



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION**

December 22, 2022

Mark White  
Sr. Stewardship & Regulatory Portfolio Manager  
Syngenta Crop Protection, LLC  
410 Swing Road  
Greensboro, NC 27419

Subject: PRIA Label Amendment – Establishment of tolerances for crop groups (stone fruits, pome fruits, citrus fruits, and tree nuts)  
Product Name: PRINCEP 4L HERBICIDE  
EPA Registration Number: 100-526  
Application Date: 3/15/2012  
Decision Number: 462915

Dear Mark White:

The application referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable under FIFRA section 3(c)(5).

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 the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 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 the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

In its endangered species assessment as part of its review of this action, EPA made may affect determinations for certain listed species and their designated critical habitats. EPA initiated formal consultation with the United States Fish and Wildlife Service (FWS), which will be

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ongoing during the renewed registration period. If, after formal consultation with FWS, additional modifications are identified in the Service's Biological Opinion, EPA will notify Syngenta in writing within 45 calendar days of the issuance of the Biological Opinion of any necessary required changes. Within 30 calendar days of receiving EPA's notice, Syngenta must submit an amendment application incorporating any required changes, including amended labels. Alternatively, Syngenta may respond by submitting a request for voluntary cancellation of this product. If Syngenta fails to comply with this term, Syngenta has agreed in prior written acceptance of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).

Your release for shipment of the product constitutes acceptance of these conditions. If you fail to satisfy these requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e).

If you have any questions, please contact Sarah Meadows at 202-566-2828 or at meadows.sarah@epa.gov.

Sincerely,



Lindsay Roe  
Chief, Herbicide Branch  
Registration Division (7505T)  
Office of Pesticide Programs

Enclosure

[Master Label]

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Not for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

**SIMAZINE** **GROUP** **5** **HERBICIDE**

Princep® 4L

[ABN: Princep® 4L CR]

Herbicide

For weed control in certain crops

Active Ingredient:

Simazine: 2-chloro-4,6-bis(ethylamino)-s-triazine ..... 41.9%

Other Ingredients: ..... 58.1%

Total: ..... 100.0%

Princep 4L is a suspension concentrate that contains 4 lb active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

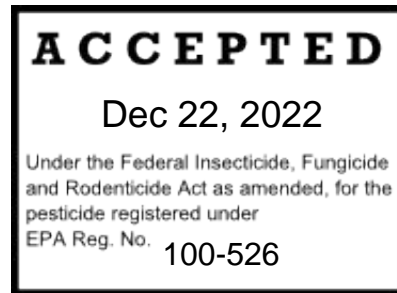
**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-526

EPA Est.

Net Contents



<b>FIRST AID</b>	
<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 in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOTLINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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## **PRECAUTIONARY STATEMENTS**

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### **Hazards to Humans and Domestic Animals**

#### **CAUTION**

Harmful if absorbed through the skin. Causes moderate eye irritation. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes, or clothing.

## Personal Protective Equipment (PPE)

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, polyvinyl chloride (PVC)  $\geq$ 14 mils, or Viton®  $\geq$ 14 mils
- Shoes plus socks

Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only or mixer/loader/applicators must wear coveralls over long-sleeved shirt and long pants in addition to the PPE specified above.

Mixer/loader/applicators for backpack application to grapefruit and oranges must wear coveralls over long-sleeved shirt and long pants in addition to the PPE specified above.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

## Engineering Controls

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)(4-5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

#### Users should:

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

## Environmental Hazards

Simazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Simazine has been found in ground water. Users are advised not to apply simazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable; i.e., well-drained. Your

local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

Product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of points where agricultural field (nurseries, Christmas tree plantings, and turf grasses for sod farms) surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide to the mixing/loading sites.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

One of the following restrictions must be used in applying simazine to tile-outletted terraced fields containing standpipes:

- Do not apply within 66 feet of standpipes in tile-outletted terraced fields.
- Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
- Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop

residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

### **NON-TARGET ORGANISM ADVISORY STATEMENT**

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

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.



## DIRECTIONS FOR USE

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

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

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Simazine Watershed Information Center (SWIC) to determine whether the use of this product is prohibited in your watershed. SWIC can be accessed through [www.simazine-watershed.info](http://www.simazine-watershed.info) or 1-888-365-2874. If the SWIC indicates that use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Syngenta Crop Protection, LLC for a refund.

### Endangered Species

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

### 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.

**For Christmas trees, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. For all other crops and use patterns, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- 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 (including children or pets) to enter treated areas until sprays have dried.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.**

#### **USE RESTRICTIONS**

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Not for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

**Do not** apply this product through any type of irrigation system except for micro-sprinkler application for citrus in California.

For use on warm season turf grass **only** (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).

All shelterbelt and forestry uses, except "Christmas Tree Plantings", are prohibited.

This product is not for use in formulating end-use products for aquatic use.

Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following uses

- Citrus (Grapefruit, Oranges, Lemons)
- Pome Fruits (Apples, Pears)
- Stone Fruits (Cherries [sweet and tart], peaches, Plums, Nectarines)
- Tree Nuts (Pecans, Walnuts, Filberts, Almonds, Macadamia Nuts)

- Berry and Small Fruit (Blueberries, Blackberries, Loganberries, Raspberries, Grapes, Lowbush Blueberries, Cranberries)
- Tropical and Sub-tropical Fruits (Avocado, Olive)
- Nursery/Ornamentals
- Sweet Corn

Applications made by mechanically pressurized handguns to strawberries are restricted to either spot treatment only or mixer/loader/applicators must wear coveralls over long-sleeved shirt and long pants, shoes plus socks, and gloves made of barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride (PVC)  $\geq 14$  mils, or Vitron®  $\geq 14$  mils.

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## **PRODUCT INFORMATION**

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### **Aerial application is prohibited.**

When tank mixing or sequentially applying simazine or products containing simazine, the total pounds of simazine applied must not exceed the specific maximum rate per calendar year as noted in the use directions.

Apply Princep 4L herbicide before weeds emerge or after removal of weed growth. Princep 4L controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops.

Where a range of application rates is given, use the low rate on coarse-textured soil and soil lower in organic matter; use the high rate on fine-textured soil and soil higher in organic matter.

Since Princep 4L enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions following application may necessitate shallow cultivation or rotary hoeing.

Princep 4L is nonflammable.

## WEED RESISTANCE MANAGEMENT

<b>SIMAZINE</b>	<b>GROUP 5</b>	<b>HERBICIDE</b>
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Simazine, the active ingredient in this product, is a Group 5 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 5 herbicides. Such resistant weed plants may not be effectively managed using Group 5 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different group and/or by using cultural or mechanical practices. However, an herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

### **Scout and know your field**

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Fields should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the full labeled rate and correct timing for the weeds present in the field.

### **Utilize non-herbicidal practices to add diversity**

- Use diversified management tactics such as cover crops, mechanical weed control, harvest weed seed control, and crop rotation as appropriate.

### **Use good agronomic practices, start clean and stay clean**

- Use good agronomic practices that enhance crop competitiveness.
- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control of emerged weeds.
- Sanitize farm equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

### **Difficult to control weeds**

- Fields with difficult to control weeds should be planted in rotation with crops that allow the use of herbicides with an alternative mode of action or different management practices.
- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

### **Do not overuse the technology**

- Do not use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different mode of action which provides overlapping spectrum for the difficult to control weeds.

### **Scout and inspect fields following application**

- Prevent an influx of weeds into the field by controlling weeds in field borders.
- Scout fields after application to verify that the treatment was effective.
- Suspected- herbicide resistant weeds may be identified by these indicators
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.
- Report non-performance of this product to your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (866-796-4368). If resistance is suspected ensure weed escapes are controlled using an herbicide with an effective mode of action and/or use non-chemical means to prevent further seed production.

### **Prevent weed escapes before, during, and after harvest**

- Do not allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival. Consider harvest weed seed management and control weeds post-harvest to prevent seed production.

### **Resistant Weeds**

Contact your local Syngenta representative, retailer, crop advisor or extension agent to determine if weeds resistant to this mode of action are present in your area. If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank-mix with a different mode of action product so there are multiple effective modes of application for each suspected resistant weed.

## PERENNIAL CROP REPLANTING

If replanting perennial crops, do not apply Princep 4L in the year preceding planting these crops, unless otherwise stated on this label, or crop injury may occur.

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## APPLICATION PROCEDURES

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**Ground boom applications:** Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gal of spray mixture per acre.

Use a pump with capacity to: (1) maintain 35-40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gal/minute/100 gal. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For band applications, calculate amount to be applied per acre as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572)
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments

## **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 spray drift.

### **BOOM HEIGHT – Ground Boom**

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

## **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.

## **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.

## **Handheld Technology Applications**

Take precautions to minimize spray drift.

## **APPLICATION THROUGH MICRO-SPRINKLER IRRIGATION SYSTEMS (FOR USE ON CITRUS ONLY IN CALIFORNIA)**

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Princep 4L may be applied only through micro-sprinkler irrigation systems. 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, you should contact State Extension Service specialists, equipment manufacturers, or other experts. Do not connect any irrigation system 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 irrigation 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.

### **Irrigation System Operating Instructions**

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. Systems must use a metering device, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended.

### **Micro-Sprinkler Application Instructions**

Princep 4L must be applied on the schedule specified in the specific crop use recommendations on the product label and not according to the irrigation schedule.



Princep 4L has not been sufficiently tested when applied through micro-sprinkler irrigation systems to assure consistent product performance for all labeled uses. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment. Users must check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through micro-sprinkler irrigation equipment.

### **General Instructions**

1. Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
2. Only pressure injection or venturi equipment is recommended.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitters closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the Princep 4L in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.
6. If a soluble fertilizer is used, measure the time intervals with a salt bridge.

### **Step-by-Step Instructions**

1. Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio to be used when mixing Princep 4L.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual Princep 4L application.
4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of Princep 4L, or adjust the injector to a slower flow rate.

7. Once the system is calibrated, dilute the needed amount of Princep 4L with water in the mix tank using a minimum of 15 parts water to 1 part Princep 4L in the solution tank.
8. Do not begin to inject Princep 4L into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the Princep 4L into the system at the beginning of the irrigation set in  $\frac{1}{2}$ -1 inch of irrigation water. Do not apply in excess of 1 inch of water.

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## MIXING PROCEDURES

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**All Uses:** (1) Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. (2) Fill tank  $\frac{1}{4}$  full with clean water, nitrogen solution, or complete fluid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) If any dry herbicides are being tank mixed, add them to the tank and allow them to become thoroughly suspended. (6) Then pour Princep 4L directly from jug into tank. (7) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (8) Add other liquid tank mix herbicide(s) after this product is thoroughly suspended. (9) Finish filling tank. Maintain agitation to avoid separation of materials. (10) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue from possible tank mix herbicides. (11) If an emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. (12) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

**Compatibility test:** To determine the tank mix compatibility of Princep 4L with liquid fertilizer, crop oil, spreaders, or other recommended pesticides, use this test method. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray in corn. Since liquid fertilizers can vary, even within the same analysis, check compatibility each time before use. Be especially careful when using **complete** suspension or fluid fertilizers, as serious compatibility problems are more apt to occur. Commercial application equipment may improve compatibility in some instances. Check compatibility using this procedure:

1. Add 1 pt of fertilizer to each of 2 one-qt glass jars with tight lids.
2. To **one** of the jars, add  $\frac{1}{4}$  tsp. of a compatibility agent approved for this use ( $\frac{1}{4}$  tsp. is equivalent to 2 pt/100 gal spray). Cap and shake until mixed. Examples of compatibility agents include Compex® and Unite®.
3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, cap and shake until thoroughly mixed. The appropriate amount of herbicides for this test follows (assuming a spray volume of 25 gal/A):

**Dry herbicides:** For each pound per acre, add 1.5 teaspoons to each jar. Fluff up wettable powder products before measuring.

**Liquid herbicides:** For each pint per acre, add 0.5 teaspoon to each jar.

For a spray volume other than 25 gal/A, change the teaspoons added to each jar as follows:

$$\frac{25 \text{ gal} \times \text{no. teaspoons given above}}{\text{desired gal spray volume per acre}} = \text{teaspoons to add to each jar}$$

4. After adding all ingredients, put lids on and tighten. Shake jars vigorously one minute. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be remixed readily, the mixture can probably be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add ½ of the compatibility agent to the fertilizer and the other ½ to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the materials mixed in the same spray tank.

## **WEEDS CONTROLLED**

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Princep 4L applied as directed in this label will control or partially control the weeds listed in Table 1. Optimal weed control can be obtained if Princep 4L is applied according to all label use directions.

Princep 4L will not control emerged weeds so applications must be made to a weed-free soil surface or in tank mixture with products that provide postemergence control of weeds present at the time of application.

Dry weather following application of Princep 4L may reduce residual weed control effectiveness.

Refer to the crop sections on this label for specific rates and use directions.

**Table 1. Annual Weeds Controlled**

<b>ANNUAL GRASSES</b>	<b>BROADLEAF WEEDS</b>	
Barnyardgrass	Alyssum	Mustard, wild
Bluegrass, annual	Burclover	Nightshade species, annual

Brome, downy (cheatgrass)	Carelessweed	Paintbrush, Flora's
Crabgrass species	Carpetweed	Pepperweed
Fescue, rattail	Chickweed, common	Pepperweed, yellow flower
Foxtail species	Fiddleneck	Pigweed species
Goosegrass	Filaree	Pineappleweed
Hairgrass, silver	Fireweed	Purslane, common
Junglerice	Fivehook, bassia	Pusley, Florida
Oats, wild	Groundsel	Ragweed, species
Fall panicum	Henbit	Redmaids
Ryegrass, annual	Knawel (German moss)	Shepherdspurse
Signalgrass species	Lambsquarters, common	Smartweed species, annual
Witchgrass	Lettuce, prickly	Spanishneedles
	Morningglory, species, annual	Speedwell
	Mustard, tansy	Thistle, Russian

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## CROP USE DIRECTIONS

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### AVOCADO

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Apply Princep 4L to the grove floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Avocado	2 - 4	Following final grove preparation  (See "Precautions" for grove establishment interval before application)	<ul style="list-style-type: none"> <li>• Apply to avocados in California and Florida only.</li> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Do not make more than one application per calendar year.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>

<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to area actually sprayed.

#### Precautions to reduce avocado crop injury risk:

1. Apply only to groves that have been established for 12 months or more.
2. Avoid use on sand, sandy loam, or loamy sand soil.

3. Immediately following application, limit irrigation to ½ inch.

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**BLUEBERRIES AND CANEBERRIES**

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Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Remarks
Blueberries Blackberries Boysenberries Loganberries Raspberries	2 - 4	<ul style="list-style-type: none"> <li>• Spring</li> <li>• Spring and Fall</li> </ul> <p><i>(See “Precautions” for orchard establishment interval before application)</i></p>	<ul style="list-style-type: none"> <li>• To control quackgrass, apply 4 qt/A (4 lb ai/A) in the fall or split the application by applying 2 qt/A in the fall followed by 2 qt/A in the spring, when quackgrass is actively growing.</li> </ul>
			<p style="text-align: center;"><b>Restrictions</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Apply in a minimum for 40 gallons of water per acre.</li> <li>• Do not make more than two applications per calendar year.</li> <li>• Allow a minimum of 90 days between applications.</li> <li>• Do not apply when fruit is present.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>

<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

**Precautions to reduce crop injury risk:**

1. On plantings less than 6 months old, use ½ the specified rate.
2. Avoid use on sand, sandy loam, or loamy sand soils.
3. Immediately following application, limit irrigation to ½ inch.

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**CITRUS FRUIT**

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Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

For Use In	Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
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<p>Arizona only</p>	<p>Orange Grapefruit Lemon Lime Tangerine Kumquat Mandarin Pummelo Satsuma Cultivars, varieties, and/or hybrids of these</p>	<p>2</p>	<ul style="list-style-type: none"> <li>• Spring</li> <li>• Fall</li> <li>• Spring and Fall</li> </ul> <p>(See "Precautions" for orchard establishment before application)</p>	<ul style="list-style-type: none"> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Do not apply more than 2 qt/A (2 lb ai/A) per application.</li> <li>• Do not make more than two applications per calendar year.</li> <li>• Allow a minimum of 40 days between applications.</li> <li>• Do not harvest crop for 1 day following application.</li> <li>• Do not use in nurseries or apply to bedded lemons or oranges.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only</li> </ul>
<p>California and Texas only</p>	<p>Orange Grapefruit Lemon Lime Tangerine Calamondin Citron Citrus hybrids Kumquat Mandarin Pummelo Tangelo Tangor Cultivars, varieties, and/or hybrids of these</p>	<p>2 - 4</p>	<ul style="list-style-type: none"> <li>• Spring</li> <li>• Fall</li> <li>• Spring and Fall</li> </ul> <p>(See "Precautions" for orchard establishment before application)</p>	<ul style="list-style-type: none"> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Do not make more than two applications per calendar year.</li> <li>• Allow a minimum of 40 days between applications.</li> <li>• Do not harvest crop for 1 day following application.</li> <li>• Do not use in nurseries or apply to bedded grapefruit, lemons or oranges.</li> <li>• Do not use in the Imperial, Coachella, or Palo Verde Valleys or crop injury may occur.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only</li> </ul>
<p>Florida<sup>2</sup> only</p>	<p>Orange Grapefruit Lemon Lime Tangerine Calamondin Citron Citrus hybrids Kumquat Mandarin</p>	<p>4</p>	<ul style="list-style-type: none"> <li>• Spring</li> <li>• Fall</li> <li>• Spring and Fall</li> </ul>	<ul style="list-style-type: none"> <li>• Do not apply more than 8 qt/A (8 lb ai/A) per calendar year.</li> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per application.</li> <li>• Do not make more than two applications per calendar year.</li> <li>• Allow a minimum of 40 days between applications.</li> <li>• Do not harvest crop for 1 day following application.</li> <li>• Do not use in nurseries.</li> </ul>

	<p>Pummelo Satsuma Tangelo</p> <p>Tangor Cultivars, varieties, and/or hybrids of these</p>			<ul style="list-style-type: none"> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only</li> </ul>
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<sup>1</sup> Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

<sup>2</sup> For additional weed control; refer to the **Difficult to Control Weeds** section below.

**Precautions to reduce citrus crop injury risk in all states:**

1. Dark-red grapefruit hybrids, e.g. “Star Ruby”, have a higher risk of crop injury than non-dark red types.

**Restrictions to reduce citrus crop injury risk in all states:**

1. Do not exceed 4 qt/A/year of Princep 4L (4 lb ai/A) on grove planted trees 1 year old or less or crop injury may occur.
2. Do not apply to bedded citrus (except for FL grapefruit and oranges).
3. Do not apply to trees under stress from freeze damage for one year after the freeze.

**Difficult to Control Weeds**

For control of difficult species, such as balsamapple vine and spanishneedles, and partial control of honeyvine milkweed, apply no more than 8.0 qt/A of Princep 4L (8.0 lb ai/A) per treated acre as a single application in the spring using a 50% band application. The amount of Princep 4L applied per acre of field must not exceed 4 quarts (4 lb ai/A). Apply in the spring growing season between January and April. Do not make a fall application if this treatment was used in the spring.

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**GRAPES**

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Apply Princep 4L to the vineyard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Grapes	2 - 4	After harvest through early spring	<ul style="list-style-type: none"> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Do not make more than one application per calendar year.</li> </ul>

		(See "Precautions" for vineyard establishment interval before application)	<ul style="list-style-type: none"> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatments only.</li> </ul>
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<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

**Precautions to reduce crop injury risk:**

1. Apply only to vines where trees have been established 36 months or more or crop injury may occur.
2. Avoid use on sand, sandy loam, or loamy sand soils.
3. Immediately following application, limit irrigation to ½ inch.

**OLIVES**

Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Olives	2 - 4	Following grove preparation in the fall  (See "Precautions" for orchard establishment interval before application)	<ul style="list-style-type: none"> <li>• Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>• Do not apply more than one application per calendar year.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>

<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

**Precautions to reduce olive crop injury risk:**

1. Apply only to orchards where trees have been established 12 months or more.
2. Avoid use on sand, sandy loam, or loamy sand soils.
3. Immediately following application, limit irrigation to ½ inch.

**POME FRUIT**

Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.



Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Apple Pear Azarole Chinese quince Japanese quince Loquat Mayhaw Medlar Quince Tejocote Cultivars varieties and/or hybrids of these	2 - 4	Spring or Fall  (See "Precaution s" for orchard establishme nt interval before application)	<ul style="list-style-type: none"> <li>Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>Do not make more than one application per calendar year.</li> <li>Do not harvest crop for 21 days following application.</li> <li>Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> <li>The PHI for apples is 150 days</li> </ul>

<sup>1</sup> Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

**Precautions to reduce apple and pear crop injury risk:**

1. Apply only to orchards where trees have been established 12 months or more.
2. Avoid use on sand, sandy loam, or loamy sand soils.
3. Immediately following application, limit irrigation to ½ inch.

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**STONE FRUIT**

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Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Cherry, Sweet Cherry, Tart Peach Apricot Nectarine <sup>2</sup> Plum Plumcot Prune (fresh)	2 - 4	Spring or Fall	<ul style="list-style-type: none"> <li>Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>Do not apply more than one application per calendar year.</li> <li>Do not apply more than 2 qt/A (2 lb ai/A) per calendar year to nectarines.</li> <li>Do not apply more than 2 qt/A (2 lb ai/A) per calendar year to peaches grown in California.</li> <li>Do not harvest crop for 21 days following application.</li> </ul>

			<ul style="list-style-type: none"> <li>• Do not apply to plums, apricots, plumcots or prunes (fresh) in California.</li> <li>• Use on sweet cherry and plum is restricted to states east of the Mississippi River and the state of Missouri.</li> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>
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<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

<sup>2</sup>Use restricted to California, must be applied in a 2–4 foot band on each side of tree row.

**Precautions to reduce crop injury risk:**

1. Apply only to orchards where trees have been established 24 months or more.
2. Avoid use on sand, sandy loam, or loamy sand soils with less than 1% organic matter.
3. Immediately following application, limit irrigation to ½ inch.
4. Do not plant nectarines or peaches into treated soil for 12 months after application.

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**STRAWBERRY (OR and WA Only)**

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Apply Princep 4L to control or suppress the weeds listed in Table 1. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate (qt/A)	Application Timing	Restrictions
Strawberry	1	<ul style="list-style-type: none"> <li>• Fall after harvest<sup>1</sup></li> <li>• Spring during crop dormancy</li> </ul>	<ul style="list-style-type: none"> <li>• Do not apply more than 1 qt/A (1 lb ai/A) per calendar year.</li> <li>• Do not make more than one application per calendar year.</li> <li>• Do not apply within 4 months after transplanting.</li> <li>• . Applications made by mechanically pressurized handguns are restricted to either spot treatment only or mixer/loader/applicators are required to wear coveralls over long sleeve shirts and long pants of clothing.</li> </ul>

<sup>1</sup>In fields where overhead irrigation is used to activate this product, apply after harvest at time of bed renovation. In fields where overhead irrigation is not available, apply during early October through November.

**Precautions to reduce strawberry crop injury risk:**

1. Avoid use on sand, sandy loam, or loamy sand soils.

## TREE NUTS

Apply Princep 4L to the orchard floor avoiding contact with fruit, foliage, stems or trunk. Refer to Table 1 for a list of weeds controlled or partially controlled. Refer to Table 2 for a list of potential tank mixtures.

Crop	Rate <sup>1</sup> (qt/A)	Application Timing	Restrictions
Almond Pecan Walnut	1 – 2	Spring or Fall  (See "Precautions " for orchard establishme nt interval before application)	<ul style="list-style-type: none"> <li>Do not apply more than 2 qt/A (2 lb ai/A) per calendar year.</li> <li>Do not make more than one application per calendar year.</li> <li>Do not treat the Mission variety of almonds.</li> <li>Do not apply to almond trees propagated on plum rootstocks.</li> <li>Do not use on pecans west of Pecos River in TX or in AZ, CA, or NM.</li> <li>Do not harvest crop for 30 days following application.</li> <li>Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>

<sup>1</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

### Precautions to reduce almond crop injury risk:

1. Apply only to trees established in the grove for 24 months or more.
2. Avoid use on sand, sandy loam, or loamy sand soils with less than 1% organic matter.
3. Immediately following application, limit irrigation to ½ inch.
4. Do not replant almonds into treated soil for 12 months following application.

Crop <sup>1</sup>	Rate <sup>2</sup> (qt/A)	Application Timing	Restrictions
Beech Nut Brazil Nut Butternut Cashew Chestnut Chinquapin Filbert/Hazelnut Hickory Nut Macadamia Nut	2 – 4	<ul style="list-style-type: none"> <li>Spring</li> <li>Fall</li> <li>Spring and Fall</li> </ul> (See "Precautions" for orchard establishment interval before application)	<ul style="list-style-type: none"> <li>Do not apply more than 4 qt/A (4 lb ai/A) per calendar year.</li> <li>Do not make more than two applications per calendar year.</li> <li>Allow a minimum of 120 days between applications.</li> <li>Do not harvest crop for 30 days following application.</li> <li>Do not use on Beech nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, or</li> </ul>

			<p>Hickory Nut in the state of California.</p> <ul style="list-style-type: none"> <li>• Applications made by mechanically pressurized handguns are restricted to spot treatment only.</li> </ul>
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<sup>1</sup>Do not apply when nuts are on the ground during harvest period.

<sup>2</sup>Rates are based on a broadcast treatment acre. For band applications, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

**Precautions to reduce filbert, macadamia nut, pecan and walnut crop injury risk:**

1. Apply only to orchards where trees have been established 36 months or more.
  2. Avoid use on sand, sandy loam or loamy sand soils.
- Immediately following application, limit overhead sprinkler irrigation to ½ inch.

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**TANK MIXTURES FOR PERENNIAL FRUIT AND NUT CROPS**

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Princep 4L may be tank mixed with other registered herbicides for improved spectrum of weed control in many crops. Additionally, these tank mixtures can be used to include a different mode of action herbicide to help control or manage the development of resistant weed biotypes.

Refer to the specific crop sections of this label for details on application timing, use rate, precautions, restrictions and other use information.

Not all of the tank mixture partners listed below are registered for use on all crops listed on this label so read and follow all label directions of the mixture partner.

**Table 2. Princep 4L Tank Mixtures for Weed Control in Perennial Crops**

Tank Mix Partner <sup>1</sup>	Directions
Gramoxone® brands that are registered for use on crops listed on this label	<ul style="list-style-type: none"> <li>• Apply this tank mixture for control of emerged annual weeds at the time of application.</li> <li>• This combination is also effective for top kill and suppression of perennial weeds.</li> <li>• This mixture will provide residual control or suppression of the weeds listed in Table 1.</li> <li>• Refer to the Gramoxone brand(s) label(s) for adjuvant instructions.</li> </ul>
Solo glyphosate brands that are registered for use on crops listed on this label	<ul style="list-style-type: none"> <li>• Apply this tank mixture for control of existing annual weeds at the time of application.</li> <li>• This combination is also effective for top control or suppression of perennial weeds.</li> <li>• This mixture will provide residual control or suppression of the weeds listed in Table 1.</li> </ul>

	<ul style="list-style-type: none"> <li>• Refer to the specific solo glyphosate brand label for adjuvant instructions.</li> </ul>
Solicam® or other solo norflurazon brands that are registered for use on crops listed on this label	<ul style="list-style-type: none"> <li>• Use this mixture for improved residual control of weeds such as clover, cutleaf evening-primrose, dandelion, henbit, horseweed (marestail), lambsquarters, and puncturevine.</li> <li>• Keep this tank mixture from contacting foliage, fruits, and stems during application.</li> <li>• The tank mixture of Princep 4L + Solicam or other solo norflurazon brands can also be applied with solo glyphosate brands or Gramoxone brands.</li> </ul>
Surflan® or other solo oryzalin brands that are registered for use on crops listed on this label	<ul style="list-style-type: none"> <li>• Use this mixture for additional residual weed control.</li> <li>• The tank mixture of Princep 4L + Surflan or other solo oryzalin brands can also be applied with solo glyphosate brands or Gramoxone brands.</li> </ul>
Rely® or other solo glufosinate brands that are registered for use on crops listed on this label	<ul style="list-style-type: none"> <li>• Apply this tank mixture for control of existing annual weeds at the time of application.</li> <li>• This combination is also effective for top control or suppression of perennial weeds.</li> <li>• This mixture will provide residual control or suppression of the weeds listed in Table 1.</li> </ul>

<sup>1</sup>Refer to individual product labels for precautionary statements, restrictions, rates, adjuvants and/or surfactants, approved uses, labeled crops and a list of weeds controlled.

### Tank Mixture with Roundup® or Touchdown® Brand Herbicides

This tank mixture is effective in grape vineyards and in the following bearing or nonbearing tree crops for control of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for this product applied alone. This combination is also effective for partial control of perennial weeds contacted by the spray mixture during application.

almonds\*\* (CA only)

apples

avocados\* (CA and FL only)

cherries (tart and sweet\*\*\*\*<sup>2</sup>)

filberts\*\*

grapefruits\*\*\* (CA, FL, and TX)

grapes\*

lemons\* (AZ and CA)

macadamia nuts\*\*

oranges\*\*\* (AZ, CA, FL, and TX)

peaches\*\*\*\*<sup>1</sup>

pears\*

pecans\*\*

plums\*\*\*\*<sup>2</sup>

walnuts\*\*

Use the specified rate given elsewhere on this label for Princep 4L applied alone to the crop being treated. Add to the spray tank the specified labeled rate of a Roundup or Touchdown brand product per acre, depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant at 0.5% by volume of spray solution. Apply the mixture in 10-40 gal of water per acre as a postemergence spray to the weeds at the appropriate weed growth stage given on the Roundup label.

Add Princep 4L to the spray tank first, then add the Roundup or Touchdown brand product. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to **Application Procedures** section of this label for further directions.

*Precaution: To avoid crop injury, take extreme care to avoid contact of herbicide solution, spray, drift, or mist with foliage or green bark of trunk, branches, suckers, fruit, or other parts of trees or vines. Observe precautions on both the Princep 4L and Roundup or Touchdown labels for each crop involved.*

Always refer to the labels of both herbicides for further directions, specific weeds controlled, and precautions and limitations on each crop.

\*Allow a minimum of 14 days between last application and harvest.

\*\*Allow a minimum of 21 days between last application and harvest of these crops.

\*\*\*Allow a minimum of 1 day between last application and harvest of these crops.

\*\*\*\*Allow a minimum of 17 days between last application and harvest of these crops.

<sup>1</sup>Limited to AR, CA, LA, MO, OK, TX, and states east of the Mississippi River. For CA, see specific directions in the **Almonds, Peaches, and Nectarines (CA only)** section.

<sup>2</sup>Plums and sweet cherries: limited to MO and states east of the Mississippi River, except TN.

### **Tank Mixture with Solicam®**

For improved control of such weeds as clover, cutleaf eveningprimrose, dandelion, henbit, horseweed or maretail, lambsquarters, and puncturevine, apply Princep 4L in tank mixture with Solicam DF on these crops:

oranges  
grapefruit  
lemons

Apply 4 qt/A of Princep 4L plus 4-5 lb of Solicam DF Herbicide (78.6% active ingredient) in 20-100 gal of water per acre. Princep 4L + Solicam may be applied in tank mixture with Gramoxone Inteon or Roundup.

Follow the labeled directions and restrictions of use on labels of the herbicides used in mixtures with Princep 4L.

*Precaution: Keep Princep 4L + Solicam mixtures from contacting foliage, fruits, and stems of citrus trees during spraying.*

## Princep 4L Plus Surflan®

Use this tank mix in the following crops for preemergence control of all weeds claimed on both labels:

almonds	lemons
apples	oranges
avocados	peaches
caneberries	pears
cherries	pecans
filberts	plums
grapes	English walnuts
grapefruit	

Apply the Princep 4L rate given under the appropriate crop on this label plus 2.67-5.33 lb of Surflan 75W or 2-4 qt of Surflan A.S. in 20-40 gal of water per acre. Refer to the Surflan 75W or Surflan A.S. label for complete tank mix directions. Observe all precautions and limitations on the Princep 4L and Surflan labels.

### FIELD CROPS

#### CORN (FIELD, POP AND SWEET)

[Not for use on popcorn in CA.]

Apply a maximum of 2 qt Princep 4L per acre (2.0 lb ai/A) as a single preemergence application on soils that are not highly erodible or on highly erodible soils, as defined by the Natural Resources Conservation Service, if at least 30% of the soil is covered with plant residues. If a second treatment is required following an earlier herbicide application, the total simazine applied may not exceed 2.5 lb ai/A per calendar year.

If the soil is highly erodible and covered with <30% plant residues, apply a maximum of 1.6 lb ai/acre as a single preemergence application. For highly erodible soils and is covered with <30% plant residue, do not apply more than one application of Princep 4L and not more than 1.6 lb ai/A (1.6 qt/A).

Pre-grazing/pre-harvest interval for field corn: 60 days

Pre-grazing/pre-harvest interval for popcorn: 60 days

Pre-grazing/pre-harvest interval for sweet corn: 45 days

Nitrogen solution or complete liquid fertilizer may replace all or part of the water in the spray. Determine the physical compatibility of Princep 4L with fertilizer before use. Refer to the **Product Information** section of this label for a compatibility test procedure. Do not apply after corn has emerged, as there is danger of liquid fertilizer causing crop injury. Use a minimum of 10 gal of spray mixture per acre.

**Preemergence:** Apply before weeds and corn emerge. Use the specified rate as stated above.

**Preplant:** Broadcast in the spring at the specified rate as stated above. If soil is tilled or worked after application, avoid deep incorporation of Princep 4L. Best results will be obtained when Princep 4L is applied within 2 weeks before planting. Under dry weather conditions, preplant applications may give better weed control than preemergence. If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

### **Winter Annual Broadleaf Control – Preemergence Fall Application**

For preemergence control of winter annual weeds, such as common chickweed, henbit, shepherdspurse, tansymustard, wild mustard, annual bluegrass, downy brome, and others, broadcast 1 qt/A of Princep 4L after harvest of the preceding crop and prior to weed emergence on land to be planted to corn the following year. A tillage operation may precede the application. Do not apply to frozen ground. If Princep 4L is used in the fall corn weed control program, do not exceed 1.5 qt of Princep 4L preemergence in the spring.

#### **Restrictions:**

1. *Do not apply more than 2.5 qt of Princep 4L per acre of corn per calendar year.*
2. *Do not plant any crop except corn until the following year.*
3. *Do not graze or harvest field corn or popcorn for 60 days following application.*
4. *Do not graze or harvest sweet corn for 45 days following application.*
5. *Do not apply Princep 4L preplant incorporated for weed control in corn in the High Plains and Intermountain areas of the West (including central and western KS, western NE, western OK, and the Panhandle of TX) where rainfall is sparse and erratic or where irrigation is required.*
6. *Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following Princep 4L application.*
7. *Applications made to sweet corn by mechanically pressurized handguns are restricted to spot treatment only.*

#### **Precautions:**

1. *Following harvest, plow and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used.*
2. *In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Princep 4L only when corn is to follow corn or when a crop of untreated corn is to precede other rotational crops.*
3. *Injury may occur to soybeans planted in north-central and northwest IA, south-central and southwest MN, northeast NE, southeast SD, and other areas the year following application on soils having a calcareous surface layer.*



## Tank Mixtures on Corn

**AAtrex® or other solo atrazine containing products:** Use Princep 4L in a preplant or preemergence tank mixture with AAtrex brands or other solo atrazine containing products for control of many annual weeds, including carpetweed, crabgrass, fall panicum, foxtail, lambsquarters, morningglory, pigweed, ragweed, and velvetleaf.

When tank mixing or sequentially applying simazine and/or atrazine or products containing either active ingredient to corn, the total pounds of simazine and/or atrazine applied must not exceed 2.5 lb ai/acre per calendar year.

Refer to the AAtrex or other solo atrazine containing product label for complete directions and use 1 qt/A of Princep 4L for each 1 lb/A of AAtrex. Also refer to the AAtrex or other solo atrazine containing product label and the **Corn** section of this label for precautions and restrictions.

**Gramoxone brands:** Use in a tank mixture where corn will be planted directly in a cover crop, established sod, or previous crop residues. This combination controls existing vegetation and provides residual control of the annual broadleaf and grass weeds listed in table 1.

Add Princep 4L to the spray tank, mix thoroughly with water, and then add Gramoxone brands and a nonionic surfactant. Provide constant agitation during mixing and application to keep the mixture in suspension.

Apply up to 2 qt of Princep 4L plus the specified labeled rate of the Gramoxone brand in 20-60 gal of water per acre as a broadcast spray, either before or after planting, but before corn emerges. Add a nonionic surfactant at the rate of 0.5 pt/100 gal of spray volume.

For further information, see product information, caution and warning statements, precautions, restrictions, and notes on the Princep 4L and the Gramoxone brand labels.

## NURSERIES, AND CHRISTMAS TREE PLANTINGS

### Nurseries (see list below)

Apply 2-3 qt Princep 4L per acre in fall or spring. Refer to Table 1 for a list of weeds controlled or suppressed. Refer to Table 3 for a list of nursery species that can be treated with Princep 4L. To avoid crop injury, do not apply for at least one year after transplanting.

### Restrictions for use in Nurseries:

1. Do not apply more than 3 qt Princep 4L/A (3 lb ai/A) per calendar year.
2. Do not apply more than once per calendar year.
3. Applications made by mechanically pressurized handguns are restricted to spot treatment only.

### Christmas Tree Plantings

Remove or control weed growth before Princep 4L application. Apply 2-4 qt Princep 4L per acre after transplanting. Use at the same rate for annual maintenance applications.

For quackgrass control apply 4 qt/A Princep 4L in the fall or apply a split application of 2 qt/A Princep 4L in the fall plus 2 qt/A Princep 4L in early spring, after quackgrass begins growth.

Refer to Table 1 for a list of weeds controlled or suppressed. Refer to Table 3 for Christmas tree species that can be treated with Princep 4L.

### Restrictions for use in Christmas Trees

1. Do not apply more than 4 qt Princep 4L/A (4 lb ai/A) per calendar year.
2. Do not apply more than twice per calendar year.
3. Applications made by mechanically pressurized handguns are restricted to spot treatment only.

### Precautions to avoid tree injury:

1. *Do not use Princep 4L on seedbeds or cuttingbeds.*
2. *In California, Oregon, and Washington, do not apply to Christmas trees sooner than one year after transplanting. In other areas, do not apply to Christmas trees transplants less than 2 years of age.*
3. *Do not use until soil is firmly settled around roots..*

**Table 3. Trees and Shrubs That Can be Treated With Princep 4L**

<b>CONIFERS</b>	<b>DECIDUOUS TREES AND WOODY ORNAMENTALS</b>
Arborvitae	American elm
Austrian pine	Siberian elm
Bishop pine	Barberry
Knobcone pine	Boxelder
Lodgepole pine (shore pine)	Bush honeysuckle
Monterey pine	Caragana
Mugho pine	Cotoneaster
Red pine (Norway pine)	Dogwood
Scotch pine	Eucalyptus
White pine	Holly ( <i>Ilex</i> spp.)
Blue spruce	Honey locust
Norway spruce	Oregon grape ( <i>Mahonia</i> spp.)
Red spruce	<i>Pieris</i> spp.
White spruce	Red oak
Balsam fir	Russian olive
Douglas fir	Oleander

Fraser fir	Palm
White fir	Bottle brush
Hemlock	Carob
Juniper	
Red cedar	
White cedar	
Yew ( <i>Taxus</i> spp.)	

**Pennant Magnum® Tank Mix:** Princep 4L may be tank mixed with Pennant Magnum Herbicide to control weeds in containerized, field, and liner\* grown ornamentals and commercial landscapes. See the Pennant Magnum label for ornamental species, weeds controlled with this tank mixture, and for other information.

\*Plants transplanted normally in rows in a nursery or similar area for further growth prior to transplanting to final growing place.

**Princep 4L Plus Surflan or other solo oryzalin brands on Christmas Trees:** Use this tank mix for additional preemergence control of weeds listed on the Surflan label or other solo oryzalin brand labels that are registered for use on Christmas trees. Refer to Surflan or other solo oryzalin brand labels for use rates, precautions and restrictions. Use on field grown conifer species listed on the labels for each herbicide plus grand fir, alpine fir, Engelmann spruce, black spruce, Colorado blue spruce, Coulter pine, giant redwood, and Veitchi fir.

Apply in sufficient water per acre to uniformly treat the area. Follow overtop sprays with sprinkler irrigation to move the herbicide from leaf surfaces to the soil. Remove weed growth before application. Mix weed residues, prunings, or trash into the soil, or remove them before treatment. Soil should be in good tilth and free of clods at time of application. Shallow cultivation (1-2 inches) after treatment will not reduce weed control. Observe all precautions and restrictions on the Princep 4L and Surflan label or other solo oryzalin brand label.

**Note:** Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.

*Precautions: To avoid plant injury, (1) Do not use on seedbeds or on unrooted cuttings. (2) Do not use in greenhouses or other enclosed areas.*

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## **TURFGRASS**

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Apply Princep 4L to turfgrass grown on sod farms, fairways, lawns, and other similar areas for broad spectrum preemergent control of the broadleaf and grassy weeds listed in Table 1.

For use on warm season turf grass only (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).

## TURFGRASSES FOR SOD (FL ONLY)

### St. Augustinegrass, Bermudagrass, Centipedegrass, and Zoysiagrass

Apply 2-4 qt/A of Princep 4L, according to soil texture as indicated below. This product must be watered in immediately after application if applied at a rate greater than 2 lb ai/A (2 qt/A of Princep 4L).

Muck or peat	4 qt	Old beds	within 2 days after lifting of sod
		New beds	3-4 days after sprigging or plugging
Sandy soil	2 qt	Old beds	within 2 days after lifting of sod
		New beds	7-10 days after sprigging or plugging

If weeds regrow, apply an additional 2 qt/A of Princep 4L on muck or peat, or 1 qt/A of Princep 4L on sandy soil.

#### Use Precautions:

- To avoid turf injury, use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
- Application to newly sprigged turfgrass may result in temporary slowing of growth.

#### Use Restrictions:

- **Do not** apply within 30 days prior to cutting or lifting.
- **Do not** apply in combination with surfactants or other spray additives.
- **Do not** exceed 4 qt of Princep 4L per acre (4 lb ai/A) per application.
- **Do not** make more than 2 applications per year.
- **Do not** exceed 6 qt Princep 4L per acre (6 lb ai/A) per calendar year.
- **Do not** graze or feed turf clippings to animals.

## TURFGRASSES FOR SOD (IN STATES EXCEPT FL)

### St. Augustinegrass, Bermudagrass, Centipedegrass, and Zoysiagrass

Apply 1-2 qt/A of Princep 4L.

Do not apply to established beds within 2 days after lifting of sod. Do not apply to new beds before 7-10 days after sprigging or plugging.

Do not apply more than 2 lb ai/A (2 qt of Princep 4L) per application and not more than two applications per calendar year. Do not exceed 3 qt/A Princep 4L (3 lb ai/A) per calendar year.

**Use Precautions:**

- On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysiagrass, temporary slowing of growth and yellowing may occur following application.

**Use Restrictions:**

- Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
- Do not use north of NC (except in the VA Coastal Plains) or on soils with a pH above 7.8.
- Do not use on muck or alkaline soils.
- Do not apply over the rooting area of trees or ornamentals not listed on this label.
- Do not seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment.
- Do not apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system.
- Do not exceed 2 qt/A of Princep 4L within 12 months of seeding grasses.

**Note:** Do not graze or feed turf clippings to animals or illegal residues may result.

**TURFGRASS FOR FAIRWAYS, LAWNS, AND SIMILAR AREAS**

**Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass**

For control of winter annual weeds, apply Princep 4L after September 1 (after October 1 for annual bluegrass) before emergence of weeds. Fall applications of Princep 4L will control annual bluegrass, burclover, lawn burweed, common and mouseear chickweed, corn speedwell, henbit, hop clover, spurweed, and parsley-piert. Princep 4L will also control these weeds soon after emergence. For control of summer annual weeds listed in Table 1 apply Princep 4L in late winter before the weeds emerge. Apply in a minimum of 15 gal of water per acre.

Irrigate with ½ inch of water if rainfall does not occur within 10 days after preemergence treatment.

For non-residential sites, where annual bluegrass is the major weed, use 1 qt of Princep 4L per acre (22 ml. or 0.75 fl. oz. per 1,000 sq. ft.) tank-mixed with another herbicide for *Poa annua* control or repeat application of 1 qt Princep 4L 4 to 6 weeks later. Use 1-2 qt/A of Princep 4L (22-44 ml. or 0.75-1.5 fl. oz. per 1,000 sq. ft.) for control of other weeds. However, do not exceed 1 qt/A of Princep 4L per treatment on newly sprigged turfgrass or on hybrid bermudagrass.

For control of summer annuals which emerge after the initial application, apply an additional 1 qt/A of Princep 4L at least 30 days after the initial application, but not after June 1. However, do not make more than 2 applications per calendar year.

For residential turf on lawns, institutional turf, parks or recreation fields, do not exceed 1.6 qt per acre of Princep 4L (1.2 fl oz per 1000 sq ft) per application (equivalent to 1.6 lb ai/A). Irrigate with ½ in of water immediately following application to remove product from turf foliage.

**Use Precautions:**

- Application to newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysia grass, may result in temporary slowing of growth and yellowing
- To avoid turf injury, use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.

**Use Restrictions:**

- Do not use on golf greens
- Do not use north of NC (except in the VA Coastal Plains) or on soils with a pH above 7.8.
- Do not use on muck or alkaline soils.
- Do not apply over the rooting area of trees or ornamentals not listed on this label.
- Do not seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment.
- Do not apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system.
- Do not exceed 2 qt/A of Princep 4L within 12 months of seeding grasses.
- Do not exceed 2 qt/A of Princep 4L (2 lb ai/A) per application.
- Do not exceed 3 qt/A Princep 4L (3 lb ai/A) per calendar year.
- Do not make more than 2 applications per year.
- Do not graze or feed turf clippings to animals.

**Tank-Mix Partner Table**

Product Name	EPA Registration Number	Active Ingredient(s)
AAtrex	Various brands	atrazine
Gramoxone	100-1431, 100-1652	paraquat
Rely	7969-448	glufosinate
Solicam	61842-41	norflurazon
Surflan	Various brands	oryzalin

**STORAGE AND DISPOSAL**

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

**Pesticide Storage**

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

### **Pesticide Disposal**

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

### **Container Handling [less than or equal to 5 gallons]**

**Non-refillable 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  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

### **Container Handling [greater than 5 gallons]**

**Non-refillable 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  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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 incineration, or by other procedures approved by state and local authorities.

### **Container Handling [greater than 5 gallons]**

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for

recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.**

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Syngenta Crop Protection at 1-800-334-9481.

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