



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

April 8, 2024

Jacob S. Moore  
Federal Regulatory Manager  
Makhteshim Agan of North America (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

Subject: Approval of Label Amendment; Only Indicated Changes Reviewed – Adding the field corn (California) directions for use.  
Product Name: Pruvin Herbicide  
EPA Registration Number: 66222-184  
Application Date: 1/26/2023  
Case Number: 478066

Dear Mr. Moore:

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

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

This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 C.F.R. § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently

approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 C.F.R. § 152.3.

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

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

If you have any questions, please contact Sayed Islam at 202-566-2796 or at [islam.sayed@epa.gov](mailto:islam.sayed@epa.gov)

Sincerely,



Kable Bo Davis  
Senior Regulatory Specialist  
Office of Pesticide Programs  
Registration Division, Immediate Office

Enclosure

**ACCEPTED**

ONLY INDICATED

REVISIONS REVIEWED

04/08/2024

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

66222-184

No label revisions other than those indicated were reported to the Agency.

# Pruvin® Herbicide

GROUP **2** HERBICIDE

(Alternate brand name: PruvIn®)

**Dry Flowable**

**For weed control in Cranberry, Potatoes, Potatoes grown for seed, field grown Tomatoes, Citrus Fruit, Stone Fruit, Tree Nuts, Pome Fruit, Grapes and Field Corn; along Roadsides and Highway Medians\*, at Industrial Plant Sites\* and Utility Substations\*, Warm Season Turf, and Grass Grown for Seed (Oregon, Washington) (\*Not Registered in New York)**

<b>ACTIVE INGREDIENT:</b>	<b>% BY WT.</b>
Rimsulfuron: N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide .....	25.0%
<b>OTHER INGREDIENTS:</b> .....	<u>75.0%</u>
<b>TOTAL:</b>	100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUTION

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

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

Manufactured for:  
Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

EPA Reg. No. 66222-184

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

**NET CONTENTS: \_\_\_\_\_ LBS**

### FIRST AID

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

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

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

**Optional Text for Label Booklet:** [For additional precautionary, handling and use statements, see inside of this booklet.]

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

**CAUTION**

Causes moderate eye irritation. Harmful if absorbed through the skin. Avoid contact with skin, eyes, and clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material including polyethylene or polyvinylchloride
- Shoes plus socks

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product.

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

**ENGINEERING CONTROLS STATEMENTS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR Part 170 Section 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**

**DO NOT** apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high-water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

**Surface Water Advisory:** This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of rimsulfuron from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

**Non-target Organism Advisory:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

**Windblown Soil Particles Advisory:** Pruvín® has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying Pruvín if prevailing local conditions may be expected to result in off-site movement.

## 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 in your State 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 4 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 including polyethylene or polyvinylchloride
- Shoes plus socks

**IMPORTANT:** Pruvin® Herbicide may be used in most states. Check with your agricultural dealer, state cooperative extension service, or Department of Agriculture before use to be certain Pruvin® Herbicide is registered in your state. Read the entire use directions and Limitations of Warranty and Liability before using Pruvin® Herbicide.

**STATE SPECIFIC RESTRICTIONS:** The state of Arizona has not approved this product for use on agricultural commodities. If grown for commercial production, use on the following sites/crops is prohibited: potatoes, potatoes grown for seed, tomatoes, citrus fruit, stone fruit, tree nuts, pome fruit, grapes, field corn, and warm-season turf grown for seed or sod.

### 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 applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser 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 Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.”

## ADVISORY SPRAY DRIFT

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. 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 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.”

#### Air-Assisted (Air Blast) Field Crop Sprayers (FOR USE ON FIELD CORN ONLY)

Air-assisted field crop sprayers carry droplets to the target via a downward-directed airstream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application and is configured properly, and that drift is not occurring.

#### CHEMIGATION APPLICATION

**DO NOT** apply Pruvin® Herbicide through any type of irrigation system except on potatoes, cranberry and on fruit, nut and vine crops. Pruvin® Herbicide may be applied using a center pivot, lateral move, solid set, or hand move irrigation systems in potatoes and cranberries. See the **CHEMIGATION – POTATOES and CHEMIGATION- CRANBERRIES** section of this label for more information. Pruvin® Herbicide may be applied via micro-sprinkler chemigation in fruit, nut and vine crops. See the **MICRO-SPRINKLER CHEMIGATION – FRUIT, NUT AND VINE CROPS** section of this label for more information. **DO NOT** apply Pruvin® Herbicide through chemigation on any other crop.

#### INTEGRATED PEST MANAGEMENT

Makhteshim Agan of North America, Inc. (ADAMA) advises the use of Integrated Pest Management (IPM) programs to control pests. Pruvin® Herbicide may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of Pruvin® Herbicide must be based on

IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

### WEED RESISTANCE MANAGEMENT

Pruvin® Herbicide, which contains the active ingredient rimsulfuron, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America. Naturally occurring weed biotypes that are resistant to other herbicides in the sulfonyleurea chemical family including Triasulfuron, Metsulfuron-methyl, Chlorsulfuron, Tribenuron methyl, Thifensulfuron-methyl, or Chlorsulfuron will also be resistant to PruvIn® Herbicide since it is also a member of the sulfonyleurea chemical family of herbicides.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of PruvIn® Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your local retailer or county extension agent.
- Contact your crop advisor or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- 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.

Additionally, users must follow as many of the following herbicide resistance management practices as is practical:

- Use a broad-spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of [Product] and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide directions available in your area.

### PRODUCT INFORMATION

Pruvin® Herbicide must be used only in accordance with directions on this label.

**Formulation:** PruvIn® Herbicide is a dry flowable formulation containing 25% active ingredient by weight. It is noncorrosive to equipment, nonflammable, and nonvolatile. Continuous agitation is required to maintain the product in suspension in the spray tank. For best results, the spray tank solutions of PruvIn® Herbicide must be maintained at pH 5 to 7. Degradation of PruvIn® Herbicide may occur if it is used in a spray solution or with spray additives that buffer pH to below 4 or above 8.

**Mode of Action (Group 2):** Herbicides in this family inhibit branched-chain amino acid synthesis in plants. PruvIn® Herbicide is absorbed through the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. For preemergence weed control, rainfall or sprinkler irrigation is needed to move PruvIn® Herbicide into the soil. Weeds will not emerge from

preemergence applications. In some cases, however, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

One to three weeks after postemergence application to weeds, leaves of susceptible plants appear chlorotic, and the growing point subsequently dies. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

Best weed control is attained when Pruvion® Herbicide is applied in vigorously growing crops that shade competitive weeds. Reduced weed control may result, however, when the crop canopy is too dense and some of the spray is intercepted by the crop and it fails to reach the weeds. In addition, reduced weed control may result where the crop canopy is not as dense due to a thin crop stand or seeding skips and there is less shade.

The herbicidal action of Pruvion® Herbicide may be less effective on weeds stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, weeds hardened-off by drought stress are less susceptible to Pruvion® Herbicide.

Postemergence weed control may be reduced if rainfall occurs soon after application. Several hours of dry weather are needed to allow Pruvion® Herbicide to be sufficiently absorbed by weed foliage (Pruvion® Herbicide is rainfast in 4 hours).

**Application Timing:** The best weed control is obtained when Pruvion® Herbicide is applied to young, actively growing weeds. The degree and duration of control may depend on (a) weed spectrum and infestation intensity, (b) weed size at application, and (c) environmental conditions at and following treatment.

For maximum preemergence activity prior to application, the bed or soil surface must be smooth and relatively free of crop and weed trash (dead weeds, decaying leaves, clippings, etc.). Leaves and trash may be removed by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide application. Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of Pruvion® Herbicide. Cutting water furrows or cultivations that mix untreated soil into the treated areas will also reduce the effectiveness of the herbicide treatment.

For best weed management, apply Pruvion® Herbicide with another suitable residual herbicide registered for that crop. This is directed for all soil types, but especially for coarse textured soils under standard sprinklers or micro-sprinklers.

More than one banded application of Pruvion® Herbicide may be needed to provide extended weed control.

**Note:** See the application information section below under each crop for directions on application timing specific to each crop use of Pruvion® Herbicide.

#### SPRAY ADJUVANTS

A spray adjuvant must be added with each application of Pruvion® Herbicide when applied by itself and postemergence to the weeds. Consult your local agricultural dealer, applicator, crop consultant, state cooperative extension service, or ADAMA fact sheets, technical bulletins, and service policies prior to using an adjuvant system. If another herbicide is tank mixed with Pruvion® Herbicide, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40 CFR 1001).

##### Nonionic Surfactant (NIS)

- Apply 0.125 to 0.25% v/v (1 to 2 pints per 100 gallons of spray solution) or 1 to 2 pints per acre for chemigation in cranberry. The higher 0.25% v/v rate must be used under arid or drought conditions.
- Surfactant products must contain at least 80% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

##### Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gallon per 100 gallons of spray solution) or 1 to 2 pints per acre for chemigation in cranberry.
- Oil adjuvants must contain at least 80% high quality petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- Blended products which contain both MSO and silicone are acceptable at labeled rates.

##### Ammonium Nitrogen Fertilizer

- An ammonium nitrogen fertilizer may be added to the spray mix in addition to a COC or NIS but is not required to optimize performance of Pruvion® Herbicide.
- Use 2 quarts per acre of a high-quality urea ammonium nitrate (UAN) including 28%N or 32%N or 2 pounds per acre of a spray-grade ammonium sulfate (AMS). Use 4 quarts per acre UAN or 4 pounds per acre AMS under arid conditions.

##### RESTRICTION

- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution.

##### Special Adjuvant Types

- Combination adjuvant products may be used with Pruvion® Herbicide at doses that provide the required amount of NIS, COC, MSO, and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.



- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality. Consult your local agricultural dealer, applicator, crop consultant, state cooperative extension service, or ADAMA fact sheets and technical bulletins prior to using an adjuvant system not specified on this label.

#### **Adjuvant Precautions**

- The use of silicone polymer-type surfactants is not suggested; as reduced weed control may result.

**Note:** More specific directions for use of spray adjuvants with Pruvion® Herbicide are provided below under specific crop uses.

### **SPRAY EQUIPMENT, CLEANUP, MIXING INSTRUCTIONS**

**Equipment:** For specific application equipment, refer to the manufacturer's directions for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc. Air and ground equipment must be properly calibrated with clean water before making an application of Pruvion® Herbicide. Thorough coverage is required for best weed control. The spray delivery system must provide a uniform spray pattern with a minimum of drift.

Avoid spray drift onto nontarget sites by using properly calibrated equipment, appropriate spray volumes for the crop, and avoiding an application during inclement weather conditions that favor spray drift. For additional information on spray drift, refer to the **SPRAY DRIFT MANAGEMENT** section of this label.

**Equipment Cleanup:** The spray equipment must be cleaned and free of previous pesticide deposits before Pruvion® Herbicide is mixed and used. Follow the cleanup procedures specified on the labels of the previously applied products. If no cleanup directions are provided, follow the steps provided below for cleaning up after spraying Pruvion® Herbicide. Thoroughly clean all mixing and spray equipment immediately following applications of Pruvion® Herbicide to avoid subsequent crop injury.

Spray equipment or nurse tanks used in chemigation must be cleaned before Pruvion® Herbicide is used. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the procedures outlined below in the **After Spraying Pruvion® Herbicide and Before Spraying Other Crops** section of this label.

When cleaning spray equipment before mixing Pruvion® Herbicide, read and follow label directions for proper rinsate disposal of the product previously sprayed. Steam cleaning spray tanks is directed prior to the cleanout procedure outlined below to facilitate the removal of any caked pesticide deposits.

When multiple loads of Pruvion® Herbicide are applied or when mixing and spraying equipment will be used over an extended period to apply multiple loads of Pruvion® Herbicide, it is directed that at the end of each day of spraying the interior of the tank be rinsed with fresh water, flush the boom and hoses, and then partially fill the tank and allow to sit overnight. This will prevent the buildup of dried pesticide deposits from accumulating in the application equipment.

#### **After Spraying Pruvion® Herbicide and Before Spraying Other Crops**

1. Drain the tank and thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of household ammonia\* (contains at least 3% active ingredient) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing ammonia\* and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) listed on this label. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

\* Equivalent amounts of an alternate-strength ammonia solution or a ADAMA-approved spray equipment cleaner can be used in the cleanup procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or ADAMA representative for a listing of approved spray equipment cleaners for use with Pruvion® Herbicide.

#### **Additional Cleanup Directions**

1. **RESTRICTION: DO NOT** use chlorine bleach with ammonia, as dangerous gases will form. **DO NOT** clean equipment in an enclosed area.
2. When Pruvion® Herbicide is tank mixed with other pesticides, all required cleanout procedures must be examined and the most rigorous procedure must be followed.
3. In addition to this cleanout procedure, all preapplication cleanout guidelines on subsequently applied products shall be followed as per the individual labels.
4. Where routine spraying practices include shared equipment frequently being switched between applications of Pruvion® Herbicide and applications of other pesticides to crops sensitive to Pruvion® Herbicide during the same spray season, it is directed that a sprayer be dedicated to Pruvion® Herbicide to further reduce the chance of crop injury.

**Mixing Instructions:** It is very important that the spray equipment is clean and free of previous pesticide deposits before mixing Pruvini® Herbicide. Follow these steps when mixing a spray solution with Pruvini® Herbicide:

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of Pruvini® Herbicide.
3. Continue agitation until the Pruvini® Herbicide is fully dispersed, at least 5 minutes.
4. Once the Pruvini® Herbicide is fully dispersed, maintain agitation and continue filling tank with water. Pruvini® Herbicide must be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired); then add the required amount of spray adjuvant (if needed). Always add the spray adjuvant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply Pruvini® Herbicide spray mixture within 48 hours of mixing to avoid product degradation.
8. If Pruvini® Herbicide and tank mix partner are to be applied in multiple loads, pre-slurry the Pruvini® Herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the Pruvini® Herbicide.

**RESTRICTION: DO NOT** use Pruvini® Herbicide in a spray solution or with spray additives that change the pH to below 4 or above 8, or Pruvini® Herbicide degradation may occur. (See the **Formulation** section above for more information.)

#### **TANK MIXTURES**

In order to broaden the weed control spectrum and/or extend the residual effectiveness of Pruvini® Herbicide, it may be used in tank mixtures with registered herbicides affecting a different site of action (mode of action) and/or adjuvants registered for use on the crops listed on the Pruvini® Herbicide labeling. If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide. Pruvini® Herbicide may also be used in other tank mixtures with insecticides and fungicides. In all cases when using tank mixtures with Pruvini® Herbicide, refer to the label(s) of the tank mix partner(s) for additional use instructions or restrictions.

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.

**Note:** See the individual crop use directions below for specific information, precautions, and restrictions on tank mixtures with Pruvini® Herbicide.

#### **CULTIVATION**

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at application, or weeds that emerge after an application of Pruvini® Herbicide. For preemergence applications, cultivation is not specified for 7 days after an application in order to allow Pruvini® Herbicide to fully control treated weeds. After postemergence application of Pruvini® Herbicide, the optimum timing for cultivation is 7 to 14 days. Cultivation up to 7 days before the postemergence application of Pruvini® Herbicide may decrease weed control by pruning weed roots placing the weeds under stress or covering the weeds with soil and preventing coverage by Pruvini® Herbicide.

## PRECAUTIONS AND RESTRICTIONS

### PRECAUTIONS

- Carefully observe sprayer cleanup instructions, as spray tank residue may damage other crops.
- Thoroughly clean application equipment immediately after use of Pruvion® Herbicide. (See the **Equipment Cleanup** section of this label for instructions.)
- Avoid spray drift to any adjacent crops, planned planting areas, and desirable plants, as injury may occur.
- For best results, maintain spray tank solution at pH 5 to 7.
- Preemergence use on soils containing more than 6% organic matter may not provide adequate soil residual weed control and may result in reduced weed control.
- If sprinklers are used for frost protection, delay the application of Pruvion® Herbicide until stress from environmental conditions has passed.
- Crop injury may occur following an application of Pruvion® Herbicide if there is a prolonged period of cold weather and/or cold weather in conjunction with wet soils caused by poor drainage or excessive use of sprinkler irrigation for frost protection.
- Preemergence and postemergence use on rill irrigated crops including potatoes and tomatoes (furrow or gravity) may not provide adequate weed control in the absence of rainfall.
- Crop varieties/cultivars may differ in their response to various herbicides. ADAMA advises that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of Pruvion® Herbicide to a small area.
- Crops (especially crops other than pome fruit, tree nuts, stone fruit, citrus, grapes, potatoes, tomatoes, and field corn) whose roots extend into a treated area may be injured.
- If tank mixing Pruvion® Herbicide with another herbicide, check to see if the selected companion herbicide has a ground or surface water advisory. If it does, consider the advisory when using the companion herbicide.
- Tank mixing Pruvion® Herbicide with organophosphate insecticides in some crops may result in crop injury.

### RESTRICTIONS

- **DO NOT** apply or drain or flush equipment containing Pruvion® Herbicide on or near desirable trees or other plants, on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Trees or other desirable plants whose roots extend into a treated crop use area may be injured.
- **DO NOT** contaminate any body of water including irrigation water that may be used on other crops.
- **DO NOT** apply in or on irrigation canals or ditches including their outer banks except for interior ditches in cranberry bogs
- **DO NOT** use on lawns, walks, driveways, tennis courts, or similar areas.
- **DO NOT** apply to frozen or snow-covered soil. Crop injury may occur from applications made to poorly drained soils.
- **DO NOT** apply using Air-Assisted (Air Blast) field crop sprayers.
- **DO NOT** apply by air in the state of NY. **DO NOT** apply by air in the state of CA except for use on potatoes in Modoc and Siskiyou counties.
- **DO NOT** graze or feed forage, grain, or fodder (stover) from treated areas to livestock within 30 days of Pruvion® Herbicide application.

**Note:** See also the specific crop uses below for additional crop-specific precautions and restrictions for use of Pruvion® Herbicide.

## CRANBERRY (Optional Text: Not for Use in California)

### APPLICATION INFORMATION

Apply Pruvin® Herbicide as a uniform broadcast application to vine canopy. Apply by ground application or chemigation. Apply to cranberry vines that are in good health and vigor.

Best results are obtained when Pruvin® Herbicide is applied to moist soil and 1/2 inch – 1 inch (depending on soil type) of rainfall or sprinkler irrigation occurs within 2 weeks after application. Time application of Pruvin® Herbicide to take advantage of normal rainfall patterns and cool temperatures. Moisture for activation must occur within 2 to 3 weeks after application.

For broadcast applications, make a single application of Pruvin® Herbicide at 2 ounces (0.5 oz a.i.) per acre at each application. **DO NOT** make more than 2 applications per year. **DO NOT** apply more than 4 ounces (1.0 oz a.i.) per acre on a broadcast application basis per year. Make the first application at early to mid-bloom and allow a minimum of 21 days to elapse before making a second application. **DO NOT** apply within 60 days of harvest. If applying emerged weeds, include a crop oil concentrate or non-ionic surfactant at labeled rate.

Uniform coverage is important. Use 10-40 gallons of spray solution per acre. Nozzle selection must meet manufacturer's spray volume and pressure specifications for postemergence herbicide applications. Pruvin® Herbicide may also be applied by certain chemigation methods, including solid-set sprinklers (e.g., pop-ups and impact heads).

As discussed above under the **Formulation** section of this label, Pruvin® Herbicide is sensitive to pH outside the range of pH 4 to 8. **RESTRICTION: DO NOT** apply in a spray solution with a pH below 4 or above 8, or with spray additives that buffer the pH to below 4 or above 8, since degradation of Pruvin® Herbicide may occur.

PHI is 60 days prior to harvest.

### WEEDS CONTROLLED OR PARTIALLY CONTROLLED IN CRANBERRIES

Pruvin® Herbicide provides control of susceptible weeds for 60 to 90 days. Moisture from rainfall or irrigation is necessary for herbicide activation. Length of control is a function of moisture for activation, soil temperature, soil texture and amount of moisture after application. Pruvin® Herbicide will help provide postemergence control of the weeds listed in this label. For best results, make postemergence applications to young, actively growing weeds and include a spray adjuvant.

Residual weed control may be reduced when Pruvin® Herbicide is applied where heavy crop canopy, trash and/or weed residue exists. Weed control may also be reduced when applications of Pruvin® Herbicide are made to weeds under stress from drought, excessive water, temperature extremes, diseases or low humidity. When used according to the label use directions Pruvin® Herbicide provides control or partial control of the following weeds:

#### PREEMERGENCE

GRASSES	BROADLEAVES/SEDGES
Barnyardgrass <sup>2</sup>	Chamomile, False
Crabgrass, Large <sup>2</sup>	Cocklebur <sup>1</sup>
Foxtail (Giant, Green, Yellow) <sup>2</sup>	Dandelion, Common (seedling) <sup>2</sup>
Quackgrass	Dandelion, Common (established) <sup>1</sup>
Wheat, Volunteer	Filaree, Redstem
Wild Oat <sup>1</sup>	Fleabane, Hairy <sup>2</sup>
	Groundsel, Common
	Henbit
	Kochia
	Lambsquarters, Common <sup>1</sup>
	Mallow, Common <sup>2</sup>
	Marestail/horseweed <sup>2</sup>
	Mustards (Birdsrape, Black)
	Nightshades, ( Black <sup>1</sup> , Hairy <sup>1</sup> )
	Nutsedge, Yellow <sup>1,2</sup>
	Pigweed, Prostrate <sup>1</sup>
	Pigweeds (Redroot, Smooth)
	Puncturevine <sup>2</sup>
	Purslane, Common
	Ragweed, Common <sup>1</sup>

GRASSES	BROADLEAVES/SEDGES
	Spurges (Prostrate, Spotted)
	Velvetleaf <sup>1</sup>

1. Partial Control.

2. See **Specific Weed Problems - Fruit, Nut and Vine Crops.**

#### POSTEMERGENCE

GRASSES (1 to 2 " in Height)	BROADLEAVES/SEDGES (1 to 3 " in Height)
Barley, Volunteer	Chamomile, False
Barnyardgrass <sup>2</sup>	Cocklebur <sup>1</sup>
Bluegrass, Annual	Chickweed, Common
Crabgrass, Large (1/2 inch) <sup>2</sup>	Dandelion, Common (>6 " in diameter) <sup>1, 2</sup>
Foxtails (Bristly, Giant, Green, Yellow) <sup>2</sup>	Henbit
Johnsongrass, seedling <sup>1</sup>	Kochia
Millet, Wild Proso <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
Panicum, Fall	Mustards (Black, Wild)
Quackgrass <sup>1</sup>	Mallow, Common <sup>1, 2</sup>
Stinkgrass <sup>1</sup>	Nightshade, Hairy <sup>1</sup>
Wheat, Volunteer	Nutsedge, Yellow <sup>1, 2</sup>
Wild Oat <sup>1</sup>	Pigweeds (Redroot, Smooth)
	Pigweed, Prostrate <sup>1</sup>
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Shepherdspurse
	Smartweed, Pennsylvania <sup>1</sup>
	Thistle, Canada <sup>1</sup>
	Velvetleaf <sup>1</sup>
	Wild Radish

1. Partial Control.

2. See **Specific Weed Problems - Fruit, Nut and Vine Crops.**

#### SPRINKLER CHEMIGATION – CRANBERRY

Pruvin® Herbicide may be applied via sprinkler (e.g., solid-set or pop-up) chemigation. The chemigation 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 pesticide(s) and capable of being fitted with a system interlock. **RESTRICTION: DO NOT** apply PruvIn® Herbicide through any other chemigation equipment.

#### Sprinkler Chemigation Restrictions - Cranberry

- **DO NOT** connect an irrigation system used for PruvIn® Herbicide application to a public water system.
- Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, or over-tolerance pesticide residues in the crop. Therefore, to ensure that the mixture is applied evenly at the listed rate, use sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water pattern.
- **DO NOT** permit run-off during chemigation.
- Continuous agitation in the mix tank is needed to keep the product from settling. If settling does occur, thoroughly re-agitate the tank mixture before using.

### **Restrictions to Use of Pruvin® Herbicide on Cranberry**

- **DO NOT** exceed 2 ounces (0.5 oz a.i.) of Pruvin® Herbicide per acre per application.
- **DO NOT** exceed 4 ounces (1.0 oz a.i.) of Pruvin® Herbicide per acre (broadcast basis) on cranberry per year.
- **DO NOT** make more than 2 applications per year.
- **Retreatment Interval (RTI):** 21 days.
- **Preharvest Interval (PHI):** 60 days.
- **DO NOT** apply by air. Use ground or chemigation application only.
- **DO NOT** apply by flood or drip irrigation.
- **DO NOT** apply to cranberry unless the crop is in good health and vigor.
- **DO NOT** allow sprays to drift onto fruit or foliage as injury may result.

### **FIELD CORN (Except California)**

#### **INFORMATION**

Apply Pruvin® Herbicide to field corn hybrids with a relative maturity (RM) of 77 days or more, including “food grade” (yellow dent, hard endosperm), waxy and High-Oil corn. Pruvin® Herbicide has not been tested for crop safety on all field corn hybrids of less than 77 days RM, nor all white corn hybrids nor Hi-Lysine hybrids, nor does ADAMA have access to all seed company data. Consequently, injury arising from the use of Pruvin® Herbicide on these types of corn is the responsibility of the user. Consult with your seed supplier before applying Pruvin® Herbicide to any of these corn types. Seed company publications indicate “Warning”, “Crop Response Warning”, or “Sensitive” notations for the use of some ALS herbicides on corn hybrids of 77 CRM or higher. As noted in the seed company publications, sulfonyleurea herbicides including Pruvin® Herbicide must be used with caution on these hybrids. Consult with your local ADAMA representative for any additional supplemental labeling information relative to potential corn hybrid sensitivity to Pruvin® Herbicide.

Pruvin® Herbicide must not be applied to field corn grown for seed, to popcorn or to sweet corn.

**RESTRICTION: DO NOT** apply preemergence to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter or injury may result.

#### **APPLICATION INFORMATION**

The maximum amount of Pruvin® Herbicide that may be applied is 2 ounces per acre per year (or 0.5 ounce active ingredient rimsulfuron). This includes combinations of preemergence and postemergence applications of Pruvin® Herbicide, as well as rimsulfuron from application(s) of other products containing rimsulfuron. Limit preemergence rates of Pruvin® Herbicide to a maximum of 1.25 ounces (0.357 oz a.i.) per acre if following with postemergence applications of the rimsulfuron-containing products noted above.

Allow at least 3 weeks between preemergence applications of Pruvin® Herbicide and postemergence applications of the herbicides noted above. NOTE: Allow at least 4 weeks between preemergence applications of Pruvin® Herbicide and postemergence applications of the herbicides noted above in California. Be sure to make sequential applications after the corn has reached the 2-collar stage but before the corn exceeds the maximum application height listed on the respective product labels.

**Broadcast Application:** Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height directed in manufacturers’ specifications. Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

**Aerial Application:** Aerial application is not permitted in the States of NY and CA. In other states, use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA. **DO NOT** apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off-target spray movement (See the **SPRAY DRIFT MANAGEMENT** section of this label for additional information on aerial application).

**Fallow:** Pruvin® Herbicide may be used as a fallow treatment, in the spring or fall when the majority of weeds have emerged and are actively growing. Apply Pruvin® Herbicide at 1 to 2 ounces (0.25-0.5 oz a.i.) per acre. **DO NOT** make more than 2 applications per acre per year. Pruvin® Herbicide may be tank mixed with other herbicides that are registered for use in fallow. Read and follow all instructions on this label and the labels of any tank mix partner before using any other herbicide in mixtures with Pruvin® Herbicide. If the directions on the tank mix partner conflict with this Pruvin® Herbicide label, **DO NOT** use in a tank mixture with Pruvin® Herbicide.

**Preemergence to Field Corn:** Pruvin® Herbicide may be applied at 0.5 to 1 ounces (0.125- 0.5 oz a.i.) per acre preemergence or preplant to corn. Applications of Pruvin® Herbicide made before weed emergence will provide residual control of labeled weeds. See the cumulative rimsulfuron rate limitations noted above. ADAMA specifies a use rate of 1 to 1.5 ounces per acre for most applications. **DO NOT** make more than 2 applications per acre per year. Control of emerged weeds will require the addition of spray adjuvants as noted below.

**Postemergence to Field Corn:** Pruvin® Herbicide may be applied at 0.5 to 1 ounces (0.125- 0.5 oz a.i.) per acre as a postemergence broadcast application. Application must be made to corn from emergence up to 12" tall. **DO NOT** apply to corn taller than 12" or exhibiting 6 or more leaf collars, whichever is more restrictive. Application of Pruvin® Herbicide made after weed emergence will provide contact control of labeled weeds as well as limited residual control of later emerging weeds. ADAMA specifies a use rate of 1 ounce per acre for most applications. **DO NOT** make more than 2 applications per acre per year.

**Timing to Weeds**

- Tank mixtures of Pruvin® Herbicide with glyphosate or glufosinate herbicides may be applied after weeds emerge but before they reach the maximum size listed on the glyphosate or glufosinate herbicide labels.
- Adequate soil moisture is required for optimum activity. Residual activity will be extended if rainfall falls within 5 to 7 days after application of Pruvin® Herbicide. If activating rainfall or sprinkler irrigation (>0.5 inch) is not received within 5 to 7 days after application, follow with a cultivation or with a sequential application of a pesticide product containing nicosulfuron, if directed for residual weed control.

**SPRAY ADJUVANTS USE SPECIFIC TO FIELD CORN**

For control of emerged weeds in field corn always include a NIS or ammonium nitrogen fertilizer in every application of Pruvin® Herbicide. If applied in tank mix combination with a glyphosate or glufosinate herbicide that contains a built-in adjuvant system, including Roundup WeatherMAX or Liberty®, no additional surfactant needs to be added. A COC may be used in place of NIS for burndown applications of Pruvin® Herbicide made before crop emergence. Consult local ADAMA fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. See the **SPRAY ADJUVANTS** section of this label for more information.

**Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)**

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

**Nonionic Surfactant (NIS)**

- Apply at 0.25% v/v (1 quart per 100 gallons spray solution).
- Surfactant products must contain at least 60% NIS with a hydrophilic/lipophilic balance (HLB) greater than 12.

**Ammonium Nitrogen Fertilizer**

- Use 2 quarts per acre of high-quality urea ammonium nitrate (UAN) including 28%N or 32%N, or 2 pounds per acre of a spray-grade ammonium sulfate (AMS).

**RESTRICTION**

- **DO NOT** use liquid nitrogen fertilizer as the total carrier solution after crop emergence.

**Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

**RESTRICTION**

- **DO NOT** use any other adjuvant rates or mixtures with Pruvin® Herbicide unless instructed to do so by ADAMA technical bulletins.

**WEEDS CONTROLLED OR PARTIALLY CONTROLLED IN FIELD CORN**

When used according to the label use directions Pruvin® Herbicide provides control or partial control of the following weeds in field corn:

**PREEMERGENCE<sup>1</sup>**

<b>GRASSES</b>	<b>BROADLEAVES</b>
Barnyardgrass	Carpetweed <sup>1</sup>
Bluegrass, Annual <sup>1</sup>	Chamomile, False
Crabgrass, Large <sup>1</sup>	Cocklebur <sup>1</sup>
Foxtail (Bristly, Giant, Green Yellow)	Filaree, Redstem
Panicum, Fall <sup>1</sup>	Henbit
Signalgrass, Broadleaf <sup>1</sup>	Jimsonweed <sup>1</sup>
Wheat, Volunteer	Kochia (ALS-sensitive)
Wild Oat <sup>1</sup>	Lambsquarters, Common
Ryegrass, Italian	Morningglory, Ivyleaf <sup>1</sup>

	Mustard (Birdsrape, Black)
	Nightshade (Hairy, Black) <sup>1</sup>
	Palmer, Amaranth <sup>1</sup>
	Pigweed (Prostrate, Redroot, Smooth)
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Russian thistle, Seedling <sup>1</sup>
	Smartweed, Pennsylvania <sup>1</sup>
	Velvetleaf <sup>1</sup>

<sup>1</sup>. Partial Control/Suppression

**POSTEMERGENCE**

<b>GRASSES/SEDGES (1 to 2")</b>	<b>BROADLEAVES (1 to 3")</b>
Barley, Volunteer	Alfalfa, Volunteer <sup>2</sup>
Barnyardgrass	Canada Thistle <sup>1</sup>
Bluegrass, Annual	Chickweed, Common
Crabgrass, Large (1/2")	Cocklebur <sup>1</sup>
Cupgrass, Wooly (1")	Dandelion (6" diameter)
Foxtail (Bristly, Giant, Green, Yellow)	Henbit
Johnsongrass, Seedling <sup>1</sup>	Kochia
Millet, Wild Proso <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
Panicum, Fall	Morningglory, Ivyleaf <sup>1</sup>
Quackgrass <sup>1</sup>	Mustards (Birdsrape, Black, Wild)
Ryegrass, Italian <sup>1</sup>	Nightshade, Hairy <sup>1</sup>
Shattercane (4")	Pigweeds (Prostrate, Redroot, Smooth)
Signalgrass, Broadleaf <sup>1</sup>	Purslane, Common <sup>1</sup>
Stinkgrass <sup>1</sup>	Ragweed, Common <sup>1</sup>
Wheat, Volunteer	Shepherdspurse
Wild Oat <sup>1</sup>	Smartweed, Pennsylvania <sup>1</sup>
Yellow nutsedge <sup>1</sup>	Velvetleaf <sup>1</sup>
	Wild Radish

<sup>1</sup>. Partial control/Suppression

<sup>2</sup>. Except in California

**TANK MIXTURES – FIELD CORN**

Pravin® Herbicide may be tank mixed with full or reduced rates of other pesticides registered for use in corn. Read and follow all manufacturers' label directions for the companion herbicide. If these directions conflict with this Pravin® Herbicide label, **DO NOT** use as a tank mixture with Pravin® Herbicide.

**SPECIFIC USE DIRECTIONS FOR TANK MIXTURES WITH PRUVIN® HERBICIDE IN FIELD CORN**

<b>TANK MIXTURES</b>	<b>COMMENTS</b>
Preemergence to crop - for additional control of grasses and broadleaf weeds	<ul style="list-style-type: none"> <li>– Pravin® Herbicide may be tank mixed with full or reduced rates of preemergence grass and broadleaf herbicides including atrazine, metolachlor, acetochlor, dimethenamid-p, isoxaflutole, or mesotrione to provide added residual activity or burndown activity on emerged weeds.</li> <li>– Consult tank mix partner labeling for rate and soil-type restrictions.</li> </ul>



Postemergence to crop - with Glyphosate	<ul style="list-style-type: none"> <li>- Pruvion® Herbicide may be tank mixed with glyphosate herbicides if applications are made to corn hybrids containing the Roundup Ready gene.</li> <li>- Consult with your seed supplier to confirm the corn hybrid is glyphosate-resistant before making any herbicide application containing glyphosate herbicides.</li> <li>- Use Pruvion® Herbicide in tank mixture with glyphosate herbicides. This combination will provide improved burndown and/or residual activity of many grass and broadleaf weeds when compared to glyphosate used alone.</li> <li>- Burndown and/or residual activity will be improved on all the grass and broadleaf weeds listed in the table above under "postemergence control" with the exception of wooly cupgrass and shattercane. In addition to the weeds listed above, activity against false chamomile, redstem filaree, field and longspine sandbur and wild buckwheat will be improved with the tank mixture as compared to glyphosate used alone.</li> </ul>
With Glufosinate	<ul style="list-style-type: none"> <li>- Pruvion® Herbicide may be tank mixed with glufosinate herbicides if applications are made to corn glufosinate-resistant hybrids. Consult with your seed supplier to confirm the corn hybrid is glufosinate-resistant before applying any herbicide containing glufosinate.</li> <li>- A tank mixture of Pruvion® Herbicide plus a glufosinate herbicide at label rates will provide improved burndown and/or limited residual activity to velvetleaf, redroot pigweed, common lambsquarters and giant and yellow foxtails, as compared to glufosinate used alone.</li> </ul>

### **Tank Mixing Precautions - Field Corn**

- Read and follow all applicable use directions, precautions, and limitations specified on the respective product labels.
- A corn plant's predisposition to develop fused tissue emerging from the whorl (rattail) after the V-11 stage may increase when a product containing dicamba is applied to small corn under early stressful conditions. Be aware of this when applying tank mixes with dicamba to small corn (V-3 stage or smaller) under stressful conditions (See the **Mode of Action** section of this label for a description of these stressful conditions).

### **RESTRICTIONS FOR ALL APPLICATION TIMINGS – FIELD CORN**

- **DO NOT** apply Pruvion® Herbicide tank mixtures with glyphosate herbicides to conventional corn hybrids that **are not glyphosate-resistant**
- **DO NOT** apply Pruvion® Herbicide tank mixtures with glufosinate herbicides to conventional corn hybrids that are not glufosinate-resistant.
- To avoid crop injury or antagonism, **DO NOT** tank mix Pruvion® Herbicide with sodium salt of bentazon or severe crop injury may occur. **DO NOT** tank mix Pruvion® Herbicide with foliar-applied organophosphate insecticides including chlorpyrifos, malathion, parathion, etc., as severe crop injury may occur. Apply these products at least seven days before or three days after the application of Pruvion® Herbicide.
- **DO NOT** exceed label application rates. **DO NOT** tank mix Pruvion® Herbicide with other products that contain the same active ingredients as Pruvion® Herbicide (rimsulfuron) unless the label of either tank mix partner specifies the maximum rate that may be used.

Other than the exceptions noted, and in addition to the tank mix partners indicated in the preemergence and postemergence sections above, Pruvion® Herbicide may be applied in tank mixture with glyphosate plus other products registered for use in field corn. Pruvion® Herbicide may be applied in tank mix combinations with full or reduced rates of other products provided: (1) the tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as Pruvion® Herbicide and other products used in the tank mixture and (2) the tank mixture is not specifically prohibited on the label of the tank mix product.

**Soil Insecticide Interaction Information:** Pruvion® Herbicide may interact with certain insecticides previously applied to the corn crop. Therefore, before using Pruvion® Herbicide be sure to check that it is compatible with any insecticides previously applied to the corn crop. Crop response varies with field corn type, insecticide used, insecticide application method, and soil type. Pruvion® Herbicide may be applied to corn previously treated with certain insecticides containing terbufos, tebupirimphos, teflurin or non-organophosphate (OP) soil insecticides regardless of soil type. **DO NOT** apply Pruvion® Herbicide to corn previously treated with terbufos in-furrow or over the row at cultivation. Applications of Pruvion® Herbicide to corn previously treated with terbufos, chlorpyrifos, phorate may cause unacceptable crop injury, especially on soils with less than 4% organic matter.

**DO NOT** apply Pruvion® Herbicide within 60 days of crop emergence where an organophosphate insecticide was applied as an in-furrow treatment since crop injury may occur. Also, allow at least 60 days between a preemergence or pre-plant application of Pruvion® Herbicide and application of an organophosphate insecticide since crop injury may result.

### **CHEMIGATION**

**RESTRICTION: DO NOT** apply Pruvion® Herbicide to Field Corn through any type of irrigation system.

## PRUVIN® HERBICIDE ROTATIONAL CROP GUIDELINES – FIELD CORN

The following rotational intervals must be observed when using Pruvini® Herbicide at use rates of 1 and 2 ounces per acre. Planting prior to the interval shown may result in crop injury.

Rotational Crop	Time Interval Before Planting (months)	Time Interval Before Planting (months)
	1 Ounce Per Acre	2 Ounces Per Acre
Corn, Field	Anytime	Anytime
Potatoes	Anytime	Anytime
STS Soybeans <sup>1</sup>	1	4
Tomato	1	1
Cereals, Winter (Wheat)	3	3
Cereals, Spring (Wheat, Oats, Barley)	9	9
Alfalfa	10 <sup>2, 3</sup>	18
Cotton	10 <sup>3</sup>	10 <sup>5</sup>
Canola	10 <sup>3</sup>	18
Cucumber	10	10
Flax	10	10
Peas	10	18
Rice	10 <sup>4</sup>	18
Red Clover	10 <sup>3</sup>	18
Sorghum	10 <sup>3</sup>	18
Corn (pop or sweet)	10	10
Soybeans	10	10
Snap beans, Dry beans	10	10
Sunflower	10	10
Sugarbeets	10 <sup>3</sup>	18
Crops not listed	18	18

1. Sulfonylurea-resistant soybean.
2. On sprinkler irrigated fields in ID, UT, and northern NV it is best to use deep fall tillage including plowing prior to planting alfalfa. Product degradation may be less on furrow irrigated soils and may result in some crop injury.
3. 18 months in the Red River Valley region of ND and MN. In all other area, the rotation intervals must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" applied during the year.
4. For soils with pH less than 6.5.
5. The rotation interval must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the year.

### Restrictions to Use of Pruvini® Herbicide on Field Corn

- **DO NOT** apply more than 1 ounce of Pruvini® Herbicide (0.25 oz a.i.) postemergence or 1.5-ounce (0.375 oz a.i.) preemergence.
- **DO NOT** apply more than 2 ounces of Pruvini® Herbicide in a year (0.5 oz a.i.)
- **DO NOT** make more than 2 applications per acre per year.
- **Retreatment Interval:** 14 days.
- **Preharvest Interval:** **DO NOT** apply to field corn taller than 12" or exhibiting 6 or more leaf collars (whichever is more restrictive).
- **DO NOT** apply to field corn grown for seed, to popcorn or to sweet corn.
- **DO NOT** apply preemergence to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.
- **DO NOT** graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of an application of Pruvini® Herbicide.

## **CORN, FIELD (CALIFORNIA)**

### **APPLICATION INFORMATION**

Pruvin® is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied fallow, preemergence and postemergence to field corn. Pruvín® may be applied in tank mix combinations with other corn herbicides for improved burndown and residual control. Residual weed control is dependent on rainfall, sprinkler irrigation, flood irrigation or furrow irrigation for herbicide activation. Furrow irrigation may not provide proper activation on tops of beds if rainfall or furrow irrigation does not drive Pruvín® into the soil and weed root zones.

Pruvin® is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move Pruvín® into the soil. Susceptible weeds will generally not emerge from a preemergence application. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases, and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green, stunted and noncompetitive.

The herbicidal action of Pruvín® may be less effective on weeds stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices.

Pruvin® treatments are most effective in controlling weeds when adequate rainfall or irrigation is received 5 - 7 days after application. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain or irrigation occurs, use shallow tillage, including a rotary hoe, to lightly incorporate Pruvín® and make certain corn seeds are below the tilled area.

Pruvin® is best used in a planned sequential application herbicide program, to be followed by an in-crop application of Pruvín®, and/or other post applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

Allow at least 4 weeks between preemergence applications of Pruvín® and postemergence applications of Pruvín®. Make sequential applications after the corn has reached the 2-collar (V2) stage but before the corn exceeds the maximum application height listed on the respective product labels. Avoid making preemergence applications to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter as crop injury may occur.

Apply Pruvín® to field corn hybrids with a relative maturity (RM) of 77 days or more, including "food grade" (yellow dent, hard endosperm), waxy and High-Oil corn. Not all field corn hybrids of less than 77 days RM, not all white corn hybrids nor Hi-Lysine hybrids have been tested for crop safety, nor does DuPont have access to all seed company data.

Consequently, to the extent consistent with applicable law, injury arising from the use of Pruvín® on these types of corn is the responsibility of the user. Consult with your seed supplier before applying Pruvín® to any of these corn types. Seed company publications indicate "Warning", "Crop Response Warning", or "Sensitive" notations for the use of some ALS inhibitor (Group 2) herbicides on corn hybrids of 77 CRM or higher. As noted in the seed company publications, sulfonylurea herbicides, including Pruvín®, must be used with caution on these hybrids. Consult with your local ADAMA representative for any additional information relative to potential corn hybrid sensitivity to Pruvín®.

#### **Fallow**

##### **Use rates**

Apply Pruvín® at 1 - 2 ounces (0.0156 - 0.0313 lb ai) per acre.

##### **Application Timing**

Pruvin® may be used as a fallow treatment, in the fall, winter or spring when the majority of weeds have emerged and are actively growing. Field corn may be planted to this treated area at any time.

#### **Field Corn**

##### **WHEN TO APPLY- Preemergence to the Crop**

Pruvin® may be applied preemergence or preplant to corn. Applications of Pruvín® made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds will require the addition of spray adjuvants as noted below.

##### **Preemergence Rates**

Pruvin® may be applied at 1.0 - 1.5 ounces (0.0156 - 0.0234 lb ai) product before corn emergence. See Use Restrictions below for rimsulfuron rate limitations.

### **Timing to Crop**

Pruvin® herbicide may be used in either conventional, conservation tillage, or no-till crop management systems, and may be applied either preplant, preplant incorporated (less than 2" deep) or preemergence for use in field corn production. Applications of PruvIn® made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds will require the addition of spray adjuvants as noted in this label.

### **Preplant Surface Applied**

Pruvin® is best used in a planned sequential application program, followed by PruvIn® and/or other post applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

### **Preplant/Preemergence Burndown**

Apply PruvIn® when weeds are young and actively growing but before they exceed the sizes listed on this label. When weeds exceed listed maximum height or weeds not controlled by PruvIn® are present, the addition of a burndown herbicide containing glyphosate, paraquat, dicamba, and/or 2,4-D is advised. If giant ragweed, common cocklebur, henbit, Pennsylvania smartweed or purple deadnettle are present at the time of application, the addition of atrazine will improve control. 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. When mixing with liquid nitrogen fertilizer or glyphosate, substitute a non-ionic surfactant for crop oil.

### **WHEN TO APPLY - Postemergence to the Crop**

Apply PruvIn® to corn that is up to 12 inches tall or exhibiting 6 or more leaf collars (V6), whichever is more restrictive. Applications of PruvIn® made after weed emergence will provide contact control of labeled weeds as well as limited residual control of later emergence.

### **Postemergence Rates**

Apply PruvIn® at 0.5 - 1.0 ounces (0.0078 - 0.0156 lb ai) per acre as a postemergence broadcast application. Use the 1 ounce (0.0156 lb ai) per acre rate for most postemergence applications. See Use Restrictions below for cumulative rimsulfuron rate limitations.

### **Timing to Emerged Weeds**

- Tank mixtures of PruvIn® with glyphosate or glufosinate herbicides may be applied after weeds emerge but before they reach the maximum size listed on the glyphosate or glufosinate herbicide labels.
- Adequate soil moisture is required for optimum activity. Rainfall or irrigation within 5 - 7 days after application will enhance PruvIn® residual activity. If activating rainfall, flood, furrow or sprinkler irrigation (>0.5 inch) is not received within 5 - 7 days after application, follow with a cultivation or with a sequential application of a nicosulfuron containing herbicide, if needed.

### **Spray Adjuvants**

For control of emerged weeds, application of PruvIn® must include an appropriate adjuvant and an ammonium nitrogen fertilizer. If applied in tank mix combination with a glyphosate or glufosinate herbicide that contains a built-in adjuvant system, no additional surfactant needs to be added. Products must contain only EPA-exempt ingredients (40 CFR 1001).

**DO NOT** use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 - 8.0 allow for optimum stability of PruvIn®.

### **Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)**

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers

### **Nonionic Surfactant (NIS)**

- Apply at 0.25% v/v (1 quart per 100 gallons spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

### **Ammonium Nitrogen Fertilizer**

- Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN) including 28%N or 32%N, or 2 lb/acre of a spray grade ammonium sulfate (AMS).

### **Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

## Use Restrictions

- **DO NOT** apply to field corn grown for seed, to popcorn or to sweet corn.
- **DO NOT** apply to field corn taller than 12 inches tall or exhibiting 6 or more leaf collars (V6), whichever is more restrictive.
  
- **DO NOT** apply more than 1.5 oz (0.0234 lb ai) per acre per year preemergence to field corn.
- **DO NOT** apply more than 1.0 oz (0.0156 lb ai) per acre per year postemergence to field corn.
- **DO NOT** apply more than a total of 2.0 oz (0.0313 lb ai) per acre per year. This includes combinations of preemergence or postemergence applications of MATRIX SG; as well as rimsulfuron from application(s) of other products that contain rimsulfuron.
- **DO NOT** make more than 2 applications of Pruvin® per year.
- Allow at least 28 days between applications.
- Limit preemergence rates of MATRIX SG to a maximum of 1.25 oz (0.0195 lb ai) product if following with postemergence applications of the rimsulfuron containing products above.
- **DO NOT** apply by air in California.
- **DO NOT** apply Pruvin® within 45 days of crop emergence where an organophosphate insecticide was applied as an in-furrow treatment since crop injury may occur.
- **DO NOT** tank mix Pruvin® with foliar-applied organophosphate insecticides including chlorpyrifos, malathion, parathion, etc, as severe crop injury may occur.
- **DO NOT** tank mix Pruvin® with a bentazon herbicide product, as severe crop injury may occur.
- **DO NOT** graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of Pruvin® application.
- **DO NOT** irrigate Pruvin® into coarse soils at planting time when soils are saturated.
- **DO NOT** apply through any type of irrigation system.
- **DO NOT** use flood or furrow irrigation to apply Pruvin®.
- **DO NOT** treat frozen soil.

Injury or loss of desirable trees or vegetation may result from failure to observe the following:

- **DO NOT** apply Pruvin® or drain or flush application equipment on or near desirable trees or other plants, or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.
- **DO NOT** contaminate any body of water.

## WEEDS CONTROLLED/SUPPRESSED - FIELD CORN IN CALIFORNIA

### Fallow/Field corn - Postemergence to Weeds - Pruvin® Alone

GRASSES (1-2 inches)	BROADLEAVES (1-2 inches)
Barley, volunteer	Canada thistle
Barnyardgrass	Chickweed, common
Bluegrass, annual	Cocklebur
Crabgrass, large (1/2")	Dandelion (6" diameter)
Cupgrass, woolly (1")	Henbit
Foxtail (bristly, giant, green, yellow)	Kochia
Johnsongrass, seedling*	Lambsquarters, common
Millet, Wild Proso*	Morningglory, ivyleaf*
Panicum, fall	Mustard (birdrape, black, wild)
Quackgrass*	Nightshade, hairy*
Ryegrass, Italian*	Pigweed (prostrate, redroot, smooth)
Shattercane (4")	Purslane, common*
Signalgrass, broadleaf*	Ragweed, common*
Stinkgrass*	Shepherd's purse
Wheat, volunteer	Smartweed, Pennsylvania*
Wild Oat*	Wild Radish
Yellow Nutsedge*	Velvetleaf*

## Fallow/Field Corn - Preemergence and Residual\* - Pruvin® Alone

GRASSES	BROADLEAVES	
Barnyardgrass	Carpetweed	Mustard (birdsrape, black)
Bluegrass, annual	Chamomile, false	Nightshade (hairy, black)
Crabgrass, large	Cocklebur	Palmer amaranth
Foxtail (bristly, giant, green, yellow)	Filaree, Redstem	Pigweed (prostrate, redroot, smooth)
Panicum, fall	Henbit	Purslane, common
Ryegrass, Italian	Jimsonweed	Ragweed, common
Signalgrass, broadleaf	Kochia (ALS-sensitive)	Russian thistle, seedling
Wheat, Volunteer	Lambsquarters, common	Smartweed, Pennsylvania
Wild Oat	Morningglory, ivyleaf	Velvetleaf*

\*Partial control or suppression - for full season control, follow with a sequential, in-crop application of Pruvin® or with appropriate tank mix partners.

### TANK MIXTURES

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.

#### Fallow

Pruvin® may be used as a fallow treatment and may be tank mixed with other herbicides that are registered for use in fallow. Read and follow all applicable use instructions on this label and the labels of any tank mix partner before using in mixtures with Pruvin®. **DO NOT** use the tank mix partner if its label conflicts with this Pruvin® label.

#### Field Corn

Pruvin® may be tank mixed with full or reduced rates of preemergence grass and broadleaf herbicides including atrazine, glyphosate, paraquat, dicamba, and/or 2,4-D to provide added residual activity or burndown activity on emerged weeds. Consult tank mix partner labeling for rate and soil-type restrictions. Read and follow all manufacturers' label instructions for the companion herbicide(s). **DO NOT** use a tank mix partner product if its label conflicts with this Pruvin® label.

Ensure the tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as Pruvin®, as well as other products used in the tank mixture.

Read and follow all applicable use directions, precautions, and limitations specified on the respective product labels.

### Postemergence to the Crop

#### Pruvin® plus a Glyphosate Based Herbicide

When used in tank mixture with glyphosate, Pruvin® will deliver improved burndown and/or residual activity on the following weeds, as compared to glyphosate used alone. A glyphosate-based herbicide may be tank mixed for postemergence applications of Pruvin® when made to glyphosate-resistant corn hybrids. Consult with your seed supplier to confirm the corn hybrid is glyphosate-resistant before making any herbicide application.

Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

Barley, volunteer	Panicum, fall
Barnyardgrass	Pigweed (prostrate, redroot, smooth)
Bluegrass, annual	Purslane, common
Canada thistle	Quackgrass
Chamomile, false	Ragweed, common
Chickweed, common	Ryegrass, Italian
Cocklebur	Sandbur (field, longspine)
Crabgrass	Shepherd's purse
Dandelion (6" diameter)	Signalgrass, broadleaf
Filaree, redstem	Smartweed, Pennsylvania
Foxtail (bristly, giant, green, yellow)	Stinkgrass
Henbit	Velvetleaf
Johnsongrass, seedling	Wheat, volunteer
Kochia	Wild buckwheat
Lambsquarters, common	Wild oat
Millet, Wild Proso	Wild radish
Morningglory, ivyleaf	Yellow Nutsedge
Mustard (birdsrape, black, wild)	
Nightshade, hairy	

### **Pruvin® plus a Glufosinate Based Herbicide**

Pruvin® may be tank mixed with a glufosinate herbicide if applications are made to glufosinate-resistant corn hybrids. Consult with your seed supplier to confirm the corn hybrid is glufosinate-resistant before applying any herbicide containing glufosinate. When used in a tank mixture with glufosinate herbicide, PruvIn® will deliver improved burndown and/or limited residual activity on the following weeds, as compared to glufosinate used alone:

Velvetleaf  
Pigweed, redroot  
Lambsquarters, common  
Foxtail (giant, yellow)

### **Pruvin® ROTATIONAL CROP GUIDELINES - FIELD CORN**

For crops listed below, planting prior to the interval shown may result in crop injury when using PruvIn®. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless supplemental sprinkler irrigation has been applied and totals greater than 15" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (months)
Beans, Dry	10
Beans, Snap	10
Corn, Field	Anytime
Corn, Sweet	10
Cotton	10
Cucumber	10
Garlic	6
Potatoes	Anytime
Soybeans	10
Tomatoes	Anytime
Wheat, Winter	4
Crops Not Listed	12

Rotational crops may be planted at indicated intervals provided the fields are deep disked or plowed, and thorough soil mixing is achieved, prior to planting the rotational crop.

### **Mixing Instructions**

Pruvin® must be completely dissolved in clean water before adding to spray tanks that **DO NOT** have continuous agitation during loading and mixing.

#### **Water Carrier Instructions**

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of PruvIn®.
3. Continue agitation until the PruvIn® is fully dissolved, at least 5 minutes.
4. Once the PruvIn® is fully dissolved, maintain agitation and continue filling tank with water.
5. As the tank is filling, add tank mix partners and then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used.
6. Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly re-agitate before using.
7. Apply PruvIn® spray mixture within 24 hours of mixing to avoid product degradation.
8. If PruvIn® and a tank mix partner are to be applied in multiple loads, fully dissolve the PruvIn® in clean water prior to adding to the tank.

If the selected companion herbicides has a ground water advisory, consider this advisory when using the companion herbicide.

### **Application and Spray Volumes**

#### **Ground**

Use a minimum spray volume of 15 gallons per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height specified in manufacturers' specifications. Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

#### **Use Precautions**

- PruvIn® may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.

- Pruvin® may be applied to corn previously treated with non-organophosphate soil insecticides regardless of soil type.
- Allow at least 60 days between a preplant or preemergence application of Pruvin® and application of organophosphate insecticide since crop injury may result.
- Crop injury may occur following an application of Pruvin® if there is a prolonged period of cold weather and / or in conjunction with wet soils.
- Prevent drift or spray onto desirable plants.
- Thoroughly clean application equipment immediately after use.

## GRASS GROWN FOR SEED (OREGON, WASHINGTON)

### APPLICATION INFORMATION

Use Pruvin® only in conjunction with carbon planted Perennial Ryegrass and Tall Fescue grown for seed. The activated carbon band over the seed row absorbs Pruvin® so that seedling grass germinating beneath the carbon band is protected from the herbicide. The protection provided by the carbon band is only as good as the width and integrity of the band. Heavy and/or persistent rains after planting can cause deterioration of the carbon band allowing Pruvin® to move into the grass root zone causing injury and/or stand loss. Standing water can also increase the risk of Pruvin® moving vertically through the carbon band or laterally beneath the band. Variability in seedbed preparation, and unpredictable environmental conditions, including heavy rain, can compromise the protection provided by the carbon band. Therefore, to the extent consistent with applicable law, the grower assumes all risks of crop injury and/or stand loss associated with the use of Pruvin®. Apply Pruvin® with properly calibrated ground equipment with good mechanical or by-pass agitation. Only apply Pruvin® on early fall planted fields (refer to Use Precautions section) that have been prepared with a smooth, fine seedbed that is firmly packed prior to planting. During the planting operation, apply activated carbon at the label directed rate as long as that rate is not lower than 300 lbs per acre. Apply the activated carbon in a band at least 1.0 inch wide centered over the seed row. Use a minimum spray volume of 40 gallons per acre to apply the activated carbon.

### WEEDS CONTROLLED - GRASS GROWN FOR SEED

In the area outside of the carbon band, Pruvin® will provide control of seedling annual bluegrass, annual and perennial ryegrass, volunteer wheat, and roughstock bluegrass. Note: Certain biotypes of diuron resistant annual bluegrass have shown reduced sensitivity to Pruvin® and may not be adequately controlled. Where these biotypes are known to exist, apply Pruvin® in a tank-mix with a pronamide containing herbicide. Some biotypes of annual bluegrass that are resistant to other herbicides have also shown reduced sensitivity to Pruvin®. Where these biotypes are present, PRUVIN® used alone will only provide suppression.

### TANK MIXES WITH OTHER HERBICIDES

Pruvin® can be applied in a tank-mix with other pre-emergence herbicides, including a pronamide or a diuron containing herbicide, that are also registered for use in carbon planted grass grown for seed. 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.

### USE RATE

Apply Pruvin® at 3.0 ounces (0.0469 lb ai) per acre immediately (within 5 days) after carbon planting and prior to grass emergence. In areas where there are biotypes of annual bluegrass that are resistant to Pruvin®, apply Pruvin® in a tank-mix with a pronamide containing herbicide. Make application before grass emergence while the carbon band is still intact. **DO NOT** apply Pruvin® if heavy rainfall or overhead irrigation has caused dissipation of the carbon band. Best results are obtained when rainfall of 1/4 to 1/2 inch, or light, frequent irrigation occurs, within two weeks after PRUVIN® is applied. If Pruvin® is being used on fields that are sprinkler irrigated, best practice is to irrigate before planting to provide enough moisture for grass germination and then apply not more than 1/4 to 1/2 inch of water in the first irrigation after PRUVIN® is applied.

### CROP ROTATION

Where Pruvin® has been applied in the fall and stand loss has occurred over the winter; best practice is to wait until soil temperatures are warm enough to support rapid germination (usually mid to late March) before trying to replant grass in the spring.

### Use Precautions

- Crop injury and/or stand loss can occur in treated areas that have standing water.
- Crop injury may occur in areas of fields where heavy residue from the previous crop makes it difficult to form a smooth, fine seed bed.
- Crop injury may occur in areas of spray overlap.
- Crop injury may occur if the carbon band is less than 1.0 inch wide.



### Use Restrictions

- **DO NOT** apply more than 3 oz (0.0469 lb ai) Pruvin® in a single application.
- **DO NOT** apply more than 3 oz (0.0469 lb ai) Pruvin® per acre per year.
- **DO NOT** make more than 1 application of Pruvin® per year.
- When a tank mix of Pruvin® and a pronamide-containing soluble concentrate (SC) herbicide is applied, **DO NOT** graze livestock in the treated fields or cut treated fields for forage or hay for livestock feed for 180 days following application.
- **DO NOT** apply Pruvin® through any type of irrigation system.
- **DO NOT** use Pruvin® if heavy rainfall and/or overhead irrigation has caused deterioration of the carbon band prior to application.
- **DO NOT** use Pruvin® on fields that routinely have large areas of standing water.
- After planting, prior to grass emergence, **DO NOT** use Big Gun irrigation or other types of overhead irrigation that product large droplets that can displace the carbon band.
- **DO NOT** use Pruvin® on fields that have enough slope to cause surface runoff.
- To avoid herbicide injury related to late planted grass, **DO NOT** apply Pruvin® to fields planted after October 31.
- **DO NOT** apply Pruvin® to fields with sandy or gravelly soil.

## POTATOES

### APPLICATION INFORMATION

**Ground Application:** Apply Pruvin® Herbicide with a properly calibrated, low-pressure (20 to 40 psi) boom sprayer equipped with flat fan, TwinJet™, underleaf banding nozzles or flood jet nozzles to ensure optimum spray distribution and thorough coverage. Nozzle screens must be no finer than 50 mesh. When using flood nozzles, the spray pattern must overlap 100% for optimum product performance. For banded applications even flow flat fan or twin jet spray nozzles may provide a more uniform spray distribution. With ground application equipment, use enough water to deliver 10 to 40 gallons total spray solution per acre. Avoid overlapping, and shut off spray booms while starting, turning, slowing, or stopping, or injury to the crop may result.

### Band Applications

Pruvin® Herbicide can be applied using three band applications at 1- 2 ounces of product (0.25-0.5 oz a.i.) per acre (For example, 0.25-0.5 ounces of product (0.625-0.125 oz a.i.) per conventional broadcast acre assuming 25% banding). **RESTRICTION: DO NOT** make any more than three band applications of Pruvin® Herbicide in one year. **DO NOT** exceed 2.5 ounces (0.625 oz a.i.) Pruvin® Herbicide per acre on potatoes per year.

**Preemergence Applications:** Apply Pruvin® Herbicide at 1 to 1.5 ounces product (0.25-0.375 oz a.i.) per acre, immediately after hilling, drag-off, or reservoir tillage (dam/dike operation), to a clean, newly prepared seedbed. To activate Pruvin® Herbicide and move it 2 to 3" deep into the soil profile, moisture is necessary from a single rainfall event, or sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), within 5 days after application. Activating sprinkler irrigation is required regardless of the soil moisture level at planting, or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying Pruvin® Herbicide postemergence would result in better weed control. **DO NOT** make more than 2 applications per acre per year.

If weeds are present at application and it is not possible to apply Pruvin® Herbicide to a clean, newly prepared seedbed, free of emerged or germinating weeds add a spray adjuvant to the spray mix (See the **Spray Adjuvant** section of this label for additional information). Control may not be adequate for weeds that have an established root system before activation of Pruvin® Herbicide.

**Postemergence Applications:** Apply Pruvin® Herbicide at 1 to 1.5 ounces product (0.25-0.375 oz a.i.) per acre to young, actively growing weeds after crop emergence. Typically, small weeds (less than 1" in height or diameter) that are actively growing at application are most easily controlled (See the **Specific Weed Problems-Potatoes and Tomatoes** section of this label for more information). For best postemergence weed control, activate Pruvin® Herbicide in the soil with rainfall or sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours, but not more than 5 days after application. **DO NOT** make more than 2 applications per acre per year.

Temporary chlorosis (lime green color) may occur after application of Pruvin® Herbicide if potato plants are growing under conditions that promote crop stress (including drought, frost, cold temperatures, high temperatures, or extreme temperature variations). Symptoms usually disappear within 5 to 15 days.

**Tank Mixtures – Preemergence Applications:** Pruvin® Herbicide may be tank mixed with pesticide products containing S-ethyl dipropylthiocarbamate, pendimethalin, linuron, metolachlor, or glyphosate labeled for use on potatoes in accordance with the most restrictive label limitations and precautions. When tank mixing Pruvin® Herbicide with another potato pesticide(s), read and follow all use directions, restrictions, and precautions on the labels of both Pruvin® Herbicide and the tank mix partner(s). Pruvin® Herbicide may also be used in three-way tank mix combinations on potatoes with the above pesticide(s). If these directions conflict with the use directions on this Pruvin® Herbicide label, **DO NOT** use as a tank mix with Pruvin® Herbicide.

**SPECIFIC USE DIRECTIONS FOR PREEMERGENCE TANK MIXTURES IN POTATOES WITH PRUVIN® HERBICIDE**

TANK MIXTURES	COMMENTS
With metribuzin*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus Metribuzin herbicide for improved control of such weeds as kochia, Russian thistle and common lambsquarters.</li> <li>- Apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate.</li> </ul>
With EPTC: S-ethyl dipropylthiocarbamate*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus an EPTC herbicide at label rates for improved control of such weeds as hairy nightshade and crabgrass.</li> <li>- Apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate.</li> <li>- The rates and incorporation methods for an EPTC herbicide vary by region, therefore, follow the directions for the local region.</li> <li>- Use irrigation rather than equipment to incorporate the tank mixture of EPTC herbicide and Pruvini® Herbicide to prevent poor weed control from deep incorporation of the Pruvini® Herbicide.</li> <li>- If incorporation by irrigation is not allowed, apply an EPTC herbicide and Pruvini® Herbicide in a split application.</li> </ul>
With pendimethalin*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus a pendimethalin herbicide at label rates for better control of such weeds as kochia, crabgrass, and common lambsquarters.</li> <li>- Apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate.</li> </ul>
With linuron*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus a linuron herbicide at label rates for better control of such weeds as common lambsquarters and common ragweed.</li> <li>- Apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate.</li> </ul>
With metolachlor or S-metolachlor*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus a metolachlor or S-metolachlor herbicide at label rates for better control of such weeds as yellow nutsedge and black nightshade.</li> <li>- Apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate.</li> </ul>

\* Read and follow all manufacturers' label instructions for companion products including use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on any label will apply. If any of those directions conflict with this label, follow the most restrictive labeling, or **DO NOT** tank mix the herbicide with Pruvini® Herbicide.

**Tank Mixtures – Postemergence Applications:** Pruvini® Herbicide may be tank mixed with pesticide products labeled for use on potatoes (including EPTC: S-ethyl dipropylthiocarbamate and metribuzin) in accordance with the most restrictive of label limitations and precautions. When tank mixing Pruvini® Herbicide with another potato pesticide(s), read and follow all use directions, restrictions, and precautions on labels of both Pruvini® Herbicide and the tank mix partner(s). Pruvini® Herbicide may also be used in three-way tank mix combinations on potatoes with the above pesticide(s). If these directions conflict with the use directions on this Pruvini® Herbicide label, **DO NOT** use as a tank mix with Pruvini® Herbicide.

**SPECIFIC USE DIRECTIONS FOR POSTEMERGENCE TANK MIXTURES IN POTATOES WITH PRUVIN® HERBICIDE**

TANK MIXTURES	COMMENTS
With metribuzin*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus a Metribuzin herbicide at label rates for improved weed control of such weeds as Russian thistle, common lambsquarters and triazine-resistant weeds.</li> <li>- Use a NIS at 0.125% v/v (1 pint per 100 gallons of water).</li> <li>- Use adjuvants with caution because the addition of adjuvants to postemergence metribuzin applications may reduce crop safety.</li> <li>- If the potato crop is under stress, or if metribuzin sensitive varieties are being grown, avoid postemergence applications of metribuzin.</li> <li>- <b>Note:</b> The use of a COC or MSO adjuvants is not advised for tank mix combinations with Pruvini® Herbicide plus metribuzin.</li> </ul>
With EPTC: S-ethyl dipropylthiocarbamate*	<ul style="list-style-type: none"> <li>- Apply Pruvini® Herbicide at 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre plus an EPTC herbicide at label rates.</li> <li>- Add 1% v/v (1 gallon per 100 gallons spray solution) of either a MSO or 0.5% v/v (0.5 gallon per 100 gallons of spray solution) of organo-silicon/modified seed oil blend (OS/MSO). Also include 2 pounds per acre of a spray-grade ammonium sulfate (AMS).</li> </ul>

	<ul style="list-style-type: none"> <li>- Use irrigation rather than equipment to incorporate the tank mixture of EPTC herbicide and Pruvin® Herbicide to prevent poor weed control from deep incorporation of the Pruvin® Herbicide.</li> <li>- For best results, rainfall or sprinkler irrigation totaling 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours after application, but not more than 1 day after application is required.</li> <li>- Additional EPTC can be added during the water in process if desired (read and follow all use directions, restrictions, and precautions on the EPTC herbicide label before use. If these directions conflict with this Pruvin® Herbicide label, <b>DO NOT</b> use as a tank mix with Pruvin® Herbicide).</li> </ul>
With Foliar Fungicides * (chlorthalonil, cymoxanil, minerals)	<ul style="list-style-type: none"> <li>- Pruvin® Herbicide may be tank mixed with suitable registered fungicides on potatoes.</li> </ul>

\* Read and follow all manufacturers' label instructions for companion products including use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on any label will apply. If any of those directions conflict with this label, follow the most restrictive labeling, or **DO NOT** tank mix the pesticide with Pruvin® Herbicide.

**Precautions with Tank mixtures:**

- Crop injury in the form of leaf burn and temporary yellowing can occur when applications are made under high temperatures. Addition of fungicides may increase the level of crop injury.
- In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed and may be more variable in weed control.

**Sequential Applications – Potatoes**

To maximize weed control, it may be necessary to apply Pruvin® Herbicide a second time to control annual weeds that have had a second flush of germinating seedlings or treated perennials that produce new growth from underground roots or stems. Make the second application 14 to 28 days after the first application to small weeds that are actively growing and are less than 1" in height or diameter. **RESTRICTION:** The combined rate of the two applications of Pruvin® Herbicide cannot exceed 2.5 ounces (0.625 oz a.i.) per acre per year.

**Potatoes Grown for Seed**

Pruvin® Herbicide may be used on potatoes grown for seed in fields that use field grown tubers as the planted seed piece and are at least the progeny of the first field planting<sup>1</sup>. Pruvin® Herbicide may be applied preemergence at 1.5 ounces per acre, postemergence at 1 to 1.5 ounces per acre, sequential applications of 1 to 1.5 ounces (0.25-0.375 oz a.i.) per acre preemergence followed by 1 ounce per acre postemergence, or two postemergence applications of 1 ounce per acre. **DO NOT** make more than 2 applications per acre per year. **DO NOT** exceed 2.5 ounces (0.625 oz a.i.) per acre of Pruvin® Herbicide in the same year.

When Pruvin® Herbicide is applied preemergence it needs to be activated within 5 days after application by moisture from a single rainfall event, or sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), to move the product 2" to 3" deep into the soil profile.

**Precautions for Potatoes Grown for Seed**

- The rotational crop interval listed in the Pruvin® Herbicide label may need to be extended to 18 months if seed potato production practices decrease water and/or time for Pruvin® Herbicide breakdown. Practices that may shorten the breakdown are late planting or less frequent irrigations as compared to commercial production practices. Potatoes can be planted at any time.
- Consider informing your state seed certification agency or inspector that Pruvin® Herbicide has been applied. Under growing conditions that promote crop stress (including drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application. These symptoms may appear similar to virus like symptoms (including chlorosis, leaf crinkling, pinching of terminal leaflet) but will usually disappear within 5 to 15 days of application.
- The rotational crop interval for Spring Barley is extended to 18 months due to the shorter growing seasons and different cultural practices in seed production in the states of CA, ID, OR, MT, SD, WA, CO, and parts of ND<sup>2</sup>.
  - First field planting utilizes laboratory tested stocks which may be tissue cultured plantlets, greenhouse produced in microtubes, minitubes, stem cuttings or line selections. All counties in ND except Pembina, Towner, Walsh, Grand Forks, Trail and Cass.

**Restrictions for Potatoes Grown for Seed**

- **DO NOT** apply to plants suffering stress from lack of moisture, cold, herbicide injury, and insect or disease injury.
- **DO NOT** use on potatoes grown for seed if these are grown from microtubers or transplants. Depending on geography, these may be referred to as Generation 1, Nuclear, Elite 1, or Pre-Elite.

**WEEDS CONTROLLED OR PARTIALLY CONTROLLED IN POTATOES**

When used according to the label use directions Pruvin® Herbicide provides control or partial control of the following weeds:

**PREEMERGENCE**

<b>GRASSES</b>	<b>BROADLEAVES</b>
Barnyardgrass	Chamomile, False
Crabgrass <sup>1</sup>	Cocklebur <sup>1</sup>
Foxtail (Giant, Green, Yellow)	Filaree, Redstem
Wheat, Volunteer	Henbit
Wild Oat <sup>1</sup>	Kochia
	Lambsquarters, Common <sup>1</sup>
	Mustard (Birdsrape, Black) <sup>1</sup>
	Nightshade, Black <sup>1,2</sup>
	Nightshade, Hairy <sup>1</sup>
	Pigweed, Prostrate <sup>1</sup>
	Pigweed (Redroot, Smooth)
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Velvetleaf <sup>1</sup>

- 1. Partial Control.
- 2. Eastern black nightshade is NOT controlled or suppressed.

**POSTEMERGENCE**

<b>GRASSES/SEDGES</b>	<b>BROADLEAVES</b>
Barley, Volunteer	Chamomile, False
Barnyardgrass	Cocklebur <sup>1</sup>
Bluegrass, Annual	Chickweed, Common
Crabgrass	Henbit
Foxtail (Bristly, Giant, Green, Yellow)	Kochia
Johnsongrass, Seedling <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
Millet, Wild Proso <sup>1</sup>	Morningglory, Ivyleaf <sup>1</sup>
Panicum, Fall	Mustard (Birdsrape, Black, Wild)
Quackgrass <sup>1,3</sup>	Nightshade, Hairy <sup>1</sup>
Stinkgrass <sup>1</sup>	Nightshade, Black <sup>1,2,3</sup>
Wheat, Volunteer	Pigweed (Redroot, Smooth)
Wild Oat <sup>1</sup>	Pigweed, Prostrate <sup>1</sup>
Yellow nutsedge <sup>1</sup>	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Shepherdspurse
	Smartweed, Pennsylvania <sup>1</sup>
	Thistle, Canada <sup>1,3</sup>
	Velvetleaf <sup>1</sup>
	Volunteer Alfalfa <sup>4</sup>
	Wild Radish

- 1. Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of the weeds, and the environmental conditions following treatment.
- 2. Eastern Black Nightshade is NOT controlled or suppressed.

3. See **Specific Weed Problems-Potatoes and Tomatoes**.

4. Except in CA.

#### **AERIAL APPLICATION**

Pruvin® Herbicide may be applied to potatoes by air in all potato growing states except NY where aerial application of PruvIn® Herbicide is prohibited. In the state of CA, aerial application to potatoes is allowed only in the counties of Modoc and Siskiyou. Always use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA (in CA use a minimum of 10 GPA). **DO NOT** apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off-target spray movement (See the **SPRAY DRIFT MANAGEMENT** section of this label for more information).

#### **CHEMIGATION – POTATOES**

Pruvin® Herbicide can be applied using center pivot, lateral move, solid set, or hand move irrigation systems in potatoes. **DO NOT** apply PruvIn® Herbicide using any other type of irrigation system. Check irrigation systems to insure uniform application of water to all areas. Failure to apply PruvIn® Herbicide uniformly may result in crop injury and/or poor weed control. For best results, use the highest listed rate and apply preemergence to early postemergence to the weeds (weeds less than 1" tall). If weeds are present at application, add a NIS containing at least 80% active ingredient to the spray mix at a rate of 1 to 2 pints per acre.

Pruvin® Herbicide may be mixed in a supply tank with water, fertilizer, or other appropriate agricultural chemicals. Maintain continuous agitation in the injection nurse tanks during application to keep the product in suspension.

For solid set and hand move irrigation systems, apply PruvIn® Herbicide at the beginning of the set and then apply 1/3 to 1" of water for activation (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"). For center pivot and lateral move irrigation systems, apply PruvIn® Herbicide in 1/3 to 1" of water for activation as a continuous injection (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1").

If you have questions about calibrating chemigation equipment, contact state cooperative extension service, equipment manufacturers, or other experts. If the chemigation equipment needs adjustment, only the custodian responsible for its operation, or someone under the supervision of that custodian, can make the necessary adjustments.

#### **Irrigation System Requirements**

The irrigation system must contain the following:

- A functional check valve
- A vacuum relief valve
- A low pressure drain (to prevent water source contamination from backflow; must be located on the irrigation pipeline)
- Functional interlocking controls (to automatically shut-off the pesticide injection pump when the water pump motor stops)
- A metering pump, including 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

The pesticide injection pipeline must contain the following:

- A functional, automatic, quick-closing check valve (to prevent the flow of fluid back toward the injection pump)
- A functional, solenoid-operated valve (normally closed) located on the intake side of the injection pump (must be connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is shut down either automatically or manually)

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when pesticide distribution is adversely affected by a decrease in water pressure.

#### **Chemigation Precautions – Potatoes**

Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, or over-tolerance pesticide residues in the crop. Therefore, to ensure that the mixture is applied evenly at the listed rate, use sufficient water, and apply the mixture for the proper length of time.

#### **RESTRICTIONS**

- **DO NOT** permit run-off during chemigation.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- **DO NOT** connect an irrigation system (including greenhouse systems) used for PruvIn® Herbicide application to a public water system.

#### **PRUVIN® HERBICIDE ROTATIONAL CROP GUIDELINES – POTATO**

For the crops listed below, planting prior to the interval shown may result in crop injury when using PruvIn® Herbicide. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless supplemental sprinkler irrigation has been applied and an amount greater than 15" has been applied during the year. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotational Crop	Time Interval Before Planting (months)
Alfalfa <sup>2</sup>	4
Barley, Spring <sup>1</sup>	9
Beans, Dry	10
Beans, Succulent	10
Carrots (Kern County, CA) <sup>2</sup>	4
Carrots <sup>2</sup>	10
Corn, Field	Anytime
Corn, Popcorn	10
Corn, Sweet	10
Cotton	10
Cover Crops (erosion control)	4
Cucumber	10
Garlic	6
Grass, pasture, hay, seed <sup>2</sup>	4
Mint <sup>2</sup>	4
Oats, Spring	9
Onions <sup>2</sup>	10
Peas <sup>2</sup>	8
Potatoes	Anytime
Sunflowers	10
Soybeans	4
Tomatoes	Anytime
Wheat, Spring	9
Wheat, Winter	4
Crops Not Listed	18

<sup>1</sup> In the state of ID – 18 months for Teton county, Caribou county, Madison county east of Hwy 20, and Fremont county east of Hwy 20.

In the state of CO – Alamosa, Conejos, Costilla, Rio Grande and Saguache counties: 1.5 ounces (0.375 oz a.i.) or less Pruvin® Herbicide per acre per year – 9 months; greater than 1.5 ounces of Pruvin® Herbicide per acre per year – 18 months.

<sup>2</sup> Applies to potatoes grown under sprinkler irrigation with a minimum of 18 " of water per year. This rotation interval is for sand, loamy sand and sandy loam soils having not more than 1.5% organic matter where a minimum of 18 " of sprinkler irrigation is used on the previous potato crop. Injury to the rotated crop may occur if less than 18 " of irrigation is used on the previous potato crop. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation to Alfalfa: Pruvin® Herbicide application in potatoes must not exceed 1 ounce (0.25 oz a.i.) per acre per use year in Adams, Grant, Douglas and Lincoln counties of WA, and Pruvin® Herbicide application in potatoes must not exceed 1.5 ounces (0.375 oz a.i.) per acre per use year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in WA and Morrow and Umatilla counties in OR.

Rotation to Onions and Carrots: Pruvin® Herbicide application in potatoes must not exceed 1.5 ounces (0.375 oz a.i.) per acre per use year in Adams, Grant, Douglas and Lincoln counties of WA, and Pruvin® Herbicide application in potatoes must not exceed 2.5 ounces (0.625 oz a.i.) per acre per use year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in WA and Morrow and Umatilla counties in OR.

Rotation to Grass Crops Grown for Seed, Hay or Pasture: Pruvin® Herbicide application in potatoes must not exceed 1.5 ounces (0.375 oz a.i.) per acre per use year in Adams, Grant, Douglas and Lincoln counties of WA, and Pruvin® Herbicide application in potatoes must not exceed 2.5 ounces (0.625 oz a.i.) per acre per use year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in WA and Morrow and Umatilla counties in OR.

Rotation to Peas and Mints: Pruvin® Herbicide application in potatoes must not exceed 1.5 ounces (0.375 oz a.i.) per acre per use year in all areas.

**NOTE:** Pruvin® Herbicide must not be used in a tank mix or sequential application program with other soil residual ALS-inhibiting herbicides on potatoes as the combined effects of these herbicides on the planting of subsequent crops have not been thoroughly investigated and crop injury may occur.

### **Restrictions to Use of Pruvin® Herbicide on Potatoes**

- **DO NOT** exceed 1.5 ounces (0.375 oz a.i.) Pruvin® Herbicide per acre per application.
- **DO NOT** exceed 2.5 ounces (0.625 oz a.i.) Pruvin® Herbicide per acre on potatoes per year.
- **DO NOT** make more than 2 applications per acre per year.
- **Retreatment Interval (RTI):** 14 days.
- **Preharvest Interval (PHI):** 30 days.
- **DO NOT** use COC or MSO with Pruvin® Herbicide when potatoes are under heat stress (>85° F) as multiple stresses may cause crop injury.
- **DO NOT** apply Pruvin® Herbicide on potatoes within 30 days of harvest.
- **DO NOT** apply to sweet potatoes or yams.
- **DO NOT** use Pruvin® Herbicide on potatoes grown for seed, except as directed on this labeling.
- **DO NOT** apply to potatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to potatoes growing in fields.

## **TOMATOES (DIRECT SEEDED AND TRANSPLANT)**

### **APPLICATION INFORMATION**

**Ground Application:** Apply Pruvin® Herbicide with a properly calibrated, low-pressure (20 to 40 psi) boom sprayer equipped with flat fan, TwinJet, underleaf banding nozzles or flood jet nozzles to ensure optimum spray distribution and thorough coverage. Nozzle screens must be no finer than 50 mesh. When using flood nozzles, the spray pattern must overlap 100% for optimum product performance. For banded applications even flow flat fan or twin jet spray nozzles may provide a more uniform spray distribution. With ground application equipment, use enough water to deliver 10 to 40 gallons total spray solution per acre. Avoid overlapping, and shut off spray booms while starting, turning, slowing, or stopping, or injury to the crop may result.

**Preemergence Applications:** Apply Pruvin® Herbicide at 2 to 4 ounces (0.5-1.0 oz a.i.) product per acre. To activate Pruvin® Herbicide and move it 2 to 3" deep into the soil profile, supply moisture within 5 days of application from a single rainfall event, or sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"). Activating sprinkler irrigation is required regardless of the soil moisture level at planting, or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying Pruvin® Herbicide postemergence would result in better weed control. **DO NOT** make more than 3 applications per acre per year. **DO NOT** exceed 4.0 ounces (1.0 oz a.i.) per acre of Pruvin Herbicide (broadcast basis) in the same year. **DO NOT** make more than 3 applications per acre per year.

Add a surfactant to the spray tank if weeds are present at application and it is not possible to apply Pruvin® Herbicide to a clean, newly prepared seedbed, free of emerged or germinating weeds (See the **Spray Adjuvant** section of this label for additional information). Control may not be adequate for weeds that are greater than 1" in height or diameter or weeds that have an established root system before activation of Pruvin® Herbicide.

**Postemergence Applications:** Apply Pruvin® Herbicide at 1 to 2 ounces product (0.25-0.5 oz a.i.) per acre (use 2 ounces per acre for longer residual) to young, actively growing weeds. It is important that Pruvin® Herbicide not be applied until after the crop has reached the cotyledon stage. Pruvin® Herbicide provides best weed control when applied to weeds that are less than 1" in height or diameter and are actively growing. Use a surfactant at a minimum rate of 0.25% v/v (2 pints per 100 gallons of water). The use of COC, MSO, nitrogen fertilizer solution or NIS surfactants at rates above 0.25% v/v may result in temporary crop chlorosis (lime green color). Symptoms usually disappear within 5 to 15 days. **DO NOT** exceed 4.0 ounces (1.0 oz a.i.) per acre of Pruvin Herbicide (broadcast basis) in the same year. **DO NOT** make more than 3 applications per acre per year.

Temporary chlorosis (lime green color) may occur after application of Pruvin® Herbicide if tomato plants are growing under conditions that promote crop stress (including as drought, frost, cold temperatures, high temperatures, or extreme temperature variations). Symptoms usually disappear within 5 to 15 days.

Typically, small weeds (less than 1" in height or diameter) that are actively growing at application are most easily controlled (See the **Specific Weed Problems-Potatoes and Tomatoes** section of this label for more information). For best postemergence weed control, activate Pruvin® Herbicide in the soil with rainfall or sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours, but not more than 5 days after application. This will help provide control of subsequent flushes of annual weeds.

### **Sequential Applications – Tomatoes**

Annual weeds often have multiple flushes of seedlings, or treated perennial weeds may sometimes re-grow from underground stems or roots, depending upon rainfall and other environmental conditions. To maximize control of such weeds, it may be necessary to use sequential applications of Pruvin® Herbicide in tomatoes. Applications may be preemergence followed by single or multiple postemergence applications, or just a postemergence application followed by another postemergence application. Best weed control is attained with Pruvin® Herbicide applied postemergence when the first application is made to small actively growing weeds, followed by a second application 7 to 14 days later. When using sequential applications, the total amount of Pruvin® Herbicide applied cannot exceed 4 ounces product (1.0 oz a.i.) per acre per year on a broadcast basis. **DO NOT** make more than 3 applications per acre per year.

### **Band Applications – Tomatoes**

Pruvin® Herbicide can be applied using three band applications at 1-4 ounces of product (0.25-1.0 oz a.i.) per acre (For example, 0.25-1.0 ounces of product (0.625-0.25 oz a.i.) per conventional broadcast acre assuming 25% banding). **RESTRICTION: DO NOT** make any more than three band applications of PruvIn® Herbicide in one year. **DO NOT** exceed 4 ounces (1.0 oz a.i.) per acre per year.

### **Tank Mixtures – Tomatoes**

Pruvin® Herbicide may be tank mixed with pesticide products labeled for use on tomatoes in accordance with the most restrictive of label limitations and precautions. PruvIn® Herbicide may also be used in three-way tank mix combinations with pesticide products approved for use on tomatoes. If the label directions of the tank mix partner(s) conflict with this PruvIn® Herbicide label, **DO NOT** use as a tank mix with PruvIn® Herbicide. Tank mixtures with products that lower the spray solution pH may reduce weed control. When tank mixing PruvIn® Herbicide with another tomato pesticide(s), read and follow all use directions, restrictions, and precautions of both PruvIn® Herbicide and the tank mix partner(s).

Pruvin® Herbicide may be tank mixed with suitable registered fungicides on tomatoes containing chlorothalonil or minerals. Tank mixes with copper containing fungicides may reduce weed control. Read and follow all manufacturers' label directions for the companion fungicide. If these directions conflict with this PruvIn® Herbicide label, **DO NOT** use as a tank mix with PruvIn® Herbicide.

## **TOMATOES – CALIFORNIA**

### **Preemergence Applications**

For preemergence applications to tomatoes in CA, follow the use directions provided above under the **Preemergence Applications** section under **TOMATOES (DIRECT SEEDED AND TRANSPLANT)**.

### **Postemergence Applications**

For postemergence applications to tomatoes in CA, apply PruvIn® Herbicide at 2 ounces product (0.5 oz a.i.) per acre to young, actively growing weeds. Other directions for postemergence use of PruvIn® Herbicide to tomatoes in CA are provided above under the **Postemergence Applications** section under **TOMATOES (DIRECT SEEDED AND TRANSPLANT)**.

### **Sequential Applications**

Follow the use directions provided above under the **Sequential Applications-Tomatoes** section under **TOMATOES (DIRECT SEEDED AND TRANSPLANT)** for information about sequential applications to tomatoes in CA.

### **Band Applications – Tomatoes**

Pruvin® Herbicide can be applied to tomatoes in CA in a preemergence band at 2 to 4 ounces product per acre (For example, 0.5 to 1 ounces of product (0.125- 0.25 oz a.i.) per conventional broadcast acre assuming 25% banding) followed by two separate postemergence band applications applied at 2 ounces product (0.5 oz a.i.) per acre (For example, 0.5 ounces of product (0.125 oz a.i.) per conventional broadcast acre assuming 25% banding) over the same sprayed area.

Pruvin® Herbicide can be applied using three postemergence band applications at 2 ounces product (0.5 oz a.i.) per acre (For example, 0.5 ounces of product per conventional broadcast acre assuming 25% banding). **RESTRICTION: DO NOT** make any more than three band applications of PruvIn® Herbicide in one year. **DO NOT** exceed 4 ounces (1.0 oz a.i.) per acre per year.

### **WEEDS CONTROLLED OR PARTIALLY CONTROLLED IN TOMATOES**

When used according to the label use directions PruvIn® Herbicide provides control or partial control of the following weeds:

#### **PREEMERGENCE**

<b>GRASSES</b>	<b>BROADLEAVES</b>
Barnyardgrass	Cocklebur <sup>1</sup>
Crabgrass <sup>1</sup>	Filaree, Redstem
Foxtail (Giant, Green, Yellow)	Henbit
Wheat, Volunteer	Kochia
Wild Oat <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
	Mustard, Black
	Nightshade, Black <sup>1, 2, 3</sup>
	Nightshade, Hairy <sup>1</sup>
	Pigweed, Prostrate <sup>1</sup>
	Pigweed (Redroot, Smooth)
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Velvetleaf <sup>1</sup>



1. Partial Control.
2. Eastern Black Nightshade is NOT controlled or suppressed (Black nightshade suppression is only for use in Tomatoes in CA).
3. See **Specific Weed Problems-Potatoes and Tomatoes**.

**POSTEMERGENCE (Weeds not to exceed 1" in height for control)**

GRASSES/SEDGES	BROADLEAVES
Barley, Volunteer	Chamomile, False
Barnyardgrass	Cocklebur <sup>1</sup>
Bluegrass, Annual	Chickweed, Common
Crabgrass	Henbit
Foxtail (Bristly, Giant, Green, Yellow)	Kochia
Johnsongrass, seedling <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
Millet, Wild Proso <sup>1</sup>	Morningglory, Ivyleaf <sup>1</sup>
Panicum, Fall	Mustard (Birdsrape, Black, Wild)
Quackgrass <sup>1,3</sup>	Nightshade, Hairy <sup>1</sup>
Stinkgrass <sup>1</sup>	Nightshade, Black (cotyledon stage only) <sup>1,2,3</sup>
Wheat, Volunteer	Pigweeds (Redroot, Smooth)
Wild Oat <sup>1</sup>	Pigweed, Prostrate <sup>1</sup>
Yellow Nutsedge <sup>1</sup>	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Shepherdspurse
	Smartweed, Pennsylvania <sup>1</sup>
	Thistle, Canada <sup>1,3</sup>
	Velvetleaf <sup>1</sup>
	Volunteer Alfalfa <sup>1,4</sup>
	Wild Radish

1. Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of the weeds, and the environmental conditions following treatment.
2. Eastern Black Nightshade is NOT controlled or suppressed. Black nightshade partial control is only for use in tomatoes in CA.
3. See **Specific Weed Problems-Potatoes and Tomatoes**.
4. Except in CA.

## PRUVIN® HERBICIDE ROTATIONAL CROP GUIDELINES – TOMATOES

For the crops listed below, planting prior to the interval shown may result in crop injury when using Pruvin® Herbicide. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless supplemental sprinkler irrigation has been applied and an amount greater than 15" has been applied during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotational Crop <sup>1</sup>	Time Interval Before Planting (months) <sup>2</sup>
Beans, Dry	10
Beans, Snap	10
Corn, Field	Anytime
Corn, Sweet	10
Cotton	10
Cucumber	10
Garlic	6
Potatoes	Anytime
Soybeans	10
Tomatoes	Anytime
Wheat, Winter	4
Crops Not Listed	12

- Where drip irrigated tomatoes are grown, rotate only to tomato, potato or field corn as crop injury may result.
- Rotational crops may be planted at indicated intervals provided the fields are deep disked or plowed, and thorough soil mixing is achieved, prior to planting the rotational crop.

### Restrictions to Use of Pruvin® Herbicide on Tomatoes

- DO NOT** exceed 4 ounces Pruvin® Herbicide (1.0 oz a.i.) per acre (broadcast basis) on tomatoes during the same year.
- Banding applications of Pruvin® Herbicide cannot exceed 4 ounces (1.0 oz a.i.) on a broadcast basis in the same year.
- DO NOT** apply more than 4.0 ounces (1.0 oz ai) product per acre preemergence or 2.0 ounces (0.5 oz ai) product per acre postemergence.
- DO NOT** make more than 3 applications per acre per year.
- Retreatment Interval (RTI):** 7 days.
- Preharvest Interval (PHI):** 45 days.
- DO NOT** apply Pruvin® Herbicide by air on tomatoes.
- DO NOT** apply using assisted (Airblast) field crops sprayers on tomatoes.
- DO NOT** apply to tomatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to tomatoes growing in fields.
- DO NOT** apply through any type of irrigation system.

### **SPECIFIC WEED PROBLEMS - POTATOES AND TOMATOES**

**Quackgrass:** For best results, apply Pruvin® Herbicide postemergence to quackgrass that is 4 to 8" tall. Quackgrass not emerged at the time of application will not be controlled or suppressed, and would require a second postemergence application for acceptable control.

**Black Nightshade (Tomatoes):** For best results, apply Pruvin® Herbicide preemergence (prior to weed germination) at 2 to 4 ounces (0.5- 1.0 oz a.i.) per acre followed by a postemergence application at 1 to 2 ounces (0.25-0.5 oz a.i.) per acre to small actively growing weeds.

**Canada Thistle:** For best results, apply Pruvin® Herbicide postemergence to small actively growing Canada thistle. Canada thistle not emerged at the time of application will not be controlled or suppressed, and would require a second postemergence application for acceptable control.

### **TREE NUTS, CITRUS FRUIT, STONE FRUIT, POME FRUIT, GRAPES**

#### **APPLICATION INFORMATION**

Apply Pruvin® Herbicide as a uniform broadcast application to the orchard or vineyard floor, or as a uniform band application directed at the base of the tree trunk or vine. Apply only by ground application (**DO NOT** apply Pruvin® Herbicide by air to fruit, nut and vine crops). Apply only to crops that have been established for one full year and are in good health and vigor. To prevent injury, avoid direct or indirect spray contact of Pruvin® Herbicide with crop foliage or fruit, except undesirable suckers.

Best results are obtained when Pruvin® Herbicide is applied to moist soil and 1/2 inch of rainfall or sprinkler irrigation occurs within 2 weeks after application. Time application of Pruvin® Herbicide to take advantage of normal rainfall patterns and cool temperatures. Moisture for activation must occur within 2 to 3 weeks after application.

For broadcast applications, make a single application of Pruvin® Herbicide at 4 ounces (1.0 oz a.i.) per acre per year.

Pruvin® Herbicide can be applied using two band applications at 2 ounces product (0.5 oz a.i.) per acre (For example, 2 ounces of product per conventional broadcast acre assuming 50% banding). Unless otherwise specified on this label allow a minimum

of 30 days between applications. For improved weed management, Pruvin® Herbicide must be applied in tank mixture with other registered preemergence herbicides. **RESTRICTION: DO NOT** make any more than two band applications of Pruvin® Herbicide in one year.

Uniform coverage is important so use a minimum of 10 gallons of spray solution per acre. Nozzle selection must meet manufacture's spray volume and pressure directions for preemergence or postemergence herbicide applications. Pruvin® Herbicide may also be applied by certain chemigation methods, including micro-sprinkler. **RESTRICTION: DO NOT** apply by overhead, flood, or drip irrigation.

As discussed above under the **Formulation** section of this label, Pruvin® Herbicide is sensitive to pH outside the range of pH 4 to 8. **RESTRICTION: DO NOT** apply in a spray solution with a pH below 4 or above 8, or with spray additives that buffer the pH to below 4 or above 8, since degradation of Pruvin® Herbicide may occur.

**WEEDS CONTROLLED OR PARTIALLY CONTROLLED IN FRUIT, NUT AND VINE CROPS**

Pruvin® Herbicide provides control of susceptible weeds for 60 to 90 days. Moisture from rainfall or irrigation is necessary for herbicide activation. Length of control is a function of moisture for activation, soil temperature, soil texture and amount of moisture after application. When weeds are present at application, include a labeled burn down herbicide, including glyphosate, paraquat, or glufosinate, with an appropriate adjuvant. Pruvin® Herbicide will help provide postemergence control of the weeds listed in this label. For best results, make postemergence applications to young, actively growing weeds and include a spray adjuvant.

Residual weed control may be reduced when Pruvin® Herbicide is applied where heavy crop trash and/or weed residue exists. Weed control may also be reduced when applications of Pruvin® Herbicide are made to weeds under stress from drought, excessive water, temperature extremes, diseases or low humidity. When used according to the label use directions Pruvin® Herbicide provides control or partial control of the following weeds:

**PREEMERGENCE**

<b>GRASSES</b>	<b>BROADLEAVES/SEDGES</b>
Barnyardgrass <sup>2</sup>	Chamomile, False
Crabgrass, Large <sup>2</sup>	Cocklebur <sup>1</sup>
Foxtail (Giant, Green, Yellow) <sup>2</sup>	Dandelion, Common (seedling) <sup>2</sup>
Quackgrass	Dandelion, Common (established) <sup>1</sup>
Wheat, Volunteer	Filaree, Redstem
Wild Oat <sup>1</sup>	Fleabane, Hairy <sup>2</sup>
	Groundsel, Common
	Henbit
	Kochia
	Lambsquarters, Common <sup>1</sup>
	Mallow, Common <sup>2</sup>
	Marestail/horseweed <sup>2</sup>
	Mustards (Birdsrape, Black)
	Nightshades, ( Black <sup>1</sup> , Hairy <sup>1</sup> )
	Nutsedge, Yellow <sup>1,2</sup>
	Pigweed, Prostrate <sup>1</sup>
	Pigweeds (Redroot, Smooth)
	Puncturevine <sup>2</sup>
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Spurges (Prostrate, Spotted)
	Velvetleaf <sup>1</sup>

1. Partial Control.

2. See **Specific Weed Problems - Fruit, Nut and Vine Crops.**

## POSTEMERGENCE

GRASSES (1 to 2 " in Height)	BROADLEAVES/SEDGES (1 to 3 " in Height)
Barley, Volunteer	Chamomile, False
Barnyardgrass <sup>2</sup>	Cocklebur <sup>1</sup>
Bluegrass, Annual	Chickweed, Common
Crabgrass, Large (1/2 inch) <sup>2</sup>	Dandelion, Common (>6 " in diameter) <sup>1, 2</sup>
Foxtails (Bristly, Giant, Green, Yellow) <sup>2</sup>	Henbit
Johnsongrass, seedling <sup>1</sup>	Kochia
Millet, Wild Proso <sup>1</sup>	Lambsquarters, Common <sup>1</sup>
Panicum, Fall	Mustards (Black, Wild)
Quackgrass <sup>1</sup>	Mallow, Common <sup>1, 2</sup>
Stinkgrass <sup>1</sup>	Nightshade, Hairy <sup>1</sup>
Wheat, Volunteer	Nutsedge, Yellow <sup>1, 2</sup>
Wild Oat <sup>1</sup>	Pigweeds (Redroot, Smooth)
	Pigweed, Prostrate <sup>1</sup>
	Purslane, Common
	Ragweed, Common <sup>1</sup>
	Shepherdspurse
	Smartweed, Pennsylvania <sup>1</sup>
	Thistle, Canada <sup>1</sup>
	Velvetleaf <sup>1</sup>
	Wild Radish

1. Partial Control.

2. See **Specific Weed Problems - Fruit, Nut and Vine Crops**.

### Specific Weed Problems - Fruit, Nut and Vine Crops

**Marestail and Fleabane:** In orchards or vineyards where marestail and fleabane are the target weeds, best control is achieved when PruvIn® Herbicide is applied prior to emergence. This may require a fall application to help prevent fall germinated seedlings from becoming established during the winter. A second application of PruvIn® Herbicide in the spring may be required to provide extended weed control into the summer. To aid in resistance management, ADAMA directs the use of another soil residual herbicide in a tank mix or as a rotational partner with PruvIn® Herbicide wherever it is applied for control of marestail and fleabane. If applied postemergence, a foliar active herbicide with activity on fleabane and marestail (including paraquat, glyphosate, and glufosinate) must be tank mixed with PruvIn® Herbicide for best control and resistance management.

**Common Dandelion and Mallow:** When applied preemergence, PruvIn® Herbicide provides excellent control of common dandelion and mallow germinating from seed. In high rainfall areas or where sprinkler irrigation is used, a second application may be needed to extend residual control throughout the year. When applications are made postemergence to these weeds, always add a suitable burndown herbicide including glyphosate or paraquat. Small and medium sized plants (up to 6 " in diameter) are controlled by postemergence applications of PruvIn® Herbicide plus a burndown herbicide; however, plants that are larger than 6" in diameter may only be suppressed and may require a second application 4 to 6 weeks later.

**Puncturevine:** For best results, apply PruvIn® Herbicide early in the spring before rainfall or prior to overhead irrigation to move it into the weed root zone before puncturevine germinates. Puncturevine emerges over a long period of time and late season germinations may not be controlled with PruvIn® Herbicide.

**Yellow Nutsedge:** PruvIn® Herbicide only provides suppression of yellow nutsedge. To obtain the most effective results, use the highest rate allowed based on the width of the spray band and make two applications. For applications made postemergence to nutsedge, always add the appropriate rate of glyphosate and an effective adjuvant. On soils with high organic matter (6% or higher) always apply postemergence to weeds since preemergence applications are not as effective on these soils. When making a preemergence application followed by an early postemergence application, make the preemergence application prior to rainfall or overhead irrigation in order to move PruvIn® Herbicide into the nutsedge root zone prior to nutsedge emergence. Make a second application when emerging nutsedge is 2 to 4 inches tall. When making sequential postemergence applications of PruvIn® Herbicide, make the first application when emerging nutsedge is 2 to 4 " tall (nutsedge taller than 6 " at the first application may not be controlled). Make the second application 14 days later.

**Annual Summer Grasses (including Barnyardgrass, Green foxtail, and Crabgrass):** Where sprinkler irrigation is used, a fall or early spring application of PruvIn® Herbicide will not provide season-long control of summer grasses like foxtail,

barnyardgrass and crabgrass. For best results, use Pruvion® Herbicide with a suitable tank mix herbicide including oryzalin or pendimethalin. A second application may be needed to provide extended control of summer grasses. Be sure to direct sprays to the base of the plants to minimize spray contact and potential injury to fruit or foliage.

**Diuron Containing Products (WA and OR):**

On coarse textured soils where crops are grown under sprinkler irrigation, avoid using diuron containing products as a tank mix partner with Pruvion® Herbicide between June 1 and September 30 since crop injury may result. Pruvion® Herbicide tank-mixed with diuron products can be used in the fall (after September 30), or early spring when temperatures are cool to moderate.

**PRUVION® HERBICIDE ROTATIONAL CROP GUIDELINES – FRUIT, NUT, AND VINE CROPS**

**RESTRICTION: DO NOT** plant any crops, except field corn, tomatoes, potatoes, and those listed on this label in the **APPLICATION INFORMATION** section, within one year of the last Pruvion® Herbicide application. Prior to planting, fields to be rotated to the above crops must have a thorough soil mixing – for example, two diskings, or a plowing and a disking. To help ensure rotational crop safety, a field bioassay must be completed prior to planting any other desired crops. The results of this bioassay may require the crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip must cross the entire field including knolls and low areas.

**MICRO-SPRINKLER CHEMIGATION – FRUIT, NUT, AND VINE CROPS**

Pruvion® Herbicide may be applied via micro-sprinkler chemigation. The chemigation 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 pesticide(s) and capable of being fitted with a system interlock. **RESTRICTION: DO NOT** apply Pruvion® Herbicide through any other chemigation equipment.

### **Micro-Sprinkler Chemigation Restrictions - Fruit, Nut, and Vine Crops**

- **DO NOT** connect an irrigation system used for Pruvin® Herbicide application to a public water system.
- Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, or over-tolerance pesticide residues in the crop. Therefore, to ensure that the mixture is applied evenly at the listed rate, use sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water pattern.
- **DO NOT** permit run-off during chemigation.
- Continuous agitation in the mix tank is needed to keep the product from settling. If settling does occur, thoroughly re-agitate the tank mixture before using.

### **Restrictions to Use of Pruvin® Herbicide on Fruit, Nut, and Vine Crops**

- **DO NOT** exceed 4 ounces (1.0oz a.i.) of Pruvin® Herbicide per acre (broadcast basis) on per year.
- When applied as a broadcast treatment, **DO NOT** make more than 1 application.
- When applied as a banded treatment, **DO NOT** make more than 2 applications.
- **Retreatment Interval (RTI):** 30 days (band application, except for yellow nutsedge). **RTI (yellow nutsedge):** 14 days.
- **DO NOT** apply by air. Use ground application only.
- **DO NOT** apply by overhead, flood, or drip irrigation.
- **DO NOT** apply to a fruit, nut or vine crops unless the crop has been established for one full year and is in good health and vigor.
- **DO NOT** allow sprays to drift onto fruit or foliage as injury may result.

<b>CROP GROUP / CROP</b>	<b>PRE-HARVEST INTERVAL (PHI)</b>
<b>Citrus Fruit:</b>	3 days
Calamondin; Citrus citron; Citrus hybrids (includes chironja, tangelo, tangor); Grapefruit; Kumquat; Lemon; Lime; Mandarin (tangerine); Orange (sweet and sour); Pummelo; Satsuma mandarin	
<b>Pome Fruit:</b>	7 days
Apple; Crabapple; Loquat; Mayhaw; Pear; Oriental pear; Quince	
<b>Tree Nuts:</b>	14 days
Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory nut; Macadamia nut (bush nut); Pecan; Pistachio; Walnut (black and English)	
<b>Stone Fruit:</b>	14 days
Apricot; Cherry (sweet and tart); Nectarine; Peach; Plum; Plum (Chickasaw); Plum (Damson); Plum (Japanese); Plumcot; Prune (fresh)	
<b>Grapes</b>	14 days

### **WEED CONTROL ALONG ROADSIDES, HIGHWAY MEDIANS, AT INDUSTRIAL PLANT SITES, AND AT UTILITY SUBSTATIONS (NOT REGISTERED FOR THESE USES IN NEW YORK STATE)**

#### **INFORMATION**

Pruvin® Herbicide may be used in weed management programs along roadsides, highway medians, at industrial plant sites, and utility substations for control of a number of grass and broadleaf weeds. Where food and/or feed crops are grown or in areas where food and/or feed crops are planned to be grown, care must be taken to prevent any direct spray of Pruvin® Herbicide onto or to drift to these crops or planned planting areas since severe crop injury may occur.

#### **APPLICATION INFORMATION**

Apply Pruvin® Herbicide at 4 ounces (1.0 oz a.i.) per acre in a broadcast application making sure that coverage is uniform. Use a minimum of 10 gallons of spray solution per acre. Nozzle selection must meet manufacturer's spray volume and pressure specifications for preemergence or postemergence herbicide applications.

**Preemergence:** Pruvin® Herbicide must be activated by rainfall and applied when soil temperatures are cool for best preemergence and residual activity. Make applications to take advantage of normal rainfall patterns (minimum of 1/2 inch) and cooler temperatures. For best results, moisture for activation must occur within 2 to 3 weeks after application. To provide a broader spectrum of residual weed control, Pruvin® Herbicide may be applied in a tank mixture with other registered preemergence herbicides. When weeds are present at application, include a labeled burndown herbicide including glyphosate, paraquat, or glufosinate with an appropriate adjuvant. When applied according to the use directions, Pruvin® Herbicide will provide residual (preemergent) control of the following weeds:

## PREEMERGENCE

GRASSES	BROADLEAVES
Barnyardgrass	Filaree, Redstem
Crabgrass, Large	Fleabane, Hairy
Foxtails (Giant, Green, Yellow)	Mallow, Common
	Marestail/horseweed <sup>1</sup>
	Mustard, Black
	Pigweeds (Redroot, Smooth)
	Puncturevine

<sup>1</sup> Naturally occurring resistant biotypes of this weed are known to exist in some areas of the U.S. Pruvion® Herbicide will not control these biotypes.

**Postemergence:** For best results, make postemergence applications of Pruvion® Herbicide to young, actively growing weeds and include a spray adjuvant. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions. Follow the most restrictive labeling of any of the tank mix component products.

### Tank Mixtures

Pruvion® Herbicide may be tank mixed with other herbicides registered for use along roadsides, highway medians, at industrial plant sites, and utility substations. It may also be tank mixed with any adjuvants registered for roadside, plant site, or utility substation use. Refer to the label of the tank-mix partner(s) for any additional use instructions or restrictions.

### Restrictions to Use of Pruvion® Herbicide Along Roadsides, Highway Medians, at Industrial Plant Sites, and Utility Substations

- **DO NOT** apply more than 4 ounces of Pruvion® Herbicide (1.0 oz a.i.) per acre per application.
- **DO NOT** apply more than 4 ounces of Pruvion® Herbicide (1.0 oz a.i.) per acre per year.
- **DO NOT** make more than one application per acer per year as a broadcast application.
- **DO NOT** make more than 2 applications per year when applied as a banded treatment (50% band or less).
- **DO NOT** mix in spray solution or with spray additives that buffer the pH to below 4 or above 8, as degradation of Pruvion® Herbicide may occur.
- **DO NOT** apply in or on irrigation canals or ditches including their outer banks.
- **DO NOT** contaminate any body of water including irrigation water that may be used on other crops.

## POSTEMERGENCE CONTROL OF WEEDS IN WARM SEASON TURF

### NOT REGISTERED FOR USE ON POSTEMERGENCE CONTROL OF WEEDS IN WARM SEASON TURF IN CALIFORNIA.

#### INFORMATION

Pruvion® Herbicide is noncorrosive to equipment, nonflammable, and nonvolatile. Control of weeds with Pruvion® Herbicide requires approximately 3 to 4 weeks, but weed growth ceases soon after application. Pruvion® Herbicide temporarily suppresses growth of Tifway bermudagrass. This is a growth regulator effect. Delayed green-up of bermudagrass in the spring has not been observed. This is typically followed by a flush of growth within 3 to 4 weeks. Some slight yellowing of bermudagrass may occur and last for approximately 7 days.

Pruvion® Herbicide is absorbed through the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move Pruvion® Herbicide into the soil. In some cases, susceptible weeds may germinate and emerge a few days after application; but, growth then ceases and leaves become chlorotic 3 to 10 days after emergence. Death of leaf tissue and growing point will follow in some species; in other species, the seedling may remain green but be stunted in growth and remain noncompetitive.

One to three weeks after postemergence application to weeds, leaves of susceptible plants appear chlorotic, and the growing point subsequently dies. In warm moist conditions, the expression of herbicide symptoms is accelerated. In cold dry conditions, expression of herbicide symptoms may be delayed. Death of leaf tissue and growing point will follow in some species; in other species, the seedling may remain green but be stunted in growth and remain noncompetitive.

The herbicidal action of Pruvion® Herbicide may be less effective on susceptible species stressed from environmental conditions (including extreme temperature or moisture), abnormal soil conditions (saturated or waterlogged soils), or cultural practices. In addition, weeds hardened off by drought stress are less susceptible to Pruvion® Herbicide. Under cold conditions, Pruvion® Herbicide activity is delayed and takes longer to control weeds. In order to achieve faster control in cold conditions, increase the rate to 2 ounces per acre.

Lateral movement and tracking have been observed in heavier clay soils which are characterized by low water infiltration rates. These problems can be significantly reduced by use of short, frequent irrigation cycles. A minimum of three irrigation cycles is specified in order to move Pruvion® Herbicide from the turf and weed canopy into the soil. These irrigation cycles must be applied prior to allowing foot or equipment traffic into treated areas. The use of a soil wetting agent may be beneficial in both clay and sandy soils. Where slopes are severe, mechanical aeration prior to spraying may help water penetrate into the soil and move Pruvion® Herbicide into the soil profile.

Never depend solely upon rainfall to move Pruvin® Herbicide into the soil. Rainfall is unpredictable and if heavy enough will move Pruvin® Herbicide laterally. Some foliar uptake may have to be sacrificed when foot and/or equipment traffic is imminent soon after Pruvin® Herbicide application. Begin irrigation regime 1 hour following Pruvin® Herbicide application.

Extreme caution must be used when applying this product to slopes of heavy or clay soils that drain onto bentgrass greens, overseeded greens, fairways, or tees. **RESTRICTION: DO NOT** apply to slopes that drain directly onto soil or “push up” bentgrass greens. Tracking and lateral movement onto bentgrass putting greens rarely results in death to bentgrass. Some off color and growth regulator effects have been observed for approximately 14 days. This effect may last longer on non-USGA (sand greens) or during periods of cool weather or on green maintained at low nitrogen levels. Fertilization with liquid fertilizer can help speed bentgrass recovery. The addition of a product containing gibberellic acid may also be beneficial. Application of activated charcoal around and/or on the perimeter of bentgrass putting greens has also been effective in reducing injury potential. **DO NOT** make more than 3 applications.

## APPLICATION INFORMATION

### I. Control of Annual Bluegrass Infesting Non-Overseeded Bermudagrass on Sod Farms, Seed Farms, Golf Courses, Professionally Managed College and Professional Sports Fields, Industrial and Commercial Lawns

**Comments and restrictions:** **DO NOT** allow spray droplet drift to contact desirable ryegrasses, bentgrasses, bluegrasses, fescues, or ornamental shrubs, trees, or flowers. Annual bluegrass (*Poa annua* var. *annua*) is controlled with Pruvin® Herbicide. The degree of control for the perennial (*Poa annua* var. *reptans*) has not been fully determined. The perennial biotypes/ecotypes are primarily confined to bentgrass putting greens where Pruvin® Herbicide cannot be used.

**Non-putting green bermudagrass not overseeded:** Apply Pruvin® Herbicide at 1 to 2 ounces (0.25-0.5 oz a.i.) per acre in November/December and again in February/March if necessary. Add a NIS at 0.25% v/v and apply in 15 to 60 gallons of water per acre. Use the higher rate on areas with large plants and high annual bluegrass populations.

**Putting green bermudagrass not overseeded:** Apply Pruvin® Herbicide at a rate of 1 ounce (0.25 oz a.i.) per acre to annual bluegrass that is no larger than one inch in diameter. Bermudagrass that is not fully dormant may show some yellowing. **RESTRICTION:** Repeat applications as needed on a 3-week schedule, but **DO NOT** exceed a total of 4 applications.

### II. Removal of Perennial Ryegrass and *Poa trivialis* (Rough Bluegrass) from Bermudagrass on Sod Farms, Seed Farms, Golf Courses, Professionally Managed College and Professional Sports Fields, Industrial and Commercial Lawns

**Precautions and comments:** Perennial ryegrass is more sensitive to Pruvin® Herbicide than *Poa trivialis* (Rough Bluegrass). Repeat applications of Pruvin® Herbicide made at lower rates are more efficacious than a single large application. Perennial ryegrass and *Poa trivialis* growing in high density seedlings and maintained at low mowing heights are more sensitive to Pruvin® Herbicide than individual plants growing as unmowed clumps. Putting green bermudagrass cultivars that have shown to be safely used with Pruvin® Herbicide include: Tifdwarf, TifEagle, Floradwarf, Mississippi Supreme, and Champion.

**Non-putting green bermudagrass:** Apply Pruvin® Herbicide at 0.5 to 2 ounces (0.125-0.5 oz a.i.) per acre in the spring months 3 to 4 weeks before the desired date for overseed removal. Add a NIS at 0.25% v/v and apply in 15 to 60 gallons of water per acre. Use of the higher rate and repeat applications may be necessary for complete removal of *Poa trivialis*.

**Putting green bermudagrass:** Apply Pruvin® Herbicide at 0.5 to 1 ounce (0.125-0.25 oz a.i.) per acre 3 weeks before the desired date for overseed removal. Add a NIS at 0.25% v/v and apply in 15 to 60 gallons of water per acre. The lower rate of Pruvin® Herbicide can be used for slower transition. Three applications of Pruvin® Herbicide at the 0.5 ounce (0.125 oz a.i.) per acre rate or 2 applications at the 1 ounce (0.25 oz a.i.) per acre rate are required for removal of *Poa trivialis*.

### III. Annual Bluegrass Control Prior to Overseeding Bermudagrass on Sod Farms, Seed Farms, Golf Courses, Professionally Managed College and Professional Sports Fields, Industrial and Commercial Lawns with Perennial Ryegrass or *Poa trivialis*

**Comments and precautions:** Annual bluegrass control will be reduced in areas where “early overseeding” is practiced. Also, applying Pruvin® Herbicide earlier than 2 weeks prior to normal overseeding times will result in reduced annual bluegrass control. Avoid mechanical disturbance (aeration, verticutting, etc.) of the turf, thatch, and/or soil layer after Pruvin® Herbicide application or annual bluegrass control may be reduced. Avoid application to wet and/or waterlogged putting greens. Allow at least 72 hours for drying on waterlogged putting greens before applying Pruvin® Herbicide.

Stressed bermudagrass turf growing in shaded areas, waterlogged soil, or under other environmental stress (including nematodes) may exhibit more discoloration or chlorosis following application of Pruvin® Herbicide. **DO NOT** apply Pruvin® Herbicide after overseeding, except as directed for removal of overseeded grasses.

**Non-putting green bermudagrass:** Apply Pruvin® Herbicide at 1 to 2 ounces (0.25-0.5 oz a.i.) per acre 10 to 14 days prior to overseeding perennial ryegrass and/or *Poa trivialis*. Add a NIS at 0.25% v/v and apply in 15 to 60 gallons of water per acre. Occasional stunting of the overseeded perennial ryegrass and/or *Poa trivialis* may occur, but symptoms disappear in approximately 7 days. Cultural practices and favorable environmental conditions that allow for maximum germination of annual bluegrass prior to application of Pruvin® Herbicide increase the degree of control.

Apply 3 to 5 light irrigation cycles approximately 2 to 4 hours after application of Pruvin® Herbicide to dislodge Pruvin® Herbicide from the turf canopy. Apply enough irrigation water to penetrate the soil, but **DO NOT** allow the water to sheet or move laterally onto sensitive areas.



**Putting green bermudagrass:** Apply 2 ounces of Pruvini® Herbicide (0.5 oz a.i.) per acre without an adjuvant 10 to 14 days prior to overseeding golf putting greens for control of emerged annual bluegrass. Irrigate within 2 to 4 hours of application and continue a routine irrigation schedule. For putting greens growing in the shade, under waterlogged conditions, or other environmental stresses including nematodes, and to help reduce potential of bermudagrass injury, apply 1 ounce (0.25 oz a.i.) of Pruvini® Herbicide 3 weeks prior to overseeding and apply another 1 ounce 1 week prior to overseeding.

#### **IV. Weed Control in Centipedegrass and Zoysiagrass on Sod Farms, Seed Farms, Golf Courses, Professionally Managed College and Professional Sports Fields, Industrial and Commercial Lawns**

**Comments and precautions:** Sensitivity of the majority of cultivars of centipedegrass and zoysiagrass to Pruvini® Herbicide have not been fully investigated. It is known that Emerald, Zenith, and Meyer cultivars of zoysiagrass have shown to be safely used with Pruvini® Herbicide similar to that of bermudagrass. Cultivars of centipedegrass have shown moderate sensitivity. The effects of Pruvini® Herbicide on these turfgrasses during transition have not been fully evaluated.

**Dormant and non-dormant turf:** Apply 1 to 2 ounces of Pruvini® Herbicide (0.25-0.5 oz a.i.) per acre for weed control. Some chlorosis of the turf may occur following application. Use the lower rate with repeat applications for weed control in centipedegrass.

Pruvini® Herbicide will control the following cool-season weed species: annual bluegrass, blue-eyed grass, wild carrots, little barley, ryegrass, tall fescue, rough bluegrass, common chickweed, shepherdspurse, cutleaf evening primrose, henbit, and field pansy. Pruvini® Herbicide will control the following warm-season weed species: spotted spurge, dollarweed, and suppression of some sedge species.

**Use on bentgrass fairways:** Apply Pruvini® Herbicide at 0.125 to 0.3 ounce (0.031-0.075 oz a.i.) per acre for weed control. Sequential applications must be made 3 to 4 weeks after the initial application to achieve the desired weed control.

#### **Restrictions to Use of Pruvini® Herbicide for Postemergence Weed Control in Warm Season Turf**

- **DO NOT** apply to residential lawns.
- **DO NOT** apply an organophosphate insecticide or nematicide within 7 days of a Pruvini® Herbicide application as injury potential to the desired grass may increase.
- **DO NOT** apply to newly sprigged or sodded bermudagrass.
- **DO NOT** apply if wind speed becomes excessive; spray drift can occur at wind speeds greater than 10 mph. If sensitive species are downwind, extreme caution must be used. If conditions for spray drift exist, use a spray shield.
- **DO NOT** apply if winds are gusty.
- **DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply more than 2 ounces of Pruvini® Herbicide (0.5 oz a.i.) per acre in a single application.
- **DO NOT** apply more than 4 ounces of Pruvini® Herbicide (1.0 oz a.i.) per acre per year.
- **DO NOT** make more than 8 applications per year.
- The minimum retreatment interval is 21 days.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, foodstuffs, feed, or seed by storage and disposal.

**STORAGE:** Store product in original container only.

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

**CONTAINER HANDLING: Nonrefillable Container (flexible-bag-all weights):** Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid-fifty lbs. or less):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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 or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid-greater than fifty lbs.):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke.

**Refillable Container (greater than 55 gallons):** Refillable container. Refill this container with rimsulfuron only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### LIMITATION OF WARRANTY AND LIABILITY

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

By using this product, user or buyer accepts the following **CONDITIONS, 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. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ADAMA. 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, ADAMA makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of ADAMA is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ADAMA disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** 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 or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at ADAMA's election, the replacement of product.

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**Optional Text for Import Labels: [Shipped for further Labeling and Packaging. NOT INTENDED FOR USE BY CONSUMER]**

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