <i>Abies fraseri</i> ) Grand ( <i>Abies grandis</i> ) Noble ( <i>Abies procera</i> )
Hemlock	Eastern hemlock ( <i>Tsuga canadensis</i> ) Western hemlock ( <i>Tsuga heterophylla</i> )
Pine	Austrian ( <i>Pinus nigra</i> ) Eastern White ( <i>Pinus strobus</i> ) Himalayan ( <i>Pinus wallichiana</i> ) Jack ( <i>Pinus banksiana</i> ) Loblolly ( <i>Pinus taeda</i> ) Lodgepole ( <i>Pinus contorta</i> ) Longleaf ( <i>Pinus palustris</i> ) Monterey ( <i>Pinus radiata</i> ) Mugho ( <i>Pinus mugo</i> ) Ponderosa ( <i>Pinus ponderosa</i> ) Scotch ( <i>Pinus sylvestris</i> ) Shortleaf ( <i>Pinus echinata</i> ) Slash ( <i>Pinus elliotii</i> ) Virginia ( <i>Pinus virginiana</i> )
Spruce	Blue ( <i>Picea pungens</i> ) Dwarf ( <i>Picea glauca Conica</i> ) Norway[*] ( <i>Picea abies</i> ) Sitka[*] ( <i>Picea sitchensis</i> )

[\*For Use only in South Carolina]

### Conifer Transplants and Container Stock (Includes 2-0 Seedling and Christmas Tree Plantings)

**Agricultural Use Requirements:** 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, including plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Many container-grown conifers and conifer transplants are resistant to preemergence and postemergence applications of **A229.01**. Applied postemergence, **A229.01** provides postemergence control of emerged weeds and preemergence residual control of many broadleaf weeds and grasses (see Key Weeds Controlled) at the beginning of this section.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 8 (1.0 – 2.0 lb ai)	<b>Transplanted and Container Grown Conifers:</b> For best results, preemergence applications must be made immediately after transplanting seedlings or to weed-free container stock. Postemergence applications must be made to weeds less than 4 inches in height. Two applications may be necessary, in fall-transplanted conifer fields, for season-long weed control. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, enhances the activity of <b>A229.01</b> on emerged weeds.
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 8 pints (2 lbs ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 16 pints (4 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> make more than 4 applications of <b>A229.01</b> per acre per year at reduced application rates.</li> <li>• <b>DO NOT</b> make over-the-top applications during periods of active conifer growth. Apply only before bud break or after new terminal growth has hardened off.</li> </ul>		

In addition to those conifer species listed under the Conifer Seedbed section, the following conifer species have been shown to be resistant to **A229.01**:

<b>Arborvitae</b>	<i>Thuja occidentalis</i> <i>Thuja orientalis</i>
<b>Juniper</b>	<i>Juniperus chinensis</i> <i>Juniperus horizontalis</i> <i>Juniperus procumbens</i> <i>Juniperus sabina</i> <i>Juniperus scopulorum</i>
<b>Red cedar</b>	<i>Juniperus virginiana</i>
<b>Western Hemlock</b>	<i>Tsuga heterophylla</i>
<b>Yew</b>	<i>Taxus species</i>

## Selected Field-Grown Deciduous Trees

Listed field-grown deciduous trees are resistant only to directed spray applications of **A229.01**. **A229.01** provides both preemergence and postemergence control of listed broadleaf weeds and grasses.

**Timing to Crop:** Apply **A229.01** to established deciduous trees or after transplanting. For optimum weed control, applications must be made prior to weed germination. Apply only as a directed spray to soil beneath the trees.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Early postemergence	2 – 6 (0.5 - 1.5 lb ai)	<p><b>A229.01</b> may be applied to established deciduous trees or after transplanting as a single or split application. Apply as a directed spray to the soil surface. Use spray shields to reduce exposure of foliage and bark. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, will enhance herbicidal activity on emerged weeds.</p> <p><b>Spot Application:</b> Spot treatments at specified rates may be used to control localized weed infestations. See use directions for SPOT APPLICATION in the APPLICATION METHODS AND CULTURAL PRACTICES section.</p>
<p><b>Tank Mixing:</b> For broader spectrum control, <b>A229.01</b> may be tank mixed with other preemergence or postemergence herbicides registered for this use in deciduous trees. Refer to Mixing Directions section for Tank Mixing Precautions.</p>		
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>For maximum crop safety, directed applications must be prior to budbreak in the spring or after trees have initiated dormancy in the fall. Avoid contact of spray or drift with foliage or stems with green bark. Application after bud swell may result in crop injury. If a non-dormant application is required due to weed competition, apply only after foliage has fully expanded and hardened off. Use only directed sprays and spray shields to prevent spray contact with stems with green bark or foliage.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li><b>DO NOT</b> make more than 3 applications of <b>A229.01</b> per acre per year when using reduced application rates.</li> <li><b>DO NOT</b> apply to bearing tree fruit, nut and vine crops. For selected bearing tree fruit, nut and vine crops, refer to Tree fruit/Nut/Vine section of this label for use directions.</li> <li><b>DO NOT</b> graze or feed livestock forage cut from areas treated with <b>A229.01</b>.</li> <li><b>DO NOT</b> apply <b>A229.01</b> to trees that have been weakened or are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously-applied pesticides, insects, or winter injury as severe injury may result.</li> </ul>		

**A229.01** may be applied to the following deciduous tree species:

Almond <sup>2</sup>	<i>Prunus spp.</i>
Apple <sup>2</sup>	<i>Malus X domestica</i>
Apricot <sup>2</sup>	<i>Prunus spp.</i>
Ash, Green	<i>Fraxinus pennsylvanica</i>
Ash, White	<i>Fraxinus americana</i>
Birch, River	<i>Betula nigra</i>
Cherry <sup>2</sup>	<i>Prunus spp.</i>

Chestnut <sup>2</sup>	<i>Castanea</i> spp.
Crabapple <sup>2</sup>	<i>Malus</i> spp.
Cottonwood	<i>Populus</i> spp.
Dogwood	<i>Cornus florida</i>
Eucalyptus	<i>Eucalyptus viminalis</i> <i>Eucalyptus pulverulenta</i> <i>Eucalyptus camaldulensis</i>
Filbert <sup>2</sup>	<i>Corylus</i> spp.
Lilac	<i>Syringa vulgaris</i>
Locust, Black	<i>Robinia pseudoacacia</i>
Maple, Black <sup>1</sup>	<i>Acer nigrum</i>
Maple, Red <sup>1</sup>	<i>Acer rubrum</i>
Maple, Sugar <sup>1</sup>	<i>Acer saccharum</i>
Myrtle, Crepe	<i>Lagerstroemia indica</i>
Nectarine <sup>2</sup>	<i>Prunus</i> spp.
Nut, Hickory <sup>2</sup>	<i>Carya</i> spp.
Nut, Macadamia	<i>Macadamia ternifolia</i>
Oak, Chestnut	<i>Quercus prinus</i>
Oak, Cherrybark	<i>Quercus pagoda</i>
Oak, Nuttall	<i>Quercus nuttallii</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Red	<i>Quercus rubra</i>
Oak, Water	<i>Quercus nigra</i>
Oak, Willow	<i>Quercus phellos</i>
Olive, Russian	<i>Elaeagnus angustifolia</i>
Poplar	<i>Populus</i> spp.
Poplar, Tulip	<i>Liriodendron tulipifera</i>
Peach <sup>2</sup>	<i>Prunus persica</i>
Pear <sup>2</sup>	<i>Pyrus</i> spp.
Pecan <sup>2</sup>	<i>Carya</i> spp.
Pistachio <sup>2</sup>	<i>Pistacia vera</i>
Plum <sup>2</sup>	<i>Prunus</i> spp.
Prune <sup>2</sup>	<i>Prunus</i> spp.
Redbud	<i>Cercis canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Walnut, Black <sup>2</sup>	<i>Juglans nigra</i>

<sup>1</sup>**DO NOT** apply to maple trees used for production of maple sap or maple syrup.

<sup>2</sup>Apply only to nonbearing trees. For bearing tree fruit, nut and vine crops, refer to specific use directions in the Tree fruit/Nut/Vine section of this label.

## Corn

### FOR USE ONLY ON FIELD CORN IN CONJUNCTION WITH THE USDA WITCHWEED ERADICATION PROGRAM IN NORTH CAROLINA AND SOUTH CAROLINA

Apply **A229.01** only as a directed spray from May through August for preemergence and postemergence control of witchweed (*Striga asiatica*). Corn must be a minimum of 24 inches tall. Examine witchweed infested fields during the early part of the growing season to determine uniformity of corn stand and grass weed pressure. If necessary, cultivate weed-infested fields prior to initial application of **A229.01** to allow for optimum soil coverage during the initial application. Fields treated with **A229.01** must be inspected regularly for any breakthrough of witchweed. If breakthrough occurs, a second application must be made as soon as possible after appearance of witchweed. Repeat treatments must occur prior to bloom stage to prevent seed set.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2 – 3 (0.5 – 0.75 lb ai)	<b>Initial Application:</b> Apply as a directed spray over the entire row surface at the rate of 2 pints (0.5 lb ai) per acre. Use up to 3 pints (0.75 lb ai) per acre in areas of heavy witchweed infestation. Use a minimum spray volume of 20 gallons per acre and a non-ionic surfactant at the rate of 2 pints per 100 gallons of spray.
Postemergence	1 – 2 (0.25 – 0.5 lb ai)	<b>Repeat Applications:</b> In case of witchweed breakthrough a repeat application may be made at 1 to 2 pints (0.25 – 0.5 lb ai) per acre.
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 3 pints (0.75 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 5 pints (1.25 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> make more than 3 applications per acre per year when using reduced application rates.</li> <li>• <b>DO NOT</b> apply any apply within 60 days of harvest.</li> <li>• <b>DO NOT</b> use corn plants from a treated field for green chop, ensilage, forage, or fodder.</li> <li>• <b>DO NOT</b> spray over the top of the corn, as this may result in severe corn injury. Spray must contact only the lower 3 to 8 inches of the corn stalk and any leaves in this zone. Spray droplets contacting the lower leaves will cause necrotic spotting or streaking of sprayed tissue.</li> </ul>		

## Cotton

**Application Methods and Equipment:** **A229.01** may be applied as a post-direct spray to cotton a minimum of 6 to 8 inches tall. Care must be exercised to avoid spray contact with the cotton leaves. Use rigid precision ground spray equipment and spray shields to prevent spray contact with cotton foliage. Use branch lifters or shields, as necessary, to avoid contact of directed sprays with cotton plant.

Accurate, placement of spray nozzles is essential for uniform coverage of weeds and to minimize injury to cotton plants. Use a minimum broadcast spray volume of 20 gallons per acre and operate the sprayer at the minimum spray pressure listed by the spray nozzle manufacturer. **A229.01** may be applied as a post-direct spray with only 2 flat fan nozzles per row (1 nozzle on each side of the row). For optimum coverage, use 4 flat fan nozzles per row (2 nozzles on each side of the row). The 2 forward nozzles must point forward and downward while the rear nozzles must point to the rear and downward. With either sprayer setup, nozzles must be carefully adjusted to cover the weed foliage with minimum contact to cotton plants. **A229.01** may also be applied as a band application. **DO NOT use hollow cone nozzles.**

**Tank Mixing:** For control of additional broadleaf and grass weeds, **A229.01** may be applied as a postemergence directed spray in tank mix combination with other herbicides registered for postemergence use in cotton (see Tank Mixing Precautions under Mixing Directions).

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	1 – 2 (0.25 – 0.5 lb ai)	<p>Apply as a post-directed spray. For optimum control, use the 2 pints (0.5 lb ai) per acre rate on actively growing weed seedlings with no more than 4 true leaves (not counting cotyledon leaves). Effective control of succulent weeds at the 2- to 3-leaf stage can usually be obtained at the 1 pint per acre rate. See Mixing Directions for surfactant directions.</p> <p>Where available, irrigation may be applied prior to application of <b>A229.01</b> to encourage maximum weed</p>

		emergence. Irrigation following application will improve preemergence activity of <b>A229.01</b> against nightshade and groundcherry species.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Exercise care to avoid spray contact with cotton leaves. Leaves accidentally sprayed will exhibit necrotic (dead) spots and may be dropped from the plant. Crop injury may be enhanced if application is made when excessive soil moisture is present or rainfall occurs immediately after application, however, cotton will outgrow this condition and develop normally.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li><b>Western Cotton (AZ and CA):</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than a total of 4 pints (1.0 lb ai) of <b>A229.01</b> per broadcast acre per year.</li> <li><b>DO NOT</b> make more than 2 application per acre per year.</li> <li><b>DO NOT</b> apply within 75 days of harvest.</li> </ul> </li> <li><b>Southern Cotton (All other states):</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) per acre per application.</li> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre of per year.</li> <li><b>DO NOT</b> make more than 2 applications when using reduced application rates.</li> <li><b>DO NOT</b> apply within 90 days of harvest.</li> </ul> </li> <li><b>DO NOT</b> apply to cotton less than 6 inches tall or severe crop injury will result.</li> </ul>		

#### Key Weeds Controlled:

Postemergence	
cocklebur, common	nightshade, hairy
croton, tropic	pigweed, redroot
groundcherry, cutleaf	poinsettia, wild <sup>1</sup>
groundcherry, Wright	purslane, common
jimsonweed	sesbania, hemp
lambsquarters, common	sicklepod <sup>2</sup>
morningglory, annual (up to 6 leaf)	sida, prickly (teaweed) <sup>1</sup>
nightshade, American black	smartweed, Pennsylvania
nightshade, black	velvetleaf

<sup>1</sup>Multiple applications may be required for acceptable control.

<sup>2</sup>Post-direct applications of **A229.01** will control or suppress seedlings not exceeding the one true leaf stage.

#### Cottonwood

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p><b>A229.01</b> may be applied as a single or split application. Apply as a directed spray to soil at the base of cottonwood trees.</p> <p>Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage.</p> <p>The addition of a non-ionic surfactant at 2 pints per 100 gallons of spray will enhance the postemergence activity of <b>A229.01</b> on emerged weeds.</p>
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Apply <b>A229.01</b> immediately after transplant only to dormant healthy cottonwood stock.</li> </ul>		



**Crop-Specific Restrictions:**

- **DO NOT** apply more than 6 pints (1.5 lb ai) per acre of **A229.01** per application.
- **DO NOT** apply more than 18 pints (4.5 lb ai) of **A229.01** per acre per year.
- **DO NOT** make more than 4 applications per acre per year when using reduced application rates.
- In established stands, **DO NOT** allow sprays of **A229.01** to contact cottonwood foliage. In newly established cottonwood plantings, use spray shields, if necessary, to prevent exposure of green bark and foliage.

**Key Weeds Controlled:**

groundsel, common	mustard, hedge
knotweed, prostrate	shepherdspurse
lambsquarters, common	smartweed, Pennsylvania

**Deciduous Tree Plantings****(Distribution and Use Only in the States of Louisiana and Mississippi)**

**A229.01** is an effective herbicide for preemergence and postemergence control of certain broadleaf weeds in deciduous tree plantings. In new plantings, over-the-top applications of **A229.01** must be made soon after transplanting of dormant deciduous tree seedlings. Subsequent applications can be made to non-dormant, fully foliated trees. Over-the-top applications to non-dormant trees may result in minor discoloration and spotting of the foliage; however, trees will outgrow this condition. Leaves that are fully expanded and hardened off will exhibit less injury than newly emerged leaves or new bud growth. Applications to newly emerged leaves and/or new bud growth will result in leaf injury and is done at the user's risk.

**Dosage:** **A229.01** may be applied at 2 to 8 pints (0.5 to 2lb active) per broadcast acre for preemergence and postemergence weed control. A maximum of 8 pints of **A229.01** (2.0 lb active) per acre per year may be applied as a result of single or multiple applications. The addition of 1 quart of Latron G-98 or a comparable 80% active non-ionic surfactant per 100 gallons of spray mix will assist in spray coverage and wetting of weeds for postemergence coverage.

**Deciduous Species**

Cottonwood, Eastern  
Oak, Cherrybark  
Oak, Nuttall  
Sweetgum  
Sycamore

*Populus deltoides*  
*Quercus pagoda*  
*Quercus nuttallii*  
*Liquidambar styraciflua*  
*Platanus occidentalis*

Selected deciduous trees listed on this label have shown resistance to **A229.01**. It is impossible however, to evaluate this product on all varieties, biotypes and cultivars of listed species on this label under all possible growing conditions. The user must exercise reasonable judgment and caution with this product. Until familiar with results under use growing conditions, limit application of this product to a small treated area to determine plant resistance and extent of injury if such occurs, prior to initiating large-scale applications.

**Weeds Controlled:** When **A229.01** is applied preemergence or postemergence to weed seedlings (not exceeding 4- to 6-leaf stage) at specified dosages, the following broadleaf weeds are controlled:

Croton, Tropic	Nightshade, Black
Groundcherry, Cutleaf	Nightshade, Hairy
Groundcherry, Wright	Pigweed, Redroot
Groundsel, Common	Purslane, Common
Jimsonweed	Sesbania, Hemp
Knotweed, Prostrate	*Sida, Prickly (Tea Weed)
Morningglory, Annual	Smartweed, Pennsylvania
Mustard, Hedge	Velvetleaf

Nightshade, American Black	
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\*Highest rate or multiple applications may be required for acceptable control.

**Timing and Method of Application:** For optimum weed control, a dormant over-the-top application of **A229.01** must be made prior to weed seedling emergence followed by a postemergence application after tree foliage have fully expanded. For weed management programs using only a single application per year, apply **A229.01** preemergence.

**A229.01** must be applied at 20 to 40 psi in a minimum of 20 gallons of water per acre depending upon density of emerged weeds. Spray volume must be increased as weed height and density increase. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment must be calibrated carefully before each use.

**Mixing Directions:** Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the specified amount of herbicide to the spray tank. Complete filling of the spray tank with water. Maintain agitation until spraying is complete.

### Eucalyptus

Apply **A229.01** for preemergence and postemergence control of listed broadleaf weeds in established eucalyptus plantings.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p><b>Directed Spray:</b> <b>A229.01</b> may be applied as a single or split application. Apply as a directed spray to soil at the base of eucalyptus trees.</p> <p>Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage.</p> <p>The addition of a non-ionic surfactant at the rate of 2 pints per 100 gallons of spray will enhance the postemergence activity of <b>A229.01</b> on emerged weeds.</p> <p><b>Over-the-Top Application:</b> In new plantings, apply <b>A229.01</b> just before or immediately after transplanting eucalyptus seedlings that are in a dormant condition (i.e., leaves may be present, but terminal growth has hardened off and terminal buds have formed). In established plantings, <b>A229.01</b> may be applied as an over-the-top spray when plants are in a dormant condition.</p>
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>At transplant, apply <b>A229.01</b> only to healthy "dormant" healthy eucalyptus stock. In established plantings, use spray shields, if needed, to prevent exposure of foliage and bark of small and/or actively growing plants.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 18 pints (4.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li><b>DO NOT</b> make more than 4 applications per acre per year when using reduced application rates.</li> <li>To avoid phytotoxicity, make over-the-top applications only to eucalyptus trees in a dormant condition. <b>DO NOT</b> make over-the-top applications after bud break and resumption of active growth.</li> </ul>		

**Key Weeds Controlled:**

<b>Preemergence</b>	<b>Postemergence</b>
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf <sup>1</sup>
filaree, broadleaf	filaree, redstem <sup>1</sup>
filaree, redstem	filaree, whitestem <sup>1</sup>
filaree, whitestem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	redmaids
pigweed, redroot	shepherdspurse
redmaids	sowthistle, annual
rocket, London	
shepherdspurse	
sowthistle, annual	
spurge, prostrate	
spurge, spotted	

<sup>1</sup>At the 6-pint rate, **A229.01** will provide control of filaree up to the 6-leaf stage.

**Use on Fallow Beds****Not for use prior to planting soybeans in California**

Used alone or in tank mix combination with glyphosate, **A229.01** provides preemergence and/or postemergence control of winter annual broadleaf weeds on land to be planted to crops.

Prior to planting, treated fallow beds must be thoroughly tilled (incorporated) to a depth of at least 2.5 inches. **A229.01** is no longer herbicidally effective once the active layer in the soil surface is disrupted by soil incorporation.

**Aerial Application:** **A229.01** may be aerially applied for weed control in fallow beds. Follow requirements for Aerial Application in the Product Information section of this label.

**Minimum Treatment to Planting Intervals for listed crops:**

<b>Direct-Seeded Crops</b>	<b>A229.01 (up to 1 pint/acre)</b>	<b>A229.01 (&gt;1 to 2 pints/acre)</b>
carrot	90 days	90 days
cotton	7 days	7 days
potato	60 days	60 days
sugar beet	60 days	90 days
other root/tuber crops	90 days	90 days
onions	180 days	180 days
other bulb vegetables	180 days	180 days
cabbage	90 days	90 days
cauliflower	90 days	90 days
other brassica crops	120 day	120 days
lettuce	90 days	120 days
other leafy vegetables (except brassica crops)	120 days	120 days
pepper	90 days	120 days
tomato	60 days	120 days
other fruiting vegetables	120 days	120 days
cantaloupe	60 days	90 days
squash	90 days	120 days

watermelon	60 days	60 days
other cucurbits	90 days	120 days
dry beans	60 days	60 days
peanut	60 days	60 days
other legume vegetables	60 days	60 days
safflower	60 days	60 days
Soybeans (Except California)	7 days	7 days
cereal grains: Including barley, buckwheat, corn, proso millet, pearl millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, and wild rice	10 months	10 months

Transplanted Crops	Minimum Treatment-to-Planting Interval	
	A229.01 (up to 1 pint/acre)	A229.01 (>1 to 2 pints/acre)
celery	30 days	30 days
conifer	0 days	0 days
garlic	0 days	30 days
grape/kiwi	0 days	0 days
onion	0 days	30 days
pepper	30 days	30 days
strawberries	30 days	30 days
tomato	30 days	30 days
tree fruit/nut/citrus	0 days	0 days

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	1 – 2 (0.25 – 0.5 lb ai)	<p>Use 20 or more gallons of spray volume per acre and increase spray volume for dense weed growth.</p> <p>Use the 1 pint (0.25 lb ai) per acre rate for up to 4 weeks of preemergence control and postemergence control of susceptible weeds up to 4-leaf stage. Use the 2 pints (0.5 lb ai) per acre rate for up to 8 weeks of preemergence control and postemergence control of susceptible weeds up to 6-leaf stage. Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks after application.</p> <p>A tank mix with glyphosate is advised if the treatment area contains dense weed populations, oversized weed seedlings, volunteer grains, annual grasses or under unfavorable environmental conditions.</p> <p><b>Outside of California:</b> For enhanced contact activity (burndown/suppression) tank mix 0.406 pint (0.102 lb ai) of <b>A229.01</b> with the labeled rate of either glyphosate or paraquat. Apply at the application rate and weed growth stages specified in the respective tank mix product label.</p>
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Failure to achieve thorough and complete incorporation, or to follow the specified treatment-planting interval, may result in stand reduction and/or vigor reduction of the planted crop.</li> <li>Crop injury may be enhanced if newly seeded crops or transplants are under stress due to drought,</li> </ul>		

<p>flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.</p> <ul style="list-style-type: none"> <li>• <b>Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.</b></li> </ul>
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications when using reduced application rates.</li> </ul>

**Key Weeds Controlled: A229.01** provides preemergence and postemergence control of the following weeds on fallow beds:<sup>1</sup>

buttercup, smallflower	mustard species
cheeseweed (malva)	nettle, burning
eveningprimrose, cutleaf <sup>2</sup>	oxalis
fiddleneck, coast	pigweed, redroot
filaree, broadleaf	purslane, common
filaree, redstem	redmaids
geranium, Carolina	rocket, London
groundcherry, cutleaf	shepherdspurse
groundsel, common	sida, prickly
henbit	sowthistle, annual
ladythumb	velvetleaf (wild cotton)
minerslettuce	

<sup>1</sup>Thorough spray coverage is essential to maximize the postemergence activity of **A229.01**. For postemergence control when applied by air, a tank mixture of **A229.01** with either glyphosate or paraquat is advised.

<sup>2</sup>Requires maximum rate and/or multiple applications for effective control.

### **Fallow-Bed Use Prior to Transplanting Strawberries or Peppers Grown in Plastic Culture California Only**

**A229.01** may be applied broadcast or banded as a fallow bed application to pre-formed beds prior to planting of strawberries or peppers grown in plastic culture.

It is advised that soil moisture be used to activate **A229.01** using one of the following practices soon after application.

- Irrigate the beds with 1/2 inch of sprinkler irrigation and then put plastic down anytime during the 30-day treatment-to-planting interval.
- (or)
- If there is adequate existing soil moisture, apply plastic to the beds as soon as possible after application and allow the moisture which condenses and accumulates beneath the plastic to thoroughly wet the treated soil.

Mechanical incorporation of the fallow-bed treatment prior to laying plastic is not required. Not disturbing the soil surface may allow for extended weed control. Not incorporating increases the potential for crop injury, especially under wet conditions. Therefore, the treatment must be incorporated if the risk of crop injury is not acceptable. Follow the minimum treatment-to-planting intervals outlined below.

#### **Minimum Treatment-to-Planting Interval:**

	<b>A229.01 Use Rate</b>	
<b>Transplanted Crops</b>	<b>Up to 1 pt/acre</b>	<b>Up to 2 pt/acre</b>
<b>Pepper</b>	<b>30 days</b>	<b>30 days</b>
<b>Strawberries</b>	<b>30 days</b>	<b>30 days</b>

## Fallow Beds in Plastic Culture Prior to Transplant

### Florida, Georgia, North Carolina, South Carolina and Virginia Only

**A229.01** is effective as a preemergence broadcast or banded treatment to pre-formed beds as a fallow bed application prior to planting of peppers, strawberries or tomatoes grown in plastic culture. Plastic may be put down anytime during the 30-day treatment-planting interval. Incorporation of the fallow-bed treatment prior to laying plastic is not required and may allow extended weed control. However, not incorporating increases the potential for crop injury, especially under wet conditions. Therefore, the treatment must be incorporated if the risk of crop injury is not acceptable. Follow the minimum treatment-planting intervals outlined below.

#### Minimum Treatment-to-Planting Interval:

	<b>A229.01 Use Rate</b>	
<b>Transplanted Crops</b>	<b>Up to 1 pt/acre</b>	<b>Up to 2 pt/acre</b>
<b>Pepper</b>	<b>30 days</b>	<b>30 days</b>
<b>Strawberries</b>	<b>30 days</b>	<b>30 days</b>
<b>Tomato</b>	<b>30 days</b>	<b>30 days</b>

Partial List of Weeds Controlled: Pigweed, Ragweed, Nightshade, Florida pusley, Common purslane, Carolina geranium, Cutleaf evening primrose<sup>1</sup>.

<sup>1</sup>Requires maximum rate and/or multiple applications for effective control.

## Fallow Beds to be Planted to Corn

### Arkansas, Louisiana, and Mississippi Only

**A229.01** alone or in tank mix combination with glyphosate or paraquat is effective for the control of winter annual broadleaf weeds in fallow beds to be planted to corn. **DO NOT** apply this product within 7 days prior to planting. Once a fallow bed application is made, the soil surface must be left undisturbed for the period of time in which weed control is desired. If a fallow bed treatment is applied thirty or more days before planting corn and at least three significant rainfalls (0.25 inch or greater) have occurred following application, corn can be planted directly into the stale seedbed. Otherwise, the fallow bed treatment must be thoroughly incorporated into the soil to a depth of two inches or more prior to planting.

**Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.**

**Weeds Controlled: A229.01 provides preemergence and postemergence control of the following weeds when used at specified dosages and weed stage.<sup>1</sup>**

buttercup, smallflower	groundsel, common	purslane, common
cheeseweed (malva)	henbit	redmaids
eveningprimrose, cutleaf <sup>2</sup>	ladysthumb	rocket, London
fiddleneck, coast	minerslettuce	shepherdspurse
filaree, broadleaf	mustard species	sida, prickly
filaree, redstem	nettle, burning	sowthistle, annual
geranium, Carolina	oxalis	velvetleaf (wild cotton)
groundcherry, cutleaf	pigweed, redroot	

<sup>1</sup>Thorough spray coverage is essential for optimum postemergence activity of **A229.01**. For optimum postemergence control when applied by air, a tank mixture of **A229.01** with either glyphosate or paraquat is advised.

<sup>2</sup>Requires maximum rate for effective control.

## Application Rates (A229.01 Used Alone)

**A229.01** may be applied at 1 to 2 pints (0.25 to 0.5 lb active) per broadcast acre. The lower rate (1 pint per acre) provides up to 4 weeks of preemergence control of susceptible weeds and provide postemergence control of

susceptible weeds (up to 4-leaf stage). The higher rate (2 pints per acre) provides preemergence control of susceptible weeds for up to 8 weeks and postemergence control of susceptible weeds (up to 6-leaf stage). Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks following application.

#### **Tank Mixes with A229.01**

**Important:** Read and observe applicable use directions, precautions and limitation on the respective tank mix labels. In interpreting the labels of tank mix products, the most restrictive limitations must apply.

**Application Rates:** **A229.01** can be tank mixed with either glyphosate or paraquat to obtain postemergence control of annual grass weeds, volunteer grains and broadleaf weeds. One to 2 pints of **A229.01** (0.25 to 0.5 lb active) may be tank mixed with labeled rates of either glyphosate or paraquat, Apply at the specified rates and growth stages for susceptible weed species and in a manner consistent with the tank mix product label.

For enhanced contact activity (burndown/suppression) of either glyphosate or paraquat, **A229.01** at the rate of 0.219 to 0.438 pints per acre (0.05 to 0.1 lb. active) may be added to labeled rates of either glyphosate or paraquat. Apply at the specified rates and growth stages for susceptible weed species and in a manner consistent with the tank mix product label.

#### **Method of Application**

##### **Ground Application**

Apply **A229.01** in a spray volume of 20 or more gallons per acre with ground equipment. Increase the spray volume, if necessary, to ensure thorough coverage of existing weeds.

##### **Aerial Application**

Apply this product using swirl jet or hollow cone nozzles and a spray pressure less than 40 psi to deliver a minimum spray volume of 5 gallons per acre. Make applications at a height of 6 to 10 feet above the soil surface. **DO NOT** place the nozzles on the spray booms any closer to the wing or rotor tips than  $\frac{3}{4}$  of the span; this will minimize the formation of spray or wing tip vortice roll. Nozzles must be spaced and positioned to produce a uniform spray pattern and to minimize or eliminate the formation of droplets 100 microns or less in diameter. Carefully follow aerial application requirements and advisory information in the Fallow Bed section of the product label for **A229.01**.

#### **Fallow Bed - Specific Use Restrictions (Mississippi, Arkansas and Louisiana)**

In addition to the following, also observe Use Restrictions listed at the beginning of this label.

- **DO NOT** apply more than 2 pints (0.5 lb active) of **A229.01** per acre per year.
- **Chemigation:** **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply **A229.01** within 7 days before planting of corn.
- **DO NOT** use corn plants from a treated field for green chop, ensilage, forage or fodder.
- **A229.01** is phytotoxic to plant foliage. **DO NOT** apply when weather conditions favor drift. Avoid drift to all non-target areas.
- The use of any plants from a treated field for green chop, ensilage, forage or fodder or the feeding or grazing of animals on any treated area is prohibited; PHI is 60 days.
- **DO NOT** treat ditch banks or waterways with this product.

#### **Fallow Beds to be Planted to Field Corn**

##### **California Only**

**A229.01** is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate, paraquat or other registered postemergence herbicides for the control of winter annual broadleaf weeds in fallow beds to be planted to field corn.

Before planting field corn, treated soil must be thoroughly mixed to a depth of at least 2.5 inches. Failure to achieve thorough soil mixing may lead to crop injury and/or stand loss. Weed control must not be expected after soil incorporation.

If a fallow bed treatment is applied sixty days or more prior to planting and at least three significant rainfalls (0.25 inch or greater) have occurred following application, corn can be planted directly into the stale seedbed. At least 0.25 inch of irrigation or rainfall is required to activate **A229.01** and must occur within 3 to 4 weeks after application. If these conditions cannot be met, soil incorporation is required as directed above.

Use a tank mix with glyphosate, paraquat or another registered postemergence herbicide if the treatment area contains dense weed populations, oversized weed seedlings, volunteer grains or annual grasses.

**Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.**

**A229.01 Used Alone:** **A229.01** may be applied at 1 to 2 pints (0.25 to 0.5 lb. active) per acre. The lower rate (1.0 pint per acre) provides up to four weeks of preemergence control of susceptible weeds and provide postemergence control of susceptible weeds up to four-leaf stage. The higher rate (2.0 pints per acre) provides preemergence control of susceptible weeds for up to eight weeks and postemergence control of susceptible weeds up to six leaf-stage.

**Tank Mixes with A229.01:** When tank mixing, always read and follow all individual manufacturer's labels. In interpreting all labels for the tank mix, the most restrictive situations must apply. **A229.01** can be tank mixed with glyphosate, paraquat or other registered postemergence herbicides for postemergence control of annual weed grasses, volunteer grains and broadleaf weeds. Tank mix 1 to 2 pints (0.25 to 0.5 lb. active) of **A229.01** with labeled rates of glyphosate, paraquat or other registered postemergence products. Apply at the specified rates and growth stages to susceptible weed species in a manner consistent with the respective labels.

**Ground Application:** **A229.01** must be applied in a minimum of 20 gallons of water per acre. The volume of water used must be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment must be calibrated carefully before each use.

**Aerial Application:** **A229.01** may be aerially applied for weed control on fallow beds. Follow requirements for aerial application in the PRODUCT INFORMATION section of the main product label.

**Avoid Drift:** When applying to fallow beds, extreme care must be exercised to prevent spray drift, which could result in damage to other crops or desirable vegetation.

Crop injury may be enhanced if newly seeded crops are under stress due to drought, flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

#### **Restrictions (California Only)**

- Follow all applicable use directions, precautions, restrictions, and Worker Protection Standard requirements on the EPA registered label.
- **DO NOT** apply more than 2 pints (0.5 lb ai) per acre, per year.
- **DO NOT** apply more than 2 pints (0.5 lb ai) per acre per application.
- **DO NOT** apply **A229.01** within 60 days prior to planting of field corn.
- Before planting field corn, treated soil must be thoroughly mixed to a depth of at least 2.5 inches.
- **Chemigation:** Except if specified elsewhere in this label, **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** use on sweet corn.
- The use of any plants from a treated field for green chop, ensilage, forage or fodder or the feeding or grazing of animals on any treated area is prohibited.
- Application may be made in a minimum of 20 gal of water/A using ground equipment or 5 gal/A by air. Applications may be made alone or as a tank mix with other herbicides.



## Ground or Aerial Application of A229.01 on Fallow Beds to Cotton or Soybeans

### Not for Use on Fallow Beds to be Planted to Soybeans in California

For Use in Alabama, Arkansas, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia

**A229.01** is effective as a preemergence and/or postemergence herbicide when used alone or in a tank mix combination with glyphosate (Glyphomax, 62719-323) or paraquat for the control of winter annual broadleaf weeds in fallow beds to be planted to either cotton or soybeans.

**Weeds Suppressed by Preemergence Application:** **A229.01** may be applied at 1 to 2 pints (0.25 to 0.5 lb ai) per broadcast acre. **A229.01** provides preemergence suppression of the following weeds when used at specified dosages and weed stage.

horseweed (marestail)  
ryegrass, Italian

*Conyza canadensis*  
*Lolium multiflorum*

## Fallow Land

### For Use Only in Idaho, Oregon and Washington

Used alone or in a tank mix combination with glyphosate, **A229.01** provides preemergence and/or postemergence control of listed annual broadleaf weeds in a fallow land system. **A229.01** may be used to reduce weed growth prior to the establishment of a dry soil mulch. Use is restricted to summer fallow on land that will be planted the following year to winter wheat, barley or oats.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	0.5 – 2 (0.125 – 0.5 lb ai)	<b>A229.01 Alone:</b> Preemergence weed control occurs as seedling weeds come in contact with the soil-applied herbicide during emergence. Postemergence weed control is most effective when <b>A229.01</b> is applied to seedling weeds less than 4 inches in height. Apply <b>A229.01</b> in 15 or more gallons of water per acre and increase spray volume if weed growth is dense. Use an 80% active non-ionic surfactant cleared for use on growing crops for optimum postemergence weed control.
<b>Tank Mixing:</b> For postemergence control of annual grass weeds, 0.5 - 2 pt (0.125 – 0.5 lb ai)/acre of <b>A229.01</b> may be tank mixed with labeled rates of glyphosate. Follow label instructions for Fallow and Reduced Tillage Systems for the glyphosate product. Refer to Mixing Directions section for Tank Mixing Precautions.		
<b>Use Restrictions for Fallow Land:</b> <ul style="list-style-type: none"><li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) per acre per application.</li><li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per year.</li><li>• <b>DO NOT</b> make more than 4 applications per acre per year when using reduced application rates.</li></ul>		

**Key Weeds Controlled:** **A229.01** provides preemergence and postemergence control of the following weeds on fallow land:

fiddleneck, coast henbit lettuce, prickly (china lettuce) mustard, blue (purple mustard) mustard, tumble (Jim hill mustard)	pigweed, redroot purslane, common shepherdspurse sowthistle, annual
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## Garbanzo Beans

For Use Only in Arizona and California

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1 (0.25 lb ai)	Apply after planting but prior to weed or crop emergence as a single broadcast application using a spray volume of 20 or more gallons of water per acre.
<b>Precautions:</b> <ul style="list-style-type: none"><li>Garbanzo beans are resistant to preemergence application of <b>A229.01</b>, however, under certain conditions, severe but temporary crop injury may occur. A heavy splashing rain shortly after crop emergence or wet soil conditions during early growth stages can cause leaf cupping, crinkling, stunting or defoliation of the garbanzo seedlings. Injury, when it occurs, it is usually limited to the first few leaves that develop after plants emerge from the soil. Delays in crop development and/or maturity may result, but Garbanzo beans do recover with little to no impact on yield.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li><b>DO NOT</b> apply more than 1 pint (0.25 lb ai) per acre of <b>A229.01</b> per application.</li><li><b>DO NOT</b> apply more than 1 pint (0.25 lb ai) per acre of <b>A229.01</b> per year.</li><li><b>DO NOT</b> make more than 1 application per acre per year.</li><li><b>DO NOT</b> use bean vines for livestock feed or hay.</li></ul>		

### Key Weeds Controlled:

<b>Preemergence</b>
groundsel, common mallow, little rocket, London sheperdspurse

## Garlic

<b>Agricultural Use Requirements:</b> <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 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, including plants, soil or water, is: <ul style="list-style-type: none"><li>Coveralls</li><li>Chemical-resistant footwear plus socks</li><li>Chemical-resistant gloves made of any waterproof material</li><li>Shoes plus socks</li></ul>
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For optimum preemergence weed control, the soil surface must be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

<b>Direct-Seeded Garlic (Postemergence Application):</b>		
<b>Weed Control</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Postemergence	0.125 – 0.25 (0.03 – 0.06 lb ai)	<b>Northeastern States Including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Apply <b>A229.01</b> at 0.125 to 0.25 pint (0.03 – 0.06 lb ai) per acre to direct-seeded garlic that has at least 3 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.125 to 0.25 pint (0.03 – 0.06 lb ai) per acre may be applied up to a maximum of 2 pints or 32 fl oz (0.5 lb ai) per acre per year. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4 leaf stage and actively growing. Application to weeds at later than 4 leaf growth stage may result in reduced weed control.
Postemergence	0.5 – 1 pt (0.125 – 0.25 lb ai)	<b>Arizona, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:</b> Apply <b>A229.01</b> at 0.5 to 1 pt (0.125 – 0.25 lb ai) per acre to direct seeded garlic that has at least 2 fully- developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.5 to 1 pt (0.125 – 0.25 lb ai) per acre may be applied up to a maximum of 2.0 pints (0.5 lb ai) per acre per year. For optimum postemergence weed control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.  <b>Post-directed Treatment Application (Nevada Only):</b> Apply <b>A229.01</b> as a post-directed to garlic that is at least 12 inches tall. Accurate, uniform placement of directed postemergence sprays is essential for effective weed control and to minimize injury to garlic. Use low-pressure sprays and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. For optimum postemergence control, apply when susceptible weeds are in the 2-to 4-leaf stage and actively growing. Application at later than 4-leaf growth stage may result in reduced weed control.
Postemergence	0.5 pt (0.125 lb ai)	<b>All Other States:</b> Apply <b>A229.01</b> at 0.5 pt (0.125 lb ai) per acre to seeded garlic that has at least 2 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.5 pt (0.125 lb ai) per acre may be applied up to a maximum of 2 pints (0.5 lb ai) per acre per year. For optimum postemergence control, apply when

		susceptible weeds are in the 2-to 4-leaf stage and actively growing. Application to weeds at later than the 4-leaf growth stage may result in reduced weed control.
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<b>Direct-Seeded Garlic (California Only):</b>		
<b>Weed Control</b>	<b>Rate (per acre)</b>	<b>Specific Use Directions</b>
Preemergence Postemergence	1 pt (0.25 lb ai)	<p><b>Application after planting but prior to garlic emergence:</b> Apply <b>A229.01</b> after planting, but prior to crop emergence, for preemergence control of listed broadleaf and grass weeds using ground, air or sprinkler irrigation (chemigation).</p> <p><b>Aerial application:</b> Apply in a minimum spray volume of 10 gallons per acre. Follow Aerial Application instructions and precautions in the Product Information section of this label.</p> <p><b>Postemergence and directed application:</b> Apply <b>A229.01</b> as a directed spray to garlic that is at least 12 inches tall. Accurate, uniform placement of directed postemergence sprays is essential for effective weed control and to minimize injury to garlic. Use low-pressure sprays and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application at later than 4-leaf growth stage may result in reduced weed control.</p> <p><b>Sprinkler irrigation (portable lateral or solid set) preemergence or postemergence:</b> Apply <b>A229.01</b> at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Apply after planting but prior to garlic emergence or postemergence when garlic is at least 12 inches tall. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.</p>
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>• <b>Garlic Response to Preemergence Applications of A229.01:</b> Following a preemergence application of <b>A229.01</b>, a chlorotic band around some of the leaves may be observed after the first irrigation (or rainfall) following garlic emergence.</li> <li>• <b>Garlic Response to Post-direct Applications of A229.01:</b> Post-direct applications may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms will be more severe if applications are made during cool, wet, overcast, or foggy weather. Garlic will typically outgrow these conditions. A delay in crop development, maturity, reduced yields, or quality may result.</li> </ul>		

Transplanted Garlic: Postemergence Application Immediately after Planting		
Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.125 – 0.25 (0.03 – 0.06 lb ai)	<b>Northeastern States, including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 0.125 to 0.25 (0.03 – 0.06 lb ai) per acre may be applied up to a maximum of 2 pints or 32 fl oz (0.5 lb ai) per acre per year.
Postemergence	up to 2 pt (0.5 lb ai)	<b>All States Except Northeastern States:</b> Transplanted garlic is most resistant of a postemergence application immediately after transplanting. An application of up to 2 pints (0.5 lb ai) per acre may be made within two days after transplanting. If less than 2 pints per acre is applied, a second application can be made two weeks or more after transplanting. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. <b>DO NOT</b> exceed the maximum use rate of 2 pints (0.5 lb ai) per acre of <b>A229.01</b> per year as a result of multiple applications.

#### Key Weeds Controlled:

canarygrass (annual)	puncturevine
eveningprimrose, cutleaf	purslane, common <sup>1</sup>
groundsel, common	rocket, London
mallow, little (malva)	sage, lanceleaf
nightshade, black	shepherdspurse <sup>1</sup>
pigweed, prostrate <sup>1</sup>	sowthistle, annual
pigweed, redroot <sup>1</sup>	

<sup>1</sup>Key weeds controlled at specified rates in Northeastern States.

Garlic - Crop-Specific Precaution (Postemergence Application):
<ul style="list-style-type: none"> <li>Postemergence applications of <b>A229.01</b> may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms may be more severe if garlic emerged under cool, wet, overcast, or foggy weather. These conditions are temporary and must not affect the vigor or development of garlic plants.</li> </ul>

Garlic - Crop-Specific Restrictions (Applicable to All Methods of Application):
<ul style="list-style-type: none"> <li>In all states <b>except</b> Northeastern states, <b>DO NOT</b> apply until direct seeded garlic plants have two (2) fully- developed true leaves. In the Northeastern states, <b>DO NOT</b> apply until direct seeded garlic plants have three (3) fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury.</li> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) per acre of <b>A229.01</b> per year.</li> <li><b>DO NOT</b> make more than 2 application per acre per year when using reduced application rates.</li> <li><b>DO NOT</b> apply within 60 days of harvest.</li> <li>In direct-seeded garlic (except in California), <b>DO NOT</b> apply <b>A229.01</b> as a preemergence treatment.</li> <li>Use only on dry bulb garlic.</li> <li><b>DO NOT</b> apply to garlic grown for seed.</li> <li>For weed control in Garlic, <b>DO NOT</b> mix <b>A229.01</b> with oils, surfactants, liquid fertilizers or pesticides except if specified on approved Atticus, LLC Supplemental Labeling.</li> <li><b>DO NOT</b> apply to garlic plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.</li> </ul>

## Grasses Grown for Seed (Established Perennial)

For Use Only in Oregon, Washington and Idaho

Weed Control	Rate (pt/acre)	Specific Use Directions
Late preemergence to Early postemergence Fine fescues (Chewings, creeping red, and hard types)	0.5 (0.125 lb ai)	Make a single application of <b>A229.01</b> at 0.5 pints (0.125 lb ai) per acre per year. The application must be applied before the weed seedlings to be controlled exceed the two-leaf growth stage ( <b>Use Period: September 1 to December 15</b> ).
Late preemergence to Early postemergence Kentucky bluegrass, tall fescue, orchardgrass, bentgrass, perennial ryegrass	0.5 – 1.5 (0.125 – 0.375 lb ai)	<p>Apply as a broadcast application in a minimum spray volume of 20 gallons of water per acre. Use conventional ground spray equipment with flat fan spray nozzles at a minimum spray pressure of 30 psi. <b>DO NOT</b> exceed maximum spray pressure of 60 psi. Spray equipment must be calibrated prior to application. Select an application rate based on soil conditions, weed spectrum, weed stage of growth and/or desired period of residual weed control. The maximum rate of 1.5 pints of <b>A229.01</b> may be split, however, the initial application must be applied before the weed (or volunteer grass) seedlings to be controlled exceed the 2-leaf growth stage and no later than December 15. The final application must be completed prior to January 15. A maximum of 1.5 pints (0.375 lb. ai) of <b>A229.01</b> per acre may be applied per year.</p> <p>Early treatment is important for control of seedling grasses. Apply <b>A229.01</b> at the onset of grass seed germination during the initial fall rains or fall sprinkler irrigation (late preemergence). Application at the 1-leaf growth stage (early postemergence) may provide somewhat better control of volunteer crop seedlings than application at the 2-leaf stage. Ample soil moisture soon after application is required for optimum performance against seedling grasses.</p> <p><b>A229.01</b> will not control established perennial grasses or seedlings of most annual and perennial grasses beyond the six-leaf stage of growth. Applications to seedling grass weeds between the 2- and 6-leaf stage may result in partial control but vary with weed species. Single applications made to seedlings between the 2- and 6-leaf growth stages will cause injury and stunting, but re-growth will usually occur. If seedlings have not died within 3 to 4 weeks after treatment and healthy green regrowth is visible, a second application may be needed.</p> <p><b>Surfactant</b> For improved control of emerged weed seedlings, an 80% active non-ionic surfactant cleared for application to growing crops may be added at a rate of 0.12 to 0.5% spray volume (1 to 4 pints/100 gal).</p>
<p><b>Precautions:</b> <b>Crop Resistance</b> The application of <b>A229.01</b> to established perennial grass will result in a chlorosis (yellowing) within two weeks after treatment. These symptoms may be present for up to three months following application. The application</p>		

of **A229.01** may also result in a substantial reduction in vegetative growth of perennial grasses during the winter. Leaf chlorosis and reduction of vegetative growth is a typical and normal response, however, the seed yield from healthy, vigorous perennial grasses has not been affected by fall application of **A229.01**. It is accepted by the grower that conditions under which seed yield may be reduced are not fully understood. Grazing may also magnify crop injury and reduce the seed yield.

Crop resistance to **A229.01** can be improved by limiting the amount of leaf tissue present on established perennial grasses at time of application by such methods as propane flaming, intensive mechanical clipping (crew-cutting), or livestock grazing prior to application.

Tank mixtures and/or sequential applications of **A229.01** with other herbicide products registered for use on grasses grown for seed may result in increased injury or stand loss. If a tank mixture is applied, applications must be made only to healthy, vigorous stands of perennial grasses. The decision to apply a tank mixture containing **A229.01** is at the sole discretion of the grower and at the grower's risk.

**Crop-Specific Restrictions:**

- **Chemigation: DO NOT** apply this product through any type of irrigation system.
- **A229.01** must be applied using ground equipment only.
- **DO NOT** apply more than 1.5 pints (0.375 lb ai) of **A229.01** per acre per application.
- **DO NOT** apply more than 1.5 pints (0.375 lb ai) of **A229.01** per acre per year.
- **DO NOT** make more than 2 applications per acre per year when using reduced application rates.
- **DO NOT** make more than 1 application per year to fine fescues.
- **DO NOT** apply **A229.01** within 150 days of harvesting grass hay in Oregon or within 365 days of harvesting grass hay in Idaho and Washington.
- **DO NOT graze fields that have been treated with A229.01 within 150 days of treatment in Oregon or within 365 days of treatment in Idaho and Washington as illegal residues may be present in the vegetative foliage.**

**Weeds Suppressed and/or Controlled**

**A229.01** will control or suppress the following weeds and volunteer crops when applied between the onset of germination and the two-leaf seedling growth stage:

Common Name	Scientific Name
Bentgrass	<i>Agrostis</i> spp.
Bluegrass, Annual	<i>Poa annua</i>
Bluegrass, Kentucky	<i>Poa pratensis</i>
Bluegrass, Roughstalk	<i>Poa trivialis</i>
Brome, California (mountain) <sup>1</sup>	<i>Bromus carinatus</i>
Fescue, Fine (creeping red and Chewings)	<i>Festuca rubra</i>
Fescue, Hard	<i>Festuca longifolia</i>
Fescue, Rattail	<i>Vulpia myuros</i>
Fescue, Tall	<i>Festuca arundinacea</i>
Orchardgrass	<i>Dactylis glomerata</i>
Rye grass, Italian	<i>Lolium multiflorum</i>
Rye grass, Perennial <sup>1</sup>	<i>Lolium perenne</i>

<sup>1</sup>These species are suppressed but not fully controlled by **A229.01**.

**Grasses Grown for Seed**  
**(Fall Seeded New Plantings of Perennial Ryegrass and Tall Fescue)**  
**For Use Only in Oregon**

Weed Control	Rate (per acre)	Specific Use Directions
Early postemergence	0.125 – 0.188 pint (0.03 – 0.05 lb ai)	<p>Use <b>A229.01</b> for early postemergence suppression/control of various annual broadleaf weed seedlings in fall seeded perennial ryegrass or tall fescue that has at least 1 to 2 tillers. Applications to seedling plants that have not yet tillered, may result in severe crop injury or stand loss (plant death).</p> <p>Apply a single application of <b>A229.01</b> either alone or tank mixed with up to 3 pints (0.75 lb ai) per acre of Nektron SC (Ethofumesate, 91234-195). Some temporary crop injury may occur, but is typically only a transient effect and should not adversely impact yield. <b>DO NOT</b> apply to newly planted stands that are under stress from any cause as there is an enhanced opportunity for crop injury to occur. Control from the <b>A229.01</b> is primarily directed at emerged seedling broadleaf weeds including speedwell and groundsel, but control or suppression of other species is possible if tank mixed with Nektron SC. Overlaps (2X applications) will cause significant crop injury but must not result in excessive stand losses if the crop plants are at least 1 to 2 tillers when the applications are made.</p> <p>Tank mixtures of <b>A229.01</b> with Nektron SC may result in enhanced crop injury. If a tank mixture is to be applied, applications must be made only to healthy, vigorous stands of perennial grasses. The decision to apply a tank mixture containing <b>A229.01</b> is at the sole discretion of the grower and at the grower's risk.</p> <p>Apply as a broadcast application in a minimum spray volume of 20 gallons of water per acre. Use conventional ground spray equipment with flat fan spray nozzles at the manufacturer's specified spray pressure. Calibrate spray equipment before each use.</p> <p><b>Use of Surfactant:</b> An 80 percent active non-ionic surfactant cleared for application to growing crops may be added at a rate of 0.12 to 0.5 percent spray volume for improved control of emerged seedlings.</p>
<p><b>Precautions:</b></p> <p><b>Crop Resistance:</b> The application of <b>A229.01</b> to fall seeded perennial ryegrass and tall fescue (that have at least 1 to 2 tillers) will result in chlorosis (yellowing) of the foliage within two weeks after treatment. Some symptoms may be present for up to three months following application. The use of <b>A229.01</b> may also result in a substantial reduction in vegetative growth by perennial grasses during the winter. Leaf chlorosis and reduction of vegetative growth is a typical and normal response and seed yield of healthy, vigorous perennial grasses is typically not affected by fall application of <b>A229.01</b>. It is accepted by the grower that conditions under which seed yield may be reduced are not fully understood and that a reduction in seed yield may occur.</p>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li><b>Chemigation: DO NOT</b> apply this product through any type of irrigation system.</li> </ul>		



- **DO NOT** apply more than 0.188 pints (0.05 lb ai) of **A229.01** per acre per application.
- **DO NOT** apply more than 0.188 pints (0.05 lb ai) of **A229.01** per acre per year.
- **DO NOT** make more than 2 applications per year when using reduced application rates.
- **DO NOT** graze livestock in treated fields within 150 days of application.
- **DO NOT** apply **A229.01** within 150 days of harvest.
- **A229.01** must be applied only by ground application equipment.
- **DO NOT graze fields that have been treated with A229.01 as illegal residues may be present in the vegetative forage.** Grazing may also magnify crop injury and reduce the seed yield.

**Weeds Suppressed and/or Controlled:** **A229.01** will provide control or suppression of the following weeds and volunteer crops when applied between the onset of germination and the two-leaf seedling growth stage:

Common Name	Scientific Name
Groundsel, Common	<i>Senecio vulgaris</i>
Speedwell	<i>Veronica</i> spp.

### Guava (Bearing and Non-Bearing)

For Use Only in Hawaii

or Use Only in Hawaii

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	5 – 8 (1.25 – 2.0 lb ai)	<b>Preemergence or Postemergence:</b> In established guava plantings, apply preemergence or postemergence to weeds. Increase the spray volume to ensure adequate coverage in high densities of emerged weeds or heavy trash. Minimize contact with guava plants by directing the spray to the soil surface. Spray shields are suggested to minimize spray contact in young plantings.  For broader spectrum postemergence control of grass and broadleaf weeds, <b>A229.01</b> may be applied in tank mix combination with paraquat or glyphosate. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products.
Postemergence	2 – 8 (0.5 – 2.0 lb ai)	
<b>Precautions:</b> <ul style="list-style-type: none"><li>• Prevent direct spray or drift from contacting green stems, fruit or foliage, as injury may result.</li><li>• Alone or in tank mix combination, <b>A229.01</b> must be applied to only healthy growing trees.</li><li>• Application of <b>A229.01</b> must be made only after new foliage growth has hardened off.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li>• <b>DO NOT</b> apply more than 8 pints (2 lb ai) per acre of <b>A229.01</b> per application.</li><li>• <b>DO NOT</b> apply more than 16 pints (4.0 lb ai) of <b>A229.01</b> per year.</li><li>• <b>DO NOT</b> make more than 4 applications per acre per year.</li><li>• <b>DO NOT</b> apply <b>A229.01</b> within 1 day of harvest.</li></ul>		

### Key Weeds Controlled:

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

## Horseradish

**Agricultural Use Requirements:** **DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 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, including plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2 (0.5 lb ai)	Apply <b>A229.01</b> after the horseradish roots have been planted but prior to emergence of new horseradish leaves. Emerged leaves that receive direct or indirect spray (drift) contact will be injured. If necessary, cultivate before application to destroy germinated weeds.
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per crop.</li> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> make more than 1 application per acre per year.</li> <li>• <b>DO NOT</b> apply <b>A229.01</b> to horseradish plantings that have been weakened or stressed due to unfavorable temperature conditions, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.</li> </ul>		

### Key Weeds Controlled:

lambsquarters, common pigweed, redroot purslane, common	sheperdspurse smartweed, Pennsylvania
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## Jojoba

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p>Initial application may be made when jojoba plants have reached a height of 6 inches or more. Use sufficient spray volume to ensure thorough coverage of dense weed growth. Sprays must be directed to the base of jojoba plants to avoid possible phytotoxicity to foliage. Spray shields are suggested for use in young plantings. Use higher rate in rate range for extended residual preemergence weed control. Make followup applications as necessary to maintain weed control.</p> <p>For early postemergence control of susceptible seedling weeds (less than 8 inches tall) apply <b>A229.01</b> at the rate of 4 pints per acre. <b>A229.01</b> may be applied at the rate of 6 pints per acre for postemergence control of weeds up to 12 inches tall. For optimum residual control, apply during the fall or winter months. Control may be unsatisfactory for weeds greater than 12 inches tall.</p>

**Precautions:**

- Avoid direct spray or drift contact with jojoba flowers or buds as severe injury may result.
- Over-the-top applications may cause burning, crinkling or bronzing of jojoba foliage, particularly to the youngest leaves, flowers, or buds present at the time of application.

**Crop-Specific Restrictions:**

- **DO NOT** apply more than 6 pints (1.5 lb ai) of **A229.01** per acre per application.
- **DO NOT** apply more than 6 pints (1.5 lb ai) of **A229.01** per acre per year.
- **DO NOT** make more than 2 applications per acre per year when using reduced application rates.

**Key Weeds Controlled:**

Preemergence	Postemergence
burclover	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf <sup>2</sup>
filaree, broadleaf	filaree, redstem <sup>2</sup>
filaree, redstem	filaree, whitestem <sup>2</sup>
filaree, whitestem	groundsel, common <sup>1</sup>
groundsel, common	henbit
henbit	mallow, little (malva, cheeseweed)
knotweed, prostrate	minerslettuce
lambsquarters, common	nettle, burning
lettuce, prickly	pigweed, redroot <sup>1</sup>
mallow, little (malva, cheeseweed)	redmaids
pigweed, redroot	shepherdspurse
purslane, common	sowthistle, annual
redmaids	
rocket, London	
shepherdspurse	
sowthistle, annual	

<sup>1</sup>Highest rate may be required for acceptable postemergence control.

<sup>2</sup>**A229.01** at the 6-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

**Mint (Spearmint and Peppermint)**

Mint (Spearmint and Peppermint) Grown on Mineral Soils		
Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p><b>Oregon and Washington (East of Cascades), California, Montana, Idaho, Nevada, South Dakota and Utah:</b> Apply from December through March when mint is dormant. When used postemergence (to weeds), add an 80% active ingredient non-ionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.</p> <p>Late winter applications will provide maximum activity on summer weeds, but summer grass control may be inconsistent. For best results, fall-plowed fields must be harrowed to provide a smooth surface for application. In furrow-irrigated fields, corrugating must be done prior to application. Corrugating or harrowing will result in</p>

		disturbance of treated soil or movement of untreated soil into treated areas, resulting in poor weed control.
Preemergence	2 – 3 (0.5 – 0.75 lb ai)	<b>Peppermint (Western Oregon Willamette Valley):</b> Apply <b>A229.01</b> from November through February to dormant peppermint only. Treatments in January or February generally provide better residual preemergence control of annual broadleaf weeds. Full season weed control must not be expected from this treatment.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Application must be made prior to emergence of new spring growth or severe crop injury may result.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li><b>DO NOT</b> make more than 1 application of <b>A229.01</b> per year.</li> <li><b>In the Willamette valley, DO NOT apply A229.01 to mint that has been plowed.</b></li> <li>Apply <b>A229.01</b> only to healthy stands of spearmint and peppermint. <b>DO NOT</b> apply to spearmint or peppermint weakened by disease, drought, flooding, excessive fertilizer, soil salts, previously applied pesticides, nematodes, insects, or winter injury, as severe injury may result.</li> </ul>		

#### Key Weeds Controlled:

bedstraw, catchweed bluegrass, annual <sup>1</sup> flixweed groundsel, common lambsquarters, common lettuce, prickly (china lettuce) mustard, blue (purple mustard) mustard, tumble (Jim hill mustard) nightshade, hairy	oats, wild <sup>1</sup> orach, red pepperweed, yellowflower pigweed, redroot ryegrass, Italian <sup>1</sup> shepherdspurse sowthistle, annual tansymustard thistle, Russian
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<sup>1</sup>Control of annual grasses is best obtained when **A229.01** is applied prior to emergence. Postemergence control of winter annual grasses is generally unsatisfactory if applications are made after the 1 to 2-leaf stage.

<b>Mint (Spearmint and Peppermint) Grown on Muck Soils: For Use Only on Mint Grown in Indiana, Michigan, Montana, North Dakota, South Dakota, and Wisconsin</b>		
<b>Weed Control</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p><b>Note:</b> Use directions in this section apply only to spearmint and peppermint grown on muck soils (organic matter content of 20% or greater).</p> <p>When used postemergence (to weeds), add an 80% active ingredient non-ionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.</p>
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Application must be made prior to emergence of new spring growth or severe crop injury may result.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li><b>DO NOT</b> make more than 1 application of <b>A229.01</b> per year.</li> </ul>		

- To avoid excessive crop injury, **DO NOT** apply within 4 days of planting (sprigging) spearmint or peppermint.
- Apply **A229.01** only to healthy spearmint or peppermint. **DO NOT** apply to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.

#### Key Weeds Controlled:

Knotweed, prostrate  
pigweed, redroot  
purslane, common

#### Non-Crop Use

(Non-Food-Producing, Non-Cultivated Agricultural or Non-Agricultural Areas, Highway and Utility Rights-of-Way, Roadways, Industrial Sites, Tank Farms, Storage Areas, Airports, Fencerows, Levee Banks (use only on the side of levee away from water channels) and Farmsteads)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	5 – 8 (1.25 – 2.0 lb ai)	<b>Preemergence:</b> Use higher rate in rate range for longer residual control.
Postemergence	2 – 8 (0.5 – 2.0 lb ai)	<b>Postemergence:</b> Use the lower rate in the rate range for control of susceptible weeds in the early postemergence stage, less than 4 inches tall. Use the higher rate for weeds up to 12 inches tall. Application to weeds beyond the 4-inch stage may result in partial control.
<b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. <ul style="list-style-type: none"> <li>• <b>Preemergence:</b> For broader-spectrum residual preemergence weed control, <b>A229.01</b> may be applied in tank mix combination diuron (Karmex) or simazine.</li> <li>• <b>Postemergence:</b> For additional postemergence control of susceptible grass and broadleaf weeds, <b>A229.01</b> may be applied in tank mix combination with paraquat or glyphosate.</li> </ul>		
<b>Site-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> feed or allow animals to graze on any areas treated with <b>A229.01</b>.</li> <li>• <b>DO NOT</b> apply more than 8 pints (2.0 lb ai) per acre in a single application.</li> <li>• <b>DO NOT</b> apply more than 16 pints (4.0 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> make more than 4 application per acre per year.</li> </ul>		

#### Key Weeds Controlled:

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf
filaree, broadleaf	filaree, redstem
filaree, redstem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	purslane, common
pigweed, redroot	redmaids
purslane, common	shepherdspurse
redmaids	sowthistle, annual
rocket, London	

shepherdspurse sowthistle, annual	
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In addition to the above weeds, **A229.01** also controls the following weeds:

**Mile-A-Minute (Connecticut and Pennsylvania)**

**A229.01** is advised for postemergence and preemergence control of Mile-a-Minute. **A229.01** is advised for postemergence control at 2 pints (0.5 lb. ai) per broadcast acre. This rate is advised for the control in the early postemergence stage (up to 4-leaf stage) in height. If applied to seedlings greater than the 4 leaf stage, the degree of suppression/burn down of existing growth is dependent on thorough and complete spray coverage of the weed. For preemergence control, **A229.01** is advised at 2 pints (0.5 lb. active) per broadcast acre.

For the greatest benefit of **A229.01** for preemergence control, adequate coverage of the soil and vegetative trash is required. Control of escape Mile-a-Minute seedlings must be obtained through postemergence applications of **A229.01**. **DO NOT** apply more than 2 pints (0.5 lb. ai) of **A229.01** per broadcast acre as a single application or more than 4 pints (1.0 lb. ai) per broadcast acre per year as a result of multiple applications. It is advised that Latron AG-98 or a comparable 80% active non-ionic surfactant be added to the spray mixture at a rate of 9.8 mls (2 teaspoons or 0.4 fluid ounces) per 1 gallon of spray.

**A229.01** must be applied in a minimum of 40 gallons of water per acre. Best preemergence results are achieved when spray is applied to a relatively weed-free soil surface. The volume of water used must be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan nozzles. Spray equipment must be calibrated carefully before each use.

Weed Stage	Gallons of Water Per Acre
Early Postemergence (weeds up to 4-leaf stage)	40 or more
Postemergence (weeds up to 8-leaf stage)	100 or more
Preemergence	40 or more

**Witchweed (North Carolina and South Carolina)**

**A229.01** is advised for postemergence and preemergence control of witchweed (*Striga asiatica*). **A229.01** is advised for postemergence control at 2 to 4 pints (0.5 to 1.0 lb. ai) per broadcast acre. Higher rates must be used for the control of dense populations of witchweed or where large witchweed plants are present. It is advised that Latron AG-98 or a comparable 80% active non-ionic surfactant be added to the spray mixture at a rate of 0.125% v/v (1 pint per 100 gallons of spray mix).

**A229.01** must be applied to witchweed plants before blooms form, to prevent the production of viable seed. Apply in a minimum of 10 gallons of water per acre. The volume of water used must be increased as the weeds become taller and more dense. Use a low-pressure sprayer equipped with flat fan or whirl chamber nozzles. Spray equipment must be calibrated carefully before each use.

**Onions**

**Agricultural Use Requirements: DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 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, including plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

For optimum preemergence weed control, the soil surface must be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices that result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control. For best results, make applications to established beds that are left undisturbed during the time period for which weed control is desired.

<b>Direct-Seeded Onions: Postemergence Application</b>		
<b>Weed Control</b>	<b>Rate (per acre)</b>	<b>Specific Use Directions</b>
Postemergence	0.125 – 0.25 (0.03 – 0.06 lb ai)	<b>Northeastern States Including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Apply <b>A229.01</b> at 0.125 to 0.25 pint (0.03 – 0.06 lb ai) per acre to seeded onions that have at least 3 fully-developed true leaves using ground equipment. Multiple treatments at 0.125 to 0.25 pint (0.03 – 0.06 lb ai) per acre may be applied up to a maximum of 2 pints or 32 fl oz (0.5 lb ai) per acre per year. For optimum postemergence control, apply when susceptible weeds are in the 2-to 4-leaf stage and actively growing.
Postemergence	0.5 – 1 (0.125 – 0.25 lb ai)	<b>Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:</b> Apply <b>A229.01</b> at 0.5 to 1 pt (0.125 – 0.25 lb ai) per acre to direct-seeded onions that have at least 2 fully developed true leaves, using ground equipment. Multiple treatments at 0.5 to 1 pt (0.125 – 0.25 lb ai) per acre may be applied up to a maximum of 2 pints (0.5 lb ai) per acre per year. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.5 (0.125 lb ai)	<b>All other states:</b> Apply <b>A229.01</b> at 0.5 pt (0.125 lb ai) per acre to direct seeded onions that have at least 2 fully developed true leaves using ground equipment. Multiple treatments at 0.5 pt (0.125 lb ai) per acre may be applied up to a maximum of 2 pints (0.5 lb ai) per acre per year. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4 leaf stage and actively growing.
Postemergence	(see above)	<b>Sprinkler Irrigation - all except Northeastern states (center pivot, portable lateral or solid set):</b> Apply <b>A229.01</b> at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Transplanted Onions: Application Immediately before Planting		
Weed Control	Rate (per acre)	Specific Use Directions
Preemergence Postemergence	1 - 2 pt (0.25 – 0.5 lb ai)	<b>Pre-transplant application (not for use in Northeastern states or Western states: A229.01</b> may be applied as a broadcast or band application after completion of tillage operations, but before transplanting of onion plants. Transplanting must be accomplished with a minimum of soil disturbance. For optimum weed control, soil surfaces must be left undisturbed after transplanting for the period for which weed control is desired. However, timely cultivation after weed emergence will assist in weed control. If less than 2 pt per acre was applied as a pre-transplant application, postemergence applications may be made as instructed for seeded onions. <b>DO NOT</b> exceed the maximum use rate of 2 pt (0.5 lb ai) per acre per year as a result of multiple applications.

Transplanted Onions: Application Immediately after Planting		
Weed Control	Rate (per acre)	Specific Use Directions
Preemergence	up to 2 pt (0.5 lb ai)	<b>All states except Northeastern states:</b> Transplanted onions are most resistant to a postemergence application immediately after transplanting. An application of up to 2 pints (0.5 lb ai) per acre may be made within two days after transplanting. If less than 2 pints (0.5 lb ai) per acre is applied, a second application can be made two weeks or more after transplanting. <b>DO NOT</b> exceed the maximum use rate of 2 pints (0.5 lb ai) per acre of <b>A229.01</b> per year as a result of multiple applications.
Postemergence	0.125 – 0.25 0.03 – 0.06 lb ai)	<b>Northeastern states including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 0.125 to 0.25 pint (0.03 – 0.06 lb ai) per acre may be applied up to a maximum of 2 pints or 32 fl oz (0.5 lb ai) per acre per year.

Onions - Use Precautions (applicable to all areas and methods of application):	
<ul style="list-style-type: none"> <li><b>A229.01</b> can cause necrotic lesions, twisting, pigtailings or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.</li> </ul>	
Onions - crop-specific restrictions (applicable to all areas and methods of application):	
<ul style="list-style-type: none"> <li>In all states <b>except</b> Northeastern states, <b>DO NOT</b> apply until <b>direct-seeded</b> onion plants have at least two (2) fully-developed true leaves. In the Northeastern states, <b>DO NOT</b> apply until direct seeded onion plants have at least three (3) fully-developed true leaves. Application made prior to the specified growth stage may result in serious crop injury.</li> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) per acre of <b>A229.01</b> per year.</li> <li><b>DO NOT</b> make more than 4 applications per acre per year when using reduced application rates.</li> <li><b>DO NOT</b> apply within 45 days of harvest.</li> </ul>	



- **DO NOT** apply **A229.01** as a preemergence treatment to direct-seeded onions.
- Use only on dry bulb onions.
- **DO NOT** apply to onions grown for seed, except as instructed in separate use directions.
- Tank mixtures of **A229.01** with oils, surfactants, liquid fertilizers or other pesticides may be made but could result in enhanced crop response/injury and are the responsibility of the user.
- **DO NOT** apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases

#### Key Weeds Controlled:

Postemergence
canarygrass (annual) eveningprimrose, cutleaf <sup>(a)</sup> groundsel, common mallow, little (malva) nightshade, black pigweed, prostrate <sup>(b)</sup> pigweed, redroot <sup>(a,b)</sup> puncturevine purslane, common <sup>(a)</sup> rocket, London sage, lanceleaf shepherdspurse <sup>(b)</sup> sowthistle, annual

<sup>a</sup>Weeds controlled when applied as a pre-transplant application. In addition, **A229.01** at the rate of 1 to 2 pints per acre will provide control/suppression of carpetweed, Pennsylvania smartweed, galinsoga, common lambsquarters, and wild mustard. Applications of **A229.01** to muck soils may result in partial control or suppression of the weeds listed.

<sup>b</sup>Specific weeds controlled at specified rates for use in Northeastern states (see SPECIFIC USE DIRECTIONS section).

#### Onions Grown for Seed

<p><b>Agricultural Use Requirements:</b> <b>DO NOT</b> enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.</p> <p>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, including plants, soil or water, is:</p> <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant footwear plus socks</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes plus socks</li> </ul>
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Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.125 (0.03 lb ai)	<b>Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 0.125 (0.03 lb ai) per acre may be applied up to a maximum of 2 pints or 32 fl oz (0.5 lb ai) per acre per year. Prior to initial treatment, seeded onions must have at least four (4) true leaves. Multiple treatments at the aforementioned rate may be applied.

Preemergence	up to 0.5 pt (0.125 lb ai)	<p><b>All other States:</b> Apply <b>A229.01</b> at up to 0.5 pt (0.125 lb ai) per acre to seeded onions that have at least three (3) true leaves. Multiple treatments at 0.5 pt (0.125 lb ai) per acre may be applied up to a maximum of 2 pints (0.5 lb ai) per acre per year. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.</p> <p><b>Sprinkler Irrigation - Portable Lateral or Solid Set:</b> Apply <b>A229.01</b> at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.</p>
<p><b>Use Precautions:</b></p> <ul style="list-style-type: none"> <li>• <b>Notice:</b> Some varieties or inbred lines of onions may be more susceptible to <b>A229.01</b>. Care must be taken to insure that the particular onion variety or line being grown is resistant to <b>A229.01</b>. It is suggested that all onion varieties or lines be tested in limited areas to ensure an adequate level of crop resistance prior to an application for postemergence weed control.</li> <li>• <b>A229.01</b> can cause necrotic lesions, twisting, pigtailings or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• In all states, <b>DO NOT</b> apply <b>A229.01</b> until the onions have reached the minimum leaf stage specified. Application prior to the specified stage of development may result in serious injury</li> <li>• <b>DO NOT</b> apply more than 0.5 pint (0.125 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lb ai) per acre of <b>A229.01</b> per year.</li> <li>• <b>Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> <b>DO NOT</b> make more than 16 applications per acre per year when using reduced rates.</li> <li>• <b>All other States:</b> <b>DO NOT</b> make more than 4 applications per acre per year.</li> <li>• <b>DO NOT</b> apply within 60 days of harvest.</li> <li>• For seeded onions, <b>DO NOT</b> apply <b>A229.01</b> with oils, surfactants, liquid fertilizers or other pesticides except as specified in approved Atticus, LLC Supplemental Labeling.</li> <li>• <b>DO NOT</b> apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.</li> </ul>		

**Key Weeds Controlled:**

Postemergence
canarygrass (annual) eveningprimrose, cutleaf groundsel, common mallow, little (malva) nightshade, black pigweed, prostrate <sup>1</sup> pigweed, redroot <sup>1</sup> puncturevine purslane, common <sup>1</sup> rocket, London

sage, lanceleaf  
shepherdspurse  
sowthistle, annual

<sup>1</sup>Specific weeds controlled at specified rates for use in Northeastern states (see SPECIFIC USE DIRECTIONS section).

## Papaya

For Use Only in Hawaii

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 (1.0 lb ai)	<p>The initial application must occur no sooner than 4 months after transplanting or 6 months after direct seeding, and after the papaya has reached a minimum height of 4 feet. Applications may be repeated at approximate 4-month intervals.</p> <p>Apply preemergence or postemergence to weeds. Increase the spray volume to assure adequate coverage of dense growth of emerged weeds. <b>A229.01</b> must be applied as a directed spray to the orchard floor beneath the papaya plants. Accurate, uniform placement of <b>A229.01</b> is essential for effective weed control and to minimize crop injury. <b>A229.01</b> must be applied using rigid precision ground sprayer equipment.</p> <p>Postemergence applications may be made up to the 4-leaf stage of weed growth.</p>
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 4 pints (1.0 lb ai) of <b>A229.01</b> per broadcast acre per application.</li> <li>• <b>DO NOT</b> apply more than 12 pints (3.0 lb ai) of <b>A229.01</b> per broadcast acre per year.</li> <li>• <b>DO NOT</b> make more than 3 applications per year.</li> <li>• <b>DO NOT</b> apply <b>A229.01</b> within 1 day of harvest.</li> <li>• <b>DO NOT</b> allow the herbicide solution, spray, drift or mist to contact green bark, stems, fruit or foliage as injury may result.</li> <li>• <b>DO NOT</b> use <b>A229.01</b> on papaya plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.</li> </ul>		

## Key Weeds Controlled:

amaranth, spiny purslane, common	spurge, garden
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## Pea, Ornamental Sweet, Grown for Seed (California Only)

Ornamental sweet peas grown for seed are resistant to preemergence applications of **A229.01**. However, under certain conditions, **A229.01** can cause severe crop injury. Splashing rain or irrigation shortly after crop emergence or wet soil conditions during early growth stages can produce leaf cupping, crinkling, stunting, or defoliation of the ornamental sweet pea seedlings. When injury occurs, it is often limited to the first few leaves that develop shortly after plant emergence from the soil. Delays in crop development and/or maturity, and yield reduction may result.

**DO NOT** use **A229.01** if the risk of crop injury is unacceptable. **DO NOT** use **A229.01** on ornamental sweet pea plantings where seed lots are weakened or germinating seed are under stress due to temperature, disease, fertilizer, soil, salts, nematodes, insects, pesticides, drought, excessive moisture, flooding, or soil crusting.

**A229.01** must be applied at a rate of 0.5 to 1 pint per acre as a preemergence application shortly after planting. Apply in a minimum of 20 gallons of water per acre, using a low-pressure sprayer equipped with flat fan or hollow cone nozzles. **DO NOT** exceed 40 psi.

**A229.01** provides preemergence suppression of the following weeds when used at specified rates:

Cheeseweed (Malva)	<i>Malva parviflora</i>
Groundsel, Common	<i>Senecio vulgaris</i>
Rocket, London	<i>Sisymbrium irio</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>

For optimum preemergence weed control, the soil surface must be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

Use Restrictions:

- **DO NOT** use plants treated with **A229.01** for feed or forage.
- **DO NOT** feed or allow animals to graze on any areas treated with **A229.01**.
- Apply only with ground application equipment.

#### **Roses: field-grown, established plantings**

**(For Distribution and Use Only in the State of California)**

**A229.01** may be used as a post-directed application for control of certain broadleaf weeds in well-established rose plantings after bud grafted canes are at least 18 inches in length.

For preemergence weed control, apply 2 to 4 pints of **A229.01** per broadcast acre. For optimum preemergence weed control, the soil surface must be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

#### **Weeds Controlled Pre-emergence:**

Little mallow (cheeseweed; *Malva parviflora*)  
Field bindweed (annual morningglory; *Convolvulus arvensis*)  
Morningglory, ivyleaf (*Ipomoea hederacea*)  
Nightshade, black (*Solanum nigrum*)  
Nightshade, hairy (*Solanum physalifolium*)  
Nodding beggarticks (*Bidens spp.*)  
Redroot pigweed (*Amaranthus retroflexus*)

For postemergence weed control, apply 2 to 4 pints of **A229.01** per broadcast acre. The lower rate is specified for the control of susceptible seedling weeds in the early postemergence stage, before the 4-leaf growth stage. The higher rate is advised for weeds at the 4-leaf growth stage. The addition of a labeled rate of a herbicide adjuvant may assist in spray coverage and postemergence activity. Applications to weeds beyond the 4-leaf growth stage may result in partial control.

#### **Weeds Controlled Postemergence:**

Little mallow (cheeseweed; *Malva parviflora*)  
Field bindweed (annual morningglory; *Convolvulus arvensis*)  
Morningglory, ivyleaf (*Ipomoea hederacea*)  
Nightshade, black (*Solanum nigrum*)  
Nightshade, hairy (*Solanum physalifolium*)  
Redroot pigweed (*Amaranthus retroflexus*)

Apply in 25 to 40 gallons of water per broadcast acre. Use a low-pressure sprayer with nozzles directed at the base of rose plants. Use spray shields to avoid spray contact with rose foliage. To minimize spray drift, use the lowest spray pressure suitable for the application equipment.

**A229.01** must be applied only to roses with canes that are 18 inches or longer. Applications to rose plants with canes less than 18 inches in length may result in severe crop injury. Spray contact with foliage may cause severe crop injury and must be avoided. Leaves that are contacted by the spray will exhibit necrotic spotting and may drop from plant. Splashing rain or irrigation water or excessive soil moisture after application may result in leaf cupping, crinkling, stunting or defoliation.

**A229.01** is phytotoxic to plant foliage. Avoid drift to nontarget areas. **DO NOT** apply when weather conditions favor drift.

When applied as directed, field-grown roses generally are resistant to **A229.01**, but this has not been evaluated on all varieties, biotypes and cultivars of roses under all possible growing conditions. The user must exercise caution with this product. Until familiar with results under current growing conditions, limit application of this product to a few plants in a small area to determine plant resistance and potential for injury before initiating large-scale applications.

Use Restrictions:

- **DO NOT** apply more than 4 pints (1.0 lb ai) of **A229.01** per broadcast acre per application.
- **DO NOT** apply more than 8 pints (2.0 lb ai) per broadcast acre per year.
- **DO NOT** make more than 2 application per acre per year.
- **DO NOT** apply **A229.01** in enclosed greenhouse or lathouse structures.
- Tank mixtures of **A229.01** with oils, liquid fertilizers or other pesticides may increase the potential for crop injury and are the responsibility of the user.
- **DO NOT** feed or graze animals on areas treated with **A229.01** [need to specify application to grazing interval].
- **A229.01** is phytotoxic to plant foliage. **DO NOT** apply when weather conditions favor drift to nontarget areas.
- **DO NOT** apply **A229.01** to rose plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.
- **DO NOT** apply this product to roses through any type of irrigation system.

**Soybeans[\*]**

[\*Not for Use in California]

Soybeans - Early Preplant Application in Conservation Tillage Systems		
Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1.5 – 3 (0.375 – 0.75 lb ai)	<b>Early Preplant Application:</b> Surface apply <b>A229.01</b> to the stale seedbed approximately 14 days before planting conservation tillage soybeans for postemergence and preemergence residual broadleaf control. Use a spray volume of 20 or more gallons per acre and increase the spray volume if growth of existing weeds is dense. <b>A229.01</b> at 2 to 3 pints (0.5 – 0.75 lb ai) provides early season suppression of annual grasses, but must not be relied upon as a basic grass herbicide. Use a planned program utilizing herbicides registered for early preplant, preemergence or postemergence grass control in soybeans.

		Use ridge or slot planter or a similar planting implement that causes minimal soil disturbance. Movement or redistribution of surface soil will reduce herbicidal effectiveness.
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<b>Soybeans: No-Till (Double-Crop)</b>		
<b>Application Timing for Target Weeds</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Preemergence Postemergence	0.5 – 2 (0.125 – 0.5 lb ai)	<b>Preemergence Application to Soybeans:</b> Applied preemergence, <b>A229.01</b> provides postemergence and residual preemergence control of susceptible broadleaf weeds. <b>Apply A229.01 within one day after planting. Later applications may result in severe crop injury.</b> Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense.
<b>Tank Mixing:</b> For enhanced postemergence control of existing grass and broadleaf weeds, <b>A229.01</b> may be tank mixed with paraquat or glyphosate. For extended residual control of annual grasses no-till soybeans, <b>A229.01</b> may also be tank mixed with a residual grass herbicide including Bronco Herbicide (Alachlor + Glyphosate-isopropylammonium, 524-341), Dual Magnum Herbicide, or Lasso Herbicide.		
Postemergence	1 (0.25 lb ai)	<b>Postemergence Directed Application: A229.01</b> may be applied as a post-directed application. Optimum control is achieved when <b>A229.01</b> is applied to seedling weeds not exceeding 4 true leaves (not counting cotyledon leaves) and actively growing. Use an 80% non-ionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray whenever postemergence weed control is desired. <b>For postemergence application, soybeans must be a minimum 8 inches tall.</b> Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. <b>DO NOT</b> use hollow cone nozzles.

<b>Soybeans: Grown Under Conventional Tillage Systems</b>		
<b>Application Timing for Target Weeds</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Preemergence Postemergence	1 – 1.5 (0.25 – 0.375 lb ai)	<b>Preemergence Application to Soybeans: A229.01</b> provides preemergence control of susceptible broadleaf weeds. <b>Apply A229.01 within one day after planting. Later applications may result in severe crop injury.</b> Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense. The 1.5 pint per acre rate will assist in early season annual grass control but must not be relied upon as a basic grass herbicide. <b>A229.01</b> may also be applied as a preemergence application following a preplant incorporated grass herbicide treatment.
<b>Preemergence Tank Mixes (To Control Additional Grass and Broadleaf Weeds): Apply preemergence tank mixes of A229.01 within one day after planting. Later applications may result in severe crop injury.</b>		

<ul style="list-style-type: none"> <li>• <b>A229.01</b> at 0.6 to 1.5 pints per acre may be applied preemergence to soybeans in tank mix with Dual Magnum Herbicide or Lasso Herbicide. <b>A229.01</b> may be applied alone as a preemergence application following a preplant incorporated grass herbicide application or as a tank mix in a preemergence application with Dual Magnum, or Lasso herbicides. Refer to the label of tank mix product for additional weeds controlled.</li> <li>• <b>A229.01</b> at 0.6 to 0.8 pints per acre may be applied preemergence to soybeans in tank mix with 1 to 1.67 pints of Command 3ME herbicide (Clomazone, 279-3158). Refer to the label for Command 3ME for additional weeds controlled.</li> </ul>		
Postemergence	1 (0.25 lb ai)	<b>Postemergence Directed Sprays: A229.01</b> may be applied as a post-directed application at 1 pint per acre. Optimum control is achieved when weeds not exceed 4 true leaves and are actively growing ( <b>DO NOT</b> count cotyledon leaves). Use of an 80% non-ionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray is advised whenever postemergence weed control is desired. <b>For postemergence application, Soybeans must be a minimum 8 inches tall.</b> Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. <b>DO NOT</b> use hollow cone nozzles.
<b>Postemergence Tank Mixes:</b> For broader spectrum control of broadleaf weeds, <b>A229.01</b> may be applied in tank mix with Butoxone Herbicide (Dimethylamine 4-(2,4-dichlorophenoxy)butyrate, 2749-516) or Butyrac 200 Herbicide (butyric acid, dimethylamine salt, 42750-38). Use 1 pint of <b>A229.01</b> with 1 pint of Butoxone or 0.7 to 0.9 pint of Butyrac 200 per acre. Refer to label of tank mix product for additional weeds controlled.		

<b>Soybeans - Precautions (All Methods and Timings to Soybeans):</b> <ul style="list-style-type: none"> <li>• Soybeans are resistant to preemergence and post-directed applications of <b>A229.01</b> at specified rates; however, under certain conditions injury may occur. Heavy splashing rain shortly after crop emergence or cold, wet soil conditions during early growth stages can cause leaf cupping and crinkling. When injury occurs, it is generally limited to the first few leaves that develop after crop emergence. Soybeans recover from this injury and yields are not adversely affected. Soybeans accidentally sprayed during a post-directed application will exhibit necrotic spotting and injury to the soybean plant. Exercise care to avoid spray contact with the soybean leaves.</li> </ul>
<b>Soybeans - Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• <b>Tank Mixing:</b> Read and observe all label directions before using. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive limitations must apply.</li> <li>• <b>DO NOT</b> apply more than 3 pints (0.75 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> make more than 2 applications of <b>A229.01</b> per year.</li> <li>• <b>DO NOT</b> apply more than 2 pints (0.5 lbs active) of <b>A229.01</b> per acre per year as a result of preemergence application in no-till (double-crop) or conventional till soybeans, or post-directed in conventional till soybeans.</li> <li>• If early preplant application is made, <b>DO NOT</b> apply more than 3 pints (0.75 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> apply a post-directed application of <b>A229.01</b> to soybeans after the initial appearance of blooms.</li> </ul>

**Key Weeds Controlled:**

Preemergence	Postemergence
groundcherry, cutleaf <sup>1</sup> jimsonweed lambsquarters, common nightshade, American black <sup>1</sup> nightshade, black <sup>1</sup> pigweed, redroot poinsettia, wild shepherdspurse sida, prickly (teaweed) smartweed, Pennsylvania sowthistle, common <sup>1</sup> velvetleaf	cocklebur, common croton, tropic groundcherry, cutleaf groundcherry, Wright jimsonweed lambsquarters, common morningglory, annual (up to 6 leaf) mustard, wild nightshade, American black nightshade, black nightshade, hairy pigweed, redroot poinsettia, wild <sup>1</sup> purslane, common sesbania, hemp shepherdspurse sicklepod <sup>2</sup> sida, prickly (teaweed) <sup>1</sup> smartweed, Pennsylvania velvetleaf

<sup>1</sup>Multiple applications may be required for acceptable control.

<sup>2</sup>Post-direct applications of **A229.01** will kill or suppress seedlings not exceeding the one true leaf stage.

**Taro****For Use Only in Hawaii**

For use only to dryland taro grown in Hawaii. Dryland taro is defined as taro grown without irrigation, or by using irrigation practices that **DO NOT** result in run-off, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2 (0.5 lb ai)	<b>Preemergence to Taro and Weeds:</b> A single application of <b>A229.01</b> at the rate of 2 pints (0.5 lb ai) per acre may be applied within 1 week after transplanting but prior to emergence of taro plants.
Postemergence	1 (0.25 lb ai)	<b>Postemergence to Taro and Weeds:</b> <b>A229.01</b> may be applied as a post-directed or band application at the rate of 1 pint (0.25 lb ai) per acre. Effective control of succulent weed seedlings in the 2-to 3-leaf stage can usually be obtained. Applications to weeds beyond the 3-leaf stage may result in partial control.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>Accurate, uniform placement of <b>A229.01</b> is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. <b>A229.01</b> must be applied using rigid precision ground sprayer equipment.</li> <li>Occasionally, after the use of <b>A229.01</b>, spotting, crinkling or flecking may appear on the leaves of the taro. Leaves that receive direct or indirect (drift) spray contact will be injured.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per broadcast acre per application.</li> </ul>		



- **DO NOT** apply more than 1 pint (0.25 lb ai) of **A229.01** per acre in a single post-direct spray or more than 2 pints (0.5 lb ai) per acre per year as a result of multiple post-directed applications.
- **DO NOT** apply more than 4 pints (1.0 lb ai) of **A229.01** per acre per year as a result of preemergence and post-direct applications.
- **DO NOT** make more than 3 application per acre per year.
- **DO NOT** apply **A229.01** within 6 months of harvest of taro (corms, leaves).
- **DO NOT** use **A229.01** on taro plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

**Key Weeds Controlled:**

amaranth, spiny  
purslane, common  
spurge, garden

**Tree Fruit / Nut / Vine Crops (Dormant Application)**

Almond, Apple, Apricot, Avocado, Beechnut, Brazil Nut, Butternut, Cashew, Cherry, Chestnut, Chinquapin, Crab Apple, Date, Feijoa, Fig, Filbert, Grapes, Hickory Nut, Kiwi, Loquat, Macadamia Nut, Mayhaws, Nectarine, Olives, Peach, Pear, Pecan, Persimmon, Pistachio, Plum, Pomegranates, Prune, Quince, and Walnut

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence (broadcast application)  (banded application)	5 – 6 (1.25 – 1.5 lb ai)  5 – 8 (1.25 – 2.0 lb ai)	Apply <b>A229.01</b> in a minimum of 20 gallons of water per acre. Use higher spray volumes to ensure thorough coverage in high densities of emerged weeds or heavy trash. Sprays must be directed to the soil and the base of dormant trees or vines.  <b>In California, A229.01</b> may be applied as an over-the-top or directed spray to dormant nonbearing grape plantings. The use of a low-pressure sprayer is suggested. <b>DO NOT</b> apply over-the-top to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result.
Postemergence (broadcast application)  (banded application)	2 – 6 (0.5 – 1.5 lb ai)  2 – 8 (0.5 – 2.0 lb ai)	Apply in a spray volume of 40 or more gallons per acre. For optimum control, apply when weeds are at seedling stage of growth.  The lower rate in the rate range (2 pints per acre) is specified for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. Higher rates (up to 6 pints per acre) may be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.
<p><b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. See labels of tank mix partners to determine suitability and use rates for various crops.</p> <ul style="list-style-type: none"> <li>• <b>Postemergence:</b> For broader spectrum postemergence control of listed grass and broadleaf weeds, <b>A229.01</b> may be applied in tank mix with paraquat or glyphosate. These herbicides may also be added to preemergence tank mixes for enhanced control of existing weeds.</li> <li>• <b>Preemergence:</b> For broad-spectrum preemergence control of susceptible grass and broadleaf weeds in listed tree fruit, nut or vine plantings, <b>A229.01</b> may be applied in tank mix with napropamide (Devrinol</li> </ul>		

herbicide, 70506-34), diuron (Karmex herbicide, 66222-51), pronamide (Kerb herbicide, 62719-578), simazine, norflurazon (Solicam herbicide, 61842-41) or oryzalin (Surflan herbicide, 70506-43).
<b>Chemigation (All States):</b> For dormant season application using sprinkler (low-volume (microsprinkler), drip (trickle), and flood (basin) irrigation systems, apply <b>A229.01</b> at the specified rate per acre. Follow applicable directions in the Chemigation section of this label when making applications using irrigation systems.
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• <b>A229.01</b> or any of the combinations listed on this label must be applied to only healthy growing trees or vines</li> <li>• Avoid direct plant contact. Direct spray toward the base of tree or vines unless specific use directions allow over-the-top application.</li> </ul>
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li>• In all states, unless otherwise specified, <b>DO NOT</b> apply <b>A229.01</b> during the period between bud swell and completion of final harvest or when fruit/nuts are present. <b>A229.01</b> may be applied upon completion of final harvest.</li> <li>• <b>In Arizona and California, A229.01 may be applied during the period following completion of final harvest up to February 15 (February 1st in the Coachella Valley, California). Applications made after these calendar dates, but prior to bud swell, may result in significant crop injury and are the responsibility of the user.</b></li> <li>• <b>DO NOT</b> apply more than 8 pints (2.0 lb ai) of <b>A229.01</b> per acre per application. For banded applications, up to 8 pints (2.0 lb ai) per acre of <b>A229.01</b> per year may be applied within the treated band. <b>DO NOT</b> apply more than a maximum of 6 pints (1.5 lb ai) per acre per year on a broadcast basis.</li> <li>• <b>DO NOT</b> make more than 3 application per acre per year when using reduced application rates.</li> <li>• <b>DO NOT</b> apply to grapes or kiwi established less than 3 years unless vines are on a trellis wire a minimum of 3 feet above the soil surface.</li> <li>• <b>DO NOT</b> apply to grapes or kiwi that are not staked or trellised unless vines are free standing.</li> </ul>

**Key Weeds Controlled (Arizona and California):**

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf <sup>1</sup>
filaree, broadleaf	filaree, redstem <sup>1</sup>
filaree, redstem	filaree, whitestem <sup>1</sup>
filaree, whitestem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	redmaids
pigweed, redroot	shepherdspurse
purslane, common	sowthistle, annual
redmaids	
rocket, London	
shepherdspurse	
sowthistle, annual	

<sup>1</sup>**A229.01** at the 6-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

**Key Weeds Controlled (All Other States Except Arizona and California):**

Preemergence	Postemergence
camphorweed	balsamapple
cudweed, narrowleaf	cocklebur, common
eveningprimrose, cutleaf <sup>1</sup>	cudweed, narrowleaf <sup>2</sup>
groundcherry, cutleaf	eveningprimrose, cutleaf <sup>1</sup>
jimsonweed	groundcherry, cutleaf
lambsquarters, common	groundcherry, Wright
nightshade, American black	jimsonweed
nightshade, black	lambsquarters, common
pepperweed, Virginia	morningglory, annual
pigweed, redroot	nightshade, American black
poinsettia, wild	nightshade, black
sida, prickly	pepperweed, Virginia
smartweed, Pennsylvania	pigweed, redroot
sowthistle, annual	poinsettia, wild
spurge, prostrate	purslane, common
spurge, spotted	sesbania, hemp
velvetleaf	shepherdspurse
	sida, prickly (teaweed)
	smartweed, Pennsylvania
	sowthistle, annual
	velvetleaf

<sup>1</sup>Highest rate and/or multiple applications may be required for acceptable control.

<sup>2</sup>Maximum 0.5-inch diameter.

**Apricots, Nectarines, Olives, Peaches, Plums, and Prunes (Non-Dormant Application)****California Only****Product Information**

**A229.01** provides effective postemergence control of cheeseweed (Malva), Fleabane, and Marestalk (Horseweed) young broadleaf weed seedlings in non-dormant apricots, nectarines, olives, peaches, plums and prunes. For enhanced postemergence activity against these target weeds as well as other weed species, tank mix **A229.01** with either paraquat (Parazone 3SL) or Glyphogan (glyphosate, 66222-105) to increase the spectrum of weed control by either of these tank mix partners. Compatibility of each mixture must be established before tank mixing and application must be applied by ground equipment. Follow all precautions and restrictions on the labeling of the products to be tank mixed.

**Dosage**

Use **A229.01** for postemergence suppression of the target weeds at 0.5 to 1 pint (0.125 to 0.25 lbs ai) per broadcast acre when applied to susceptible weed seedlings less than 4 inches in height. Repeat applications may be required.

**DO NOT** exceed 6 pints (1.5 lbs ai) of **A229.01** during the non-dormant stage of apricots, nectarines, olives, peaches, plums and prunes. For a broader spectrum of grass weeds and broadleaf weeds control in the tree row middles, a tank mixture of **A229.01** with either Parazone 3SL (paraquat, 5481-615) or Glyphogan (glyphosate) can be used. Read and follow the labeling of either the Parazone 3SL (paraquat) or Glyphogan (glyphosate) pesticide product which is to be tank mixed with **A229.01**.

**Method of Application**

**Ground Application:** Apply a minimum spray volume of 10 gallons of water per acre. Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. Use conventional low-pressure ground spray equipment with flat fan spray nozzles at 20 to 40 psi. Position an off-center nozzle at the end of the boom. Calibrate spray equipment carefully before each use.

**Chemigation Application:** Apply this product only through flood (basin) irrigation systems, or low-volume sprinkler (microsprinkler) and drip (trickle) irrigation systems designed to distribute irrigation water beneath the tree canopy. For additional information on these systems, see the **Chemigation Instructions** section of this label.

**Cultural Considerations for All Applications:** In order to provide maximum effectiveness of preemergence activity of **A229.01**, the berm or soil surface must be level, smooth, and free of crop or weed trash (decaying leaves, clippings, dead weeds, etc.). Remove leaves and trash by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide applications.

Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of **A229.01**. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment. For best results, apply to established berms or soil surfaces that are left undisturbed during the time period for which weed control is desired.

#### **Apricots, Nectarines, Olives, Peaches, Plums and Prunes in California**

##### **Non-dormant Application**

##### **Specific Use Restrictions**

In addition to the following, also observe **USE RESTRICTIONS** listed at the beginning of this label.

- Read and observe all label directions before using. When tank mixing, always read all individual manufacturer labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- When applied as a non-dormant treatment, **A229.01** can only be applied to apricots, peaches, nectarines, plums and prunes after May 1. **A229.01** can only be applied as a non-dormant treatment to olives after bloom.
- **DO NOT** apply **A229.01** within 14 days of harvest of fruit.
- **DO NOT** apply more than 6 pints (1.5 lbs ai) per broadcast acre of **A229.01** per year during the non-dormant season.
- Apply **A229.01** only to healthy trees.
- Direct spray toward the base of the tree. Avoid direct herbicide contact with foliage and fruit.

#### **Grapes (Non-Dormant Application)**

##### **(California Only)**

**A229.01** may be applied as a directed spray or, for supplemental preemergence weed control, through low-volume sprinkler (microsprinkler) or drip irrigation systems for control or suppression of listed broadleaf weeds in non-dormant grapes (raisin and wine grapes only). **A229.01** may also be applied to all grapes (raisin, table, and wine) as a dormant season application. Refer to **TREE FRUIT/NUT/VINE CROPS (DORMANT APPLICATION)** section above for use directions for dormant season application to grapes.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2 (0.5 lb ai)	<b>A229.01</b> may be applied preemergence or postemergence to weeds either as a directed spray in a minimum spray volume of 20 gallons per acre or through low-volume sprinkler (microsprinkler) or drip irrigation systems. Repeat applications may be required. Applications may be made from completion of bloom up to 14 days before harvest.  When applied as a postemergence directed spray, add 1 quart 80% active non-ionic surfactant cleared for application to growing crops per 100 gallons of spray. Sprays must be directed to the soil and the base of vines.
Postemergence	1 – 2 (0.25 – 0.5 b ai)	

**Tank Mixing:**

- When applied as a directed postemergence spray using ground equipment, **A229.01** may be applied in tank mix with paraquat or glyphosate in a minimum spray volume of 10 gallons per acre. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

**Chemigation:** Follow chemigation instructions in Product Information section.

- Low Volume Sprinkler (Microsprinkler) and Drip (Trickle) Irrigation:** Apply only through low volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the canopy. Meter **A229.01** at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of **A229.01** through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

**Precautions:**

- Crop Resistance:** The use of **A229.01** may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Grape leaves that are immature or expanding at the time of contact with **A229.01** are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flecks) on the fruit.

**Crop-Specific Use Restrictions:**

- The total amount of **A229.01** applied per year (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed 6 pints (1.5 lb ai) per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation system).
- DO NOT** apply more than 2 pints (0.5 lb ai) of **A229.01** per acre per application.
- DO NOT** apply more than 6 pints (1.5 lb ai) of **A229.01** per acre per year.
- DO NOT** make more than 4 applications per acre per year when using reduced application rates.
- DO NOT** apply within 14 days of harvest.
- DO NOT** initiate application of **A229.01** in non-dormant grapes until the completion of the bloom period.
- DO NOT** apply to grapes established less than 3 years unless vines are either on a trellis wire a minimum of 3 feet above the soil surface, or protected by grow tubes.
- A229.01** must be applied only by ground application equipment of through low-volume sprinkler (microsprinkler) or drip (trickle) irrigation systems.
- Apply **A229.01** as a non-dormant application to wine grapes or raisin grapes only.
- A229.01** is phytotoxic to plant foliage. Avoid drift to all other crops and nontarget areas. **DO NOT** apply when weather conditions favor drift.

**Key Weeds Controlled or Suppressed:**

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed, malva	fiddleneck, coast
fiddleneck, coast	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	morningglory species, annual
lambsquarters, common	mustard, black
minerslettuce	nettle, burning
mustard, black	nightshade, black

nettle, burning nightshade, black pigweed, redroot purslane, common redmaids rocket, London sowthistle, annual	pigweed, redroot purslane, common redmaids rocket, London sowthistle, annual
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### Sucker Control in Non-Dormant Grapes

(Washington and Oregon Only)

(Grapes for Wine and Processing Only)

Application Timing for Sucker Control	Rate (pt/acre)	Specific Use Directions
Grape suckers less than 12 inches in length	1 – 2 (0.25 – 0.5 lb ai)	Apply <b>A229.01</b> in a three-foot band directed towards to newly emerging suckers at the base of the grapevine. The highest rate and/or a second application may be required to achieve an acceptable level of control/suppression of grape suckers. Avoid spray contact on flowers, grape clusters, or fruit. Use mounted nozzles to deliver the spray solution. Thorough spray coverage of sucker growth is essential for optimal activity. Use a spray volume of 50 or more gallons per acre (broadcast basis).
<b>Tank Mixing:</b> For enhanced postemergence sucker activity, a tank mixture of <b>A229.01</b> with either glufosinate (Rely Herbicide, 7969-447) or paraquat can be used. Apply at the specified dates and growth stages in a manner described on the respective labels. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.		
<b>Precautions:</b> <ul style="list-style-type: none"> <li>The use of <b>A229.01</b> may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift or soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Leaves that are immature or expanding at the time of contact with <b>A229.01</b> are the most susceptible to injury. Grape fruit may exhibit some small blemishes (spots or flecks) on the fruit.</li> </ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 2 pints (0.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li><b>DO NOT</b> make more than 4 applications (dormant and non-dormant) per acre per year when using reduced application rates.</li> <li>The total amount of <b>A229.01</b> applied during one crop year (dormant and non-dormant) cannot exceed 6 pints (1.5 lb ai) per acre as a result of multiple applications in any give area (broadcast or banded).</li> <li><b>A229.01</b> must be applied only by ground application equipment.</li> <li>Apply <b>A229.01</b> as a non-dormant application for sucker control only to wine or processed grapes.</li> <li><b>DO NOT</b> apply <b>A229.01</b> within 60 days of harvest.</li> </ul>		

**Pistachios, Walnuts, Almonds (California and Arizona Only)**  
**(Non-Dormant Application)**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	5 – 6 (1.25 – 1.5 lb ai)	<b>Preemergence:</b> For residual weed control of listed weeds.
Postemergence	1 – 2 (0.25 – 0.5 lb ai)	<b>Postemergence (Suppression):</b> Apply to seedling weeds less than 4 inches in height. Repeat applications may be required.
	2 – 6 (0.5 – 1.5 lb ai)	<b>Postemergence (Cleanup):</b> Contact (postemergence) control for cleanup sprays and preharvest applications. Apply to seedling weeds less than 4 inches in height. Applications to weed seedlings beyond the 4-inch stage may result in partial control.
<b>Tank Mixing:</b> For broader spectrum grass and broadleaf weed control in tree row middles, <b>A229.01</b> may be tank mixed with either paraquat or glyphosate. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.		
<b>CALIFORNIA ONLY:</b> <b>A229.01</b> may be applied at a rate of no more than 5 pts/acre (1.25 lb. a.i.) before February 15, and no more than 0.5 pt/acre (0.125 lb. a.i.) up to 30 days before harvest and/or no more than 0.5 pt/acre (0.125 lb. a.i.) between 30 and 15 days before harvest. <b>DO NOT</b> apply more than 6 pints of <b>A229.01</b> or 1.5 lb. oxyfluorfen a.i. per broadcast acre per year during the non-dormant season. <b>Chemigation:</b> Follow chemigation instructions in Product Information section. <b>Flood (Basin) Irrigation:</b> For flood (basin) irrigation systems, meter continuously into the water during the entire irrigation period. Best weed control results are obtained when a uniform distribution and flow of irrigation water is maintained over level land. Irrigation water treated with <b>A229.01</b> must be contained on the treated area until the water is absorbed by the soil. <b>Low Volume Sprinkler (Microsprinkler) and Drip (Trickle) Irrigation:</b> Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the tree canopy. Applications must be made prior to weed emergence; otherwise postemergence activity may be inconsistent due to uneven coverage. Meter <b>A229.01</b> at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of <b>A229.01</b> through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.		
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• Direct spray toward the base of trees. Avoid direct contact with foliage or nuts.</li> <li>• <b>A229.01</b> must be applied only to healthy growing trees</li> </ul>		
<b>Crop-Specific Use Restrictions:</b> <ul style="list-style-type: none"> <li>• When applied as a non-dormant treatment, <b>A229.01</b> can only be applied to pistachio plantings between May and 7 days prior to harvest.</li> <li>• When applied as a non-dormant treatment, <b>A229.01</b> can only be applied to almond plantings between April 1 and September 30 and to walnut plantings between May 1 and September 30.</li> <li>• <b>DO NOT</b> apply <b>A229.01</b> within 7 days of harvest of pistachios.</li> <li>• <b>DO NOT</b> apply <b>A229.01</b> within 30 days of harvest of almonds (AZ only) or within 15 days of harvest of almonds (CA only).</li> <li>• <b>DO NOT</b> apply <b>A229.01</b> within 7 days of harvest of walnuts.</li> <li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per year during the non-dormant season.</li> <li>• <b>DO NOT</b> make more than 3 application per acre per year when using reduced application rates.</li> </ul>		

**Key Weeds Suppressed and/or Controlled**

cheeseweed (malva)	morningglory species, annual
fiddleneck, coast	mustard, black
filaree, broadleaf	nettle, burning
filaree, redstem	pigweed, redroot
filaree, whitestem	purslane, common
groundsel, common	redmaids
henbit	rocket, London
minerslettuce	sowthistle, annual

**Additional Weeds Controlled in Tank Mix with Glyphosate or Paraquat**

barnyardgrass	horseweed (marestail)
bluegrass, annual	rocket, London
chickweed, common	ryegrass, Italian

**Windbreaks and Shelterbelts****(For Use Only in Minnesota, North Dakota, South Dakota and Wyoming)**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	4 – 6 (1.0 – 1.5 lb ai)	<p>Apply <b>A229.01</b> may be applied as a broadcast, banded or post-directed spray. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Pre-transplant applications must be made after completion of soil preparation but prior to transplanting. Transplanting must be completed with minimal soil disturbance. For optimum weed control results, treated soil surfaces must be left undisturbed during the time period for which weed control is desired.</p> <p><b>Postemergence Weed Control:</b> For best results, apply before 4-leaf stage for broadleaf weeds or 2-leaf stage for grass weeds.</p> <p><b>Conifers:</b> <b>A229.01</b> can be applied pre-transplant, post-directed or postemergence (over-the-top) to conifers. Postemergence or post-directed applications must be applied prior to budbreak or after new growth foliage has hardened off and new terminal buds have formed.</p> <p><b>Deciduous Hardwoods:</b> <b>A229.01</b> has exhibited selectivity to many deciduous species when applied pre-transplant or as a post-directed spray prior to budbreak.</p>
<b>Precautions:</b> <ul style="list-style-type: none"> <li>• <b>Important:</b> Some varieties or cultivars of conifers or deciduous species listed may be susceptible to <b>A229.01</b>. Care must be taken to ensure that the particular variety to be sprayed with <b>A229.01</b> is resistant. For unfamiliar species, it is suggested that <b>A229.01</b> be tested on a limited number of plants prior to large scale application.</li> <li>• Occasionally after the use of <b>A229.01</b>, a spotting, crinkling or flecking may appear on the leaves of the deciduous species. Leaves that receive direct or indirect (drift) spray contact will be injured. Deciduous species typically rapidly outgrow these symptoms and develop normally.</li> <li>• Application after budbreak may result in injury to deciduous species. If non-dormant application is required, apply only after foliage has fully expanded and hardened off. Avoid direct or indirect spray contact with the foliage by applying to the soil surface as a directed spray.</li> </ul>		
<b>Specific Use Restrictions for Shelterbelts:</b> <ul style="list-style-type: none"> <li>• <b>DO NOT</b> apply more than 6 pints (1.5 lb ai) of <b>A229.01</b> per acre per application.</li> <li>• <b>DO NOT</b> apply more than 18 pints (4.5 lb ai) of <b>A229.01</b> per acre per year.</li> <li>• <b>DO NOT</b> make more than 4 applications per acre per year when using reduced application rates.</li> </ul>		



- Apply **A229.01** only to healthy deciduous and/or conifer trees. **DO NOT** apply **A229.01** to conifers or deciduous trees that have been weakened or under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.

**Key Broadleaf Weeds Controlled:**

buckwheat, wild	mustard, wild
burclover	nettle, burning
carpetweed	nightshade, black
dock, curly	nightshade, hairy
groundcherry, cutleaf	oats, wild
groundcherry, Wright	orach, red
groundsel, common	pepperweed, yellow flower
henbit	pigweed, prostrate
jimsonweed	pigweed, redroot
knotweed, prostrate	purslane, common
kochia	rocket, London
ladysthumb	shepherdspurse <sup>1</sup>
lambsquarters, common	smartweed, Pennsylvania
lettuce, prickly	sowthistle, annual
mallow, little	tansymustard
mayweed	thistle, Russian (seedling)
mustard, blue	velvetleaf
mustard, tumble	

<sup>1</sup>The highest rate or multiple applications may be required for acceptable control.

**Key Grasses Controlled:**

barnyardgrass	foxtail, giant
bluegrass, annual	goosegrass
crabgrass, large	witchgrass

**A229.01 may be applied to numerous conifer and deciduous species, including the following:**

**Conifer Species**

Common Name	Scientific Name
<b>douglas-fir</b>	<i>Pseudotsuga menziesii</i>
<b>fir</b>	
grand	<i>Abies grandis</i>
fraser	<i>Abies fraseri</i>
noble	<i>Abies procera</i>
<b>hemlock</b>	
eastern hemlock	<i>Tsuga canadensis</i>
western hemlock	<i>Tsuga heterophylla</i>
<b>pine</b>	
Austrian	<i>Pinus nigra</i>
eastern white	<i>Pinus strobus</i>
jack	<i>Pinus banksiana</i>
Himalayan	<i>Pinus griffithii</i>
loblolly	<i>Pinus taeda</i>
lodgepole	<i>Pinus contorta</i>
longleaf	<i>Pinus palustris</i>
monterey	<i>Pinus radiata</i>
mugo	<i>Pinus mugo</i>
ponderosa	<i>Pinus ponderosa</i>

scotch shortleaf slash Virginia	<i>Pinus sylvestris</i> <i>Pinus echinata</i> <i>Pinus elliotii</i> <i>Pinus virginiana</i>
<b>spruce</b> blue dwarf Alberta Norway Sitka	<i>Picea pungens</i> <i>Picea glauca Conica</i> <i>Picea abies</i> <i>Picea sitchensis</i>
<b>Arborvitae</b>	<i>Thuja occidentalis</i> <i>Thuja orientalis</i>
<b>juniper</b>	<i>Juniperus chinensis</i> <i>Juniperus horizontalis</i> <i>Juniperus procumbens</i> <i>Juniperus sabina</i> <i>Juniperus scopulorum</i>
<b>red cedar</b>	<i>Juniperus virginiana</i>
<b>yew</b>	<i>Taxus</i> spp.

#### Deciduous Hardwood Species

Common Name	Scientific Name
ash	<i>Fraxinus</i> spp.
crabapple	<i>Malus</i> spp.
eucalyptus	<i>Eucalyptus</i> spp.
lilac	<i>Syringa vulgaris</i>
maple, black	<i>Acer nigrum</i>
oak, northern red	<i>Quercus rubra</i>
olive, Russian	<i>Elaeagnus angustifolia</i>
poplar (cottonwood)	<i>Populus</i> spp.
sweetgum	<i>Liquidambar styraciflua</i>
sycamore	<i>Platanus occidentalis</i>
walnut, black	<i>Juglans nigra</i>

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Keep from freezing. Store above 32°F.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the 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:

**[For plastic containers ≤ 5 gallons: Nonrefillable Container: DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

**[For plastic containers > 5 gallons: Nonrefillable container. DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

## LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** 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. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A229.01] is a trademark of Atticus, LLC

[Goal® 2XL Herbicide] is a registered trademark of Nutrichem Co, LTD and used under exclusive license by Nufarm Americas, Inc.

## {LANGUAGE ON LABEL AFFIXED TO CONTAINER}

OXYFLUORFEN	GROUP	14	HERBICIDE
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### A229.01

[Alternate Brand Name: Scroll 2 XL]

Contains oxyfluorfen, the active ingredient used in [Goal® 2XL Herbicide].

#### ACTIVE INGREDIENT: (% by weight)

oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)  
4-(trifluoromethyl)benzene.....22.3%

OTHER INGREDIENTS:.....77.7%

TOTAL ..... 100.0%

Contains 2 pounds active ingredient per gallon.

Contains petroleum distillates

## KEEP OUT OF REACH OF CHILDREN

## WARNING / AVISO

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

FIRST AID	
If on skin or clothing:	<ul style="list-style-type: none"><li>Take off contaminated clothing.</li><li>Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
If swallowed:	<ul style="list-style-type: none"><li>Immediately call a poison control center or doctor..</li><li><b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li><li><b>DO NOT</b> give any liquid to the person.</li><li><b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
If in eyes:	<ul style="list-style-type: none"><li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
Note to Physician: contains petroleum distillates. Vomiting may cause aspiration pneumonia.	
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at <b>1-844-685-9173</b> for emergency medical treatment information.	

#### For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Do not get on skin or on clothing. Avoid contact with eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.  
**DO NOT** get on skin or on clothing. Avoid contact with eyes.

**ENVIRONMENTAL HAZARDS:** This product is toxic to aquatic invertebrates and wildlife. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. **DO NOT** contaminate water when disposing of equipment wash water.

#### Physical and Chemical Hazards

Do not mix or allow coming in contact with Oxidizing agents. Hazardous chemical reaction may occur.

### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Keep from freezing. Store above 32°F.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the 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:

[For plastic containers ≤ 5 gallons: Nonrefillable Container: **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[For plastic containers > 5 gallons: Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

See inside label booklet for additional Precautionary Statements and Directions for Use.

[A229.01] is not manufactured, or distributed by Nufarm Americas, Inc., seller of [Goal® 2XL Herbicide].

Manufactured for:

Atticus, LLC

940 NW Cary Parkway, Suite 200

Cary, NC 27513

EPA Reg. No.: 91234-226

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

NET CONTENTS: \_\_\_\_\_