69361-32



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

03 05 2012

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

MAR - 5 2012

N. Bhushan Mandava, Ph.D Repar Corporation P.O. Box 4321 Silver Spring, MD 20914

Subject: Label Amendment – Updates per January 30, 2012 Agency Email Pendim H2O Herbicide EPA Reg. No. 69361-32 Application dated – February 1, 2012

Dear Dr. Mandava:

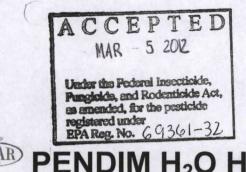
The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Submit one (1) copy of final printed labeling before you release the product for shipment. If you have any questions regarding this letter, please contact Maggie Rudick at (703) 347-0257 or <u>rudick.maggie@epa.gov</u>.

Sincerely,

Kable Bo Davis Product Manager 25 Herbicide Branch Registration Division (7505P)



GROUP 3 HERBICIDE

REPAR PENDIM H₂O HERBICIDE FOR USE IN SELECTED CROPS SEE TABLE 1 FOR LIST OF CROP USES

Active Ingredient*:	
PENDIMETHALIN: N-(1-ethylpropyl)-3,4-dimethyl 2,6-dinitrobenzamine	38.7%
Other Ingredients:	
Total:	and the second se
*1 gallon contains 3.8 pounds of PENDIMETHALIN formulated as an aqueous capsule suspensi	on

EPA Reg. No. 69361-32

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCIÓN

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

See inside for complete First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty, and state specific crop and/or use site restrictions.

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

Manufactured for: Repar Corporation P.O. Box 4321 Silver Spring, MD, 20914

Net Contents:

NA Y	FIRST AID
	Call a poison control center or doctor immediately for treatment advice.
	 Have person sip a glass of water if able to swallow.
wed	• DO NOT induce vomiting unless told to do so by a poison control center or doctor.
	DO NOT give anything by mouth to an unconscious person.
	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.
	• Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.
	Call a poison control center or doctor for treatment advice.

 Take off contaminated clothing. If on skin

· Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC for emergency medical treatment information 1-800-424-9300

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- · Chemical-resistant gloves made of waterproof materials, such as butyl rubber >14 mils, nitrile rubber >14 mils, or neoprene rubber >14 mils
- · Shoes plus socks

If swallow

If in eves

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

Engineering Controls:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the

Worker Protection Standard (WPA) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User safety Recommendations

Users should:

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

ENVIRONMENTAL HAZARDS

This product is toxic to fish. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. DO NOT contaminate water when disposing of equipment washwater or rinsate.

Endangered Species Protection

If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- · If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASAE fine to medium/coarse nozzles.
- · If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger); wind can be no more than 8 mph; and release height must be 15 feet or less.

To determine whether your county has an endangered species, consult the Web site http://www.epa.gov/espp/usa-map.htm.

Endangered Species Bulletins may also be obtained from extension offices or state pesticide agencies. If the bulletin is not available for your specific area, check with the appropriate local state agency to determine if known populations of endangered species occur in the area to be treated.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at the time of pesticide application.

Observe all cautions and limitations in this label and the labels of products used in combination with PENDIM H_2O HERBICIDE. The use of PENDIM H_2O HERBICIDE not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

DO NOT apply this product in a way that will contact workers or other persons, either directly or thorough drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide protection.

REPAR intends that this product may not be used for manufacturing products for application to turf and ornamentals.

DO NOT enter or allow other people (or pets) to enter the treated area until sprays have dried.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage. PENDIM H₂O HERBICIDE freezes around 15^{0} F and is stable under conditions of freezing and thawing. Product that has been frozen should be thawed and recirculated prior to use.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law.

If these wastes cannot be disposed of by the use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity \leq 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and re-cap. 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.

Triple rinse containers too large to shake (capacity >5 gallons) 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.

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

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rise as follows: 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% 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.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling an before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Spill

In case of large-scale spillage regarding this product, call:

CHEMTREC 1-800-424-9300

Steps to be taken in case material is released or spilled:

Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing and wash affected skin areas with soap and water. Wash clothing before reuse. Keep the spill out of all sewers and open bodies of water.

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

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of waterproof materials such as barrier laminate, butyl rubber
 14 mils, nitrile rubber >14 mils, neoprene rubber > 14 mils
- · Shoes plus socks

PRODUCT INFORMATION

PENDIM H₂O HERBICIDE is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. Refer to **Table 1** for crop uses. Refer to **Table 2** for a complete list of controlled weeds. **PENDIM H₂O HERBICIDE** will not control established weeds.

Table 1. Crop Uses
alfalfa
artichoke
asparagus
bearing citrus fruit trees
bearing grape
bearing nut trees
bearing pome fruit trees
bearing stone fruit trees
Brassica head and stem vegetables carrots
corn (field, pop, field seed, pop seed, fresh sweet)
cotton
edible beans
fallow
fruiting vegetables (eggplant, tomato, tomatillo, pepper)
garlic
grain sorghum
leek
lentils and peas
· · · · · · · · · · · · · · · · · · ·

mint nonbearing fruit tree and nut tree crops nonbearing vineyards onions and shallots (dry bulb, green) peanuts potatoes rice soybeans strawberry sugarcane tobacco triticale wheat

Table 2. Weeds Controlled

(see crop sections for additional weeds controlled)

	to 4.8 pts/A Grasses	
Annual ryegrass	Italian ryegrass*	
Barnyardgrass	Japanese brome*	
Canary grass*	Johnsongrass (seedling)	
Cheat*	Jointed goatgrass*	
Crabgrass	Oat, wild	
Crowfootgrass	Panicum, fall	
Downy brome* (Cheatgrass)	Panicum, Texas	
Foxtail, giant	Sandbur, field	
Foxtail, green	Shattercane*	
Foxtail, yellow	Signalgrass*	
Goosegrass	Wild proso millet*	
Hairy chess*	Witchgrass	
Itchgrass*	Wooly cupgrass*	
	roadleaves	
Amaranth, Palmer	Mustard, black	
Bugloss, small	Pigweed species	
Carpetweed	Pursiane	
Chickweed, common*	Pusley, Florida	
Henbit	Shepherdspurse*	
Kochia	Smartweed, Pennsylvania*	
Lady's thumb	Spurge, Ammia;	
Lambsquarters,	Velvet leaf*	
common		
Lambsquarters. slimleaf	Waterhemp species	
London rocket*		
* Suppression, but controlled w pts/A.	when PENDIM H2O use rate exceeds 4	
Weeds controlled with F	PENDIM H ₂ O HERBICIDE applie	
at 4.8 p	ots/A or greater	
	Grasses	
Annual bluegrass	Lovegrass	
Browntop panicum	Sprangletop, Mexican	
Grass, Guinea	Sprangleton, red	
Junglerice	Swollen fingergrass	
	roadleaves	
Dodder [†]	Prostate, knotweed	
Fiddleneck	Puncturevine	
Morningglory** [†] For optimum dodder control, us		

** Suppression		
	MODE OF ACTION	17 States Physics

PENDIM H₂O HERBICIDE is a meristematic inhibitor that interferes with the plant's cellular division or mitosis. This and/or other products with the meristematic inhibiting mode of action may not effectively control naturally occurring biotypes of some of the weeds listed on this label. A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants. Other herbicides with the meristematic inhibiting mode of action include other dinitroaniline herbicides, such as trifluralin. If naturally occurring meristematic inhibiting resistant biotypes are present in a field, **PENDIM H₂O HERBICIDE** and/or any other meristematic inhibiting mode of action herbicide should be tank mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

Application Rate

Use rates for PENDIM H₂O HERBICIDE when used alone, in tank mix, or sequential applications are given in Cropspecific information. Use rates of this product vary by soil texture and organic matter. See Table 3 for soil texture groupings used in this label.

Table 3. Soil Texture Groups

COARSE	MEDIUM	FINE
sands	sandy clay loams*	silty clay loams*
oamy	sandy clays	silty clays
sands	loams	clay loams
sandy	silt loams	clays
loams	silts	
	considered transitional either medium- or fine-text	
used on pea	ck soils: PENDIM H₂O H t and muck soils, but w ind/or reduced. Use maxir	veed control may be

Application Timings

PENDIM H₂O HERBICIDE will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into soil within 7 days after application by rainfall, sprinkler irrigation, or mechanical tillage prior to weed seedling emergence from soil. **PENDIM H₂O HERBICIDE** can also be applied through chemigation, including flood basin irrigation systems. **PENDIM H₂O HERBICIDE** is labeled for preplant surface, preplant incorporated, surface incorporated, preemergence, early postemergence, postemergence incorporated (CULTI-SPRAY) or layby treatment. See **Crop-specific Information** for specific application directions by crop.

Preplant Surface Applications: For use in minimum tillage or no-tillage production systems, apply **PENDIM** H_2O **HERBICIDE** alone or in tank mixes up to 45 days before planting. When making early preplant surface applications (15 to 45 days prior to planting, **PENDIM** H_2O **HERBICIDE** should be tank mixed or followed by a postemergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

Preplant Incorporated Applications: Apply **PENDIM** H_2O **HERBICIDE** and incorporate into the upper (1 inch to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation; two-pass incorporation usually results in a more consistent result.

Surface Incorporated Applications: Uniformly apply PENDIM H_2O HERBICIDE as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between trees rows. Incorporate into upper (1 inch to 2 inches) soil surface using either rainfall, sprinkler irrigation, or shallow mechanical incorporation; two-pass mechanical incorporation usually results in a more consistent result.

Surface Incorporated Applications. Uniformly apply PENDIM H_2O HERBICIDE as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between tree rows. Incorporate into upper (1 inch to 2 inches) soil surface using either rainfall, sprinkler irrigation, or shallow mechanical incorporation using an implement capable of giving uniform incorporation; two-pass mechanical incorporation usually results in a more consistent result.

Preemergence Surface Applications: Broadcast treatment uniformly to the soil surface at planting and up to 2 days after planting. Rainfall, sprinkler irrigation, or shallow mechanical incorporation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

Early Postemergence Applications: PENDIM H_2O HERBICIDE must be applied prior to weed seedling emergence or in a tank mix with products that control the emerged weeds. Refer to **Crop-specific Information** for specific post emergence application rates by crop.

Postemergence Incorporated Applications

(CULTI-SPRAY): Prior to application, crop must be cultivated in such a manner as to throw at least one inch of soil over the base of the crop plants. This will prevent direct contact of **PENDIM H₂O HERBICIDE** and the zone of brace root formation. **PENDIM H₂O HERBICIDE** must be applied broadcast with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate **PENDIM H₂O HERBICIDE** treatments into the soil:

- (1) With a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil, or
- (2) With an adequate overhead irrigation water or rainfall. See Crop-specific Information (Corn and Grain Sorghum) for more details on (CULTI-SPRAY) application.

Layby Application: Apply PENDIM H₂O HERBICIDE

directly to the soil between rows as a directed spray following the last normal cultivation (layby). See Crop-specific Information for more details on layby application.

Split Applications: PENDIM H₂O HERBICIDE may be applied pre-plant incorporated up to 60 days prior to planting and followed by a preemergence application at planting or up to 2 days after planting. The total amount of **PENDIM H2O HERBICIDE** applied per acre per season cannot exceed the highest labeled rate for any given soil type. See **Cropspecific Information** for more details on split applications.

Fall Applications: PENDIM H₂O HERBICIDE may be used in fall applications programs in certain crops. See Cropspecific Information for details on fall application timing.

Spraying Instructions

PENDIM H₂O HERBICIDE may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, **PENDIM H₂O HERBICIDE** may be impregnated on dry bulk fertilizer. Sprayable fluid fertilizer as a carrier is **NOT** recommended for use after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

Aerial Applications

Uniformly apply in 5 or more gallons of water per acre. Exercise caution to minimize drift. **DO NOT** apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. It is recommended that a flagman or an automatic mechanical flagging unit on the aircraft be used to avoid overlapping and possible crop injury.

Ground Applications (Broadcast)

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre or 20 or more gallons of liquid fertilizer per acre. Use sprayers equipped with appropriate nozzles that provide uniform and accurate spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh. Application of **PENDIM H₂O HERBICIDE** during periods of gusty winds may result in uneven applications. **DO NOT** apply **PENDIM H₂O HERBICIDE** postemergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result. Always predetermine the compatibility of **PENDIM H₂O HERBICIDE** alone or with other herbicides based on the following compatibility **jar test**.

- 1. Add 1 pint of fertilizer to a quart jar
- 2. Add 1 to 4 teaspoon(s) of the Dry Flowable (DF), Wettable Powder (WP), Aqueous Solution (AS), Flowable (F) or Liquid (L) formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula.

<u>lbs or pts of product/acre</u> x 11.4 = teaspoons of herbicide gallons of fertilizer/acre to add to 1pint of fertilizer

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials

DO NOT disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.

4. After dispersing the materials, add appropriate number of teaspoons of **PENDIM** H_2O **HERBICIDE** to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.

5. Evaluate compatibility.

- (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
- (b) If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
- (c) If separation of mixture occurs and agitation does not correct this problem, a compatibility agent is needed.
- 6. If the need for a compatibility agent is demonstrated, the following procedure is recommended: Using a clean quart jar, repeat step 1 above and add $\frac{1}{2}$ teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, **DO NOT** use **PENDIM** H₂**O HERBICIDE** with that specific liquid fertilizer.

Ground Applications (Band)

Uniformly apply the broadcast equivalent rate and volume per acre. To determine these:

Band Width inches	X Broadcast Rate =	Band Rate	
Row Width in Inches	per Acre	per Acre	

 Band Width inches
 X Broadcast Volume = Band per

 Volume Row Width in Inches
 per Acre

Ground Applications (Dry Bulk Fertilizer)

Apply **PENDIM** H_2O **HERBICIDE** /dry bulk fertilizer mixtures only with ground equipment. DO NOT impregnate **PENDIM** H_2O **HERBICIDE** onto coated aluminum nitrate or limestone because these materials will not adsorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with **PENDIM** H_2O **HERBICIDE**. A minimum of 200 pounds of dry bulk fertilizer, excluding the weight of ammonium nitrate of limestone, must be applied per acre.

Use the following formula to determine the amount (in pints) of **PENDIM H₂O HERBICIDE** to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

2000 > Pounds of Dry	Pints of PENDIM H ₂ O X HERBICIDE	Pints of PENDIM H₂O HERBICIDE Ton of Fertilizer
Fertilizer per Acre	(Recommended Rate per Acre)	

To impregnate **PENDIM** H_2O **HERBICIDE** on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of **PENDIM** H_2O

HERBICIDE onto the fertilizer during mixing.

Apply the **PENDIM H2O HERBICIDE** /dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The **PENDIM H2O HERBICIDE** /dry bulk fertilizer mixture must be spread uniformly on the soil surface.

Chemigation Applications via Sprinkler Irrigation Systems

PENDIM H₂O HERBICIDE may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to Cropspecific Information sections for individual crops. DO NOT apply **PENDIM H₂O HERBICIDE** via chemigation to crops unless specified in Crop-specific Information section.

Apply this product **ONLY** through a sprinkler irrigation system that has emitters above the soil surface.

DO NOT apply this product through any other type of sprinkler irrigation system.

Uniform distribution of **PENDIM H₂O HERBICIDE** -treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

The system must be properly calibrated (with water only) to ensure that the amount of **PENDIM** H_2O applied corresponds to the recommended rate. Apply **PENDIM** H_2O in 1/2 to 3/4 inches of water during the first sprinkler set (use at least 1 inch of water in the states of **New Mexico**, **Oklahoma** and **Texas**). REPAR recommends that **PENDIM** H_2O **HERBICIDE** is mixed with water at a 1:1 ratio in the in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.

Chemigation Instruction

(for low volume micro sprinklers)

Output of low volume sprinkler = 4 to 50 gallons per hour (gph) per emitter. Point of application **MUST** be above ground.

Irrigation system should run a sufficient amount of time prior to PENDIM H₂O HERBICIDE injection to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain PENDIM H₂O HERBICIDE -treated water. Add PENDIM H₂O HERBICIDE to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in PENDIM H₂O injection tank. PENDIM H₂O HERBICIDE should be mixed in clean water and injected down-line from filters. Following PENDIM H2O HERBICIDE injection, system should be flushed for a period of time sufficient to clear the line of PENDIM H2O HERBICIDE. (If PENDIM H₂O HERBICIDE application is made during a normal irrigation cycle, injection should be made during the last stage.)

Chemigation Calibration

(for low volume micro sprinklers)

Calculation of use rate is based on wetted area around emitters – **NOT** on tree acres. To determine correct amount of **PENDIM H₂O HERBICIDE**, use the following formula:

- 1. Treated area per each emitter = A A=3.14 x (radius x radius) (radius in inches)
- 2. The area in square feet wet in each acre = B $B = \frac{A \times emitters/acre}{144}$
- 3. The total area (in square feet) wet by your system = C
 - C = B x acres covered by system.
- Rate per treated acre of **PENDIM H₂O HERBICIDE** (based on length of control desired) = R (desired application rate)

Amount of

PENDIM H_2O S = Cx R = qts of PENDIM H_2O HERBICIDE43,560HERBICIDEto inject = SS

Example

If the average distance from emitter to perimeter of wetted area measured one inch below soil surface is 13 inches, then

 $A = 3.14 \times (13" \times 13")$, and A = 530.7 square inches

If there are 300 emitters per acre, then

 $B = \frac{530.7 \times 300}{144}$ and B = 1105.6 square feet wetted per acre

If the system cover 20 acres, then

C = 1105.6 square feet per acre x 20 acres and C = 22,112 square feet wetted by system

If the desired application rate per treated acre is 2.4 qts of **PENDIM** H_2O **HERBICIDE**, then

 $S = \frac{22.112}{43,560} x 2.4 \text{ and } S = 1.2 \text{ qts} = PENDIM H_2O HERBICIDE}$ is injected into the system

Special Precautions for Chemigation

- 1. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.
- 3. A person knowledgeable of the chemigation system and responsible for its operation, or under the super vision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- Tail water (runoff water) from chemigation that contains **PENDIM H₂O HERBICIDE** should be recirculated and/pr contained in the field in a cistern or holding reservoir from the initial application and/or

used only on adjacent, approved crops for which **PENDIM** H_2O **HERBICIDE** is registered for this type of application.

- 5. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. It 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.
- 6. The sprinkler 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. In addition, systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Chemigation Systems Connected to Public Water Systems

- Public water system means a system for the provision to the public or piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the tip or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section titled **Chemigation**.

Applications via Flood, Flooded Basin or Gravity Flow Irrigation Systems

PENDIM H₂O HERBICIDE may be applied via flooded basin irrigation systems, but only to the following crops: bearing and non-bearing fruit and nut trees, non-bearing vineyards, and alfalfa.

Use Instructions and Precautions for Flooded Basin Irrigation

 PENDIM H₂O HERBICIDE may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.

- Follow all label recommendations and restrictions for **PENDIM H₂O HERBICIDE** regarding rates per acre, timing of application and crop-specific restrictions.
- 3. DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- 4. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- 5. Mix **PENDIM H₂O HERBICIDE** with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
- 6. Systems using a gravity-flow pesticide dispensing system must meter the pesticide in the water at the head of the field downstream of a hydraulic discontinuity, such as a drop structure or weir box, to decrease potential for water source contamination from backflow water.
- Tail water (runoff water) from flood irrigation that contains PENDIM H₂O HERBICIDE should be recirculated and/or contained in the field in a cistern or holding reservoir from the initial application and/or used only on adjacent approved crops for which PENDIM H₂O HERBICIDE is registered for this type of application.
- 8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
 - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards 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 a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
 - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
 - Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), of effective design and constructed of materials that are compatible with

- Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
- 9. Be sure to regularly measure the flow in the field to ensure the correct amount of **PENDIM H₂O HERBICIDE** is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of **PENDIM H₂O HERBICIDE** can vary with water temperature and speed of water flow across the field.
- Uniform distribution of PENDIM H₂O HERBICIDE treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the field.
- 11. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Managing Off-Target Movement

Spray Drift

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

The following drift management requirements must be followed to avoid off target drift movement from aerial applications to agricultural field crops:

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

Where states have been more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the <u>Spray Drift Reduction Advisory</u> <u>Information</u> presented below.

Information on Droplet Size

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

Controlling Droplet Size

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure - DO NOT exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower

pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid –or- straight stream nozzles oriented straight back produce the largest droplets and the lowest drift. Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Application Height

Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind. Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. **DO NOT** apply with a nozzle height greater than 4 feet above the crop canopy (for ground application

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. Apply only when the wind speed is 2 to 10 mph at the application site. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

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

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature

inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light or no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

This pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or nontarget crops or plants) is minimal (e.g. when wind is blowing away from the sensitive areas). **DO NOT** apply when wind conditions will allow the drift to adjacent, susceptible crops.

Additives

Spray adjuvants have little or no influence on performance of **PENDIM** H_2O **HERBICIDE** when applications are made prior to weed emergence. However, several tank mixes with **PENDIM** H_2O **HERBICIDE** require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30%, or 32% UAN (urea ammonium nitrate) or ammonium sulfate), or crop oil concentrate may be used with **PENDIM** H_2O **HERBICIDE** tank mixes applied preplant, preemergence, or early postemergence to the crop. Follow the adjuvant recommendations on the tank mix partner's label. The recommended adjuvants must contain ingredients accepted by the Environmental Protection Agency.

Tank Mixing Information

PENDIM H₂O HERBICIDE may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to **PENDIM H₂O HERBICIDE** alone.

When using tank mixtures or sequential applications with **PENDIM** H_2O **HERBICIDE**, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

Uses with Other Products (Tank Mixes)

Always perform a mixing test to check the compatibility of **PENDIM H**₂**O** with all potential tank mix partners.

Mixing Instructions

1. Fill tank 1/2 to 3/4 full with clean water liquid fertilizer

and agitate. Prior to mixing **PENDIM** H_2O **HERBICIDE** or **PENDIM** H_2O **HERBICIDE** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

NOTE: PENDIM H₂O HERBICIDE will **NOT** mix in high salt formulation fertilizers, such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use **one** of the following:

- (a) Pre-slury PENDIM H₂O HERBICIDE in water prior to adding to tank; use 1:1 ratio of water to PENDIM H₂O HERBICIDE.
- (b) Add water to fertilizer solution prior to adding PENDIM H₂O HERBICIDE. The amount of water should be equal to or greater than the amount of PENDIM H₂O to be used.
- PENDIM H₂O herbicide Alone When using PENDIM H₂O HERBICIDE alone, add PENDIM H₂O HERBICIDE to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.
- 3. PENDIM H₂O HERBICIDE Tank Mixes

Add the tank mixture ingredients in the order listed below prior to adding **PENDIM H₂O HERBICIDE**:

- (a) Wettable Powder (WP) formulations Make a slurry of the WP in water (1:2 ratio). Add the slurry slowly into the partially filled tank while agitating.
- (b) Dry Flowable (DF)/Water Dispersible Granule (WDG) formulations- Add the granules to the partially filled tank while agitating. Make a slurry of the granules in water before adding to liquid fertilizer.
- (c) Flowable (F) formulations Add the F formulation to the partially filled tank while agitating.
- (d) Add **PENDIM H₂O HERBICIDE** to the partially filled tank while agitating.
- (e) Water Soluble Concentrate (WSC) formulations - Add the WSC formulation to the partially filled tank while agitating.
- (f) Emulsifiable Concentrate (EC) formulations

 Add the EC formulation to the partially filled tank while agitating.

Fill the remainder of the tank with water or liquid fertilizer while agitating.

4. Thorough and continuous sprayer-tank agitation MUST be maintained during mixing and spraying of PENDIM H₂O HERBICIDE. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Cleaning Spray Equipment

12 35

Clean application equipment thoroughly by using a strong detergent or commercial spray cleaner according to the manufacturer's directions, and then triple rinsing the equipment before and after applying this product.

Restrictions and Limitations

- DO NOT exceed the maximum labeled rate for any soil type.
- **PENDIM H₂O HERBICIDE** will not control established weeds. Destroy emerged weeds prior to application.
- PENDIM H₂O HERBICIDE is most effective in controlling weeds when mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.
- When using tank mixtures with PENDIM H₂O HERBICIDE, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.
- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a preplant incorporated application of **PENDIM H₂O HERBICIDE** can be replanted without adverse effects the same year (see **Crop specific Information** for exceptions). If replanting is necessary, **DO NOT** work the soil deeper than the treated zone.
- Refer to Crop-specific Information for crop-specific preharvest intervals and feeding and grazing restrictions.

Crop Rotation Restrictions

 Use of PENDIM H₂O HERBICIDE in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors, such as arid conditions, make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of PENDIM H₂O HERBICIDE include:

coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought, and heavy rainfall soon after application.

- When PENDIM H₂O HERBICIDE is used in tank mix or sequential combinations, refer to labels of other herbicides traditional rotational crop restrictions
- Restrictions for rotational cropping after the use of PENDIM H₂O HERBICIDE are dependent on the application use rate of PENDIM H₂O HERBICIDE in the primary crop. The user should thoroughly read the following restrictions to determine the rotational crops for their specific situations, according to application use rate.

Rotational Crop Restrictions Following Applications of PENDIM H_2O to Field and Row Crops

- 1. <u>Application Rate less than or equal to 4.3 pts/A (2.0 lbs ai/A):</u>
 - a. Crops which are labeled for preplant incorporated application may be planted the same season in which

PENDIM H₂O HERBICIDE was applied. b.Sugar beets, Red beets and Spinach

To avoid crop injury, **DO NOT** plant sugar beets, red beets or spinach for 12 months following a spring application of **PENDIM H₂O HERBICIDE** or 14 months following a fall application of **PENDIM H₂O HERBICIDE**.

These crops should not be planted for 18 months following a spring application of **PENDIM H₂O HERBICIDE** or 20 months following a fall application of **PENDIM H₂O HERBICIDE** if rainfall or irrigation was not sufficient to produce a crop.

To ensure thorough mixing of soil prior to planting sugar beets, red beets and spinach, land should be plowed using a moldboard plow to a depth of 12 inches.

c. Proso millet, Sorghum (milo), and Annual or Perennial grass crops or mixtures

Proso millet, sorghum (milo), and annual or perennial grass crops or mixtures should not be planted for 10 months after a spring application of **PENDIM H₂O HERBICIDE** or 12 months after a fall application of **PENDIM H₂O HERBICIDE** except in the following conditions:

In the states of Minnesota, North Dakota and South Dakota, these crops should not be planted for 18 months following a spring application of PENDIM H₂O HERBICIDE or 21 months following a fall application of PENDIM H₂O HERBICIDE.

To avoid the possibility of crop injury in areas that receive less than 20 inches of rainfall or irrigation to produce a crop, these crops should not be planted for 18 months following a spring application of **PENDIM H₂O HERBICIDE** or 20 months following a fall application of **PENDIM H₂O** if rainfall or irrigation was not sufficient to produce a field or row crop.

d.Wheat and Barley in Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming

Wheat and barley may be planted 4 months after an application of **PENDIM** H₂O **HERBICIDE** applied at rates less than or equal to 3.2 pts/A (1.52 lbs ai/A) with normal rainfall and/or irrigation. Following harvest of furrow-irrigated crops, thoroughly mix the soil by plowing or deep disking to minimize the potential for herbicide carryover to the following crop. For **PENDIM** H₂O **HERBICIDE** application rates greater than 3.2 pts/A but less than or equal to 4.0 pts/A, follow the wheat and barley crop rotation guidelines listed in e. Wheat and Barley in other states.

e. Wheat and Barley in all other states Wheat and barley may be planted 4 months after an application of **PENDIM** H_2O **HERBICIDE**, except under the following conditions:

If less than 12 inches of rainfall or overhead irrigation was received between application and rotational crop planting, wheat should not be planted before 12 months after a spring application of **PENDIM H₂O HERBICIDE** or 14 months after a fall application of **PENDIM H₂O HERBICIDE**.

In dryland areas and/or areas where irrigation is necessary to produce the crop treated with **PENDIM H₂O HERBICIDE**, **DO NOT** plant winter wheat or barley as a follow crop failure/destruction occurs and land is fallowed during the summer.

f. All Other Rotational Crops Not Specifically Addressed Above

Crops, other than those to which **PENDIM** H_2O **HERBICIDE** may be applied as a preplant incorporated treatment, may be planted the year following application of **PENDIM** H_2O , **HERBICIDE** except under the following condition:

If rainfall or irrigation was not sufficient to produce a crop, delay planting for 18 months following a spring application of **PENDIM H₂O HERBICIDE** or 20 months following a fall application of **PENDIM H₂O HERBICIDE**.

- Application Rate greater than 4.8 pts/A (2.0 lbs. ai/A): In the growing season following application of PENDIM H₂O HERBICIDE to field and row crops at greater than 4.8 pts/A, plant only those crops for which PENDIM H₂O HERBICIDE is labeled for preplant incorporated treatment or crop injury may occur. DO NOT plant other crops for 24 months.
- II. Rotational Crop Restrictions Following Applications of PENDIM H2O HERBICIDE to Orchard, Grove, and Vineyard Crops

In the growing season following application of **PENDIM** H_2O **HERBICIDE** to bearing fruit and nut trees, plant only those crops for which **PENDIM** H_2O **HERBICIDE** is labeled for pre-plant incorporated treatment or crops injury may occur. **DO NOT** rotate to other crops (except for nut crops, fruit trees, or grapes) for 24 months following a **PENDIM** H_2O **HERBICIDE** application to bearing fruit or nut trees.

Use Area



Crop Specific Information

Crop Injury Disclaimer: PENDIM H₂O HERBICIDE use may result in crop injury, loss or damage to certain crops under a number of conditions, including but not limited to agronomic, cultural, mechanical and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of PENDIM H₂O HERBICIDE even when directions for use are followed completely. The user or grower must take all such risks into consideration before deciding to apply the product. **REPAR** recommends testing on a small portion of the target crop to determine if damage is likely to occur. Each grower who is considering the product for such use should test PENDIM H₂O HERBICIDE to determine its suitability. A grower should use PENDIM H2O HERBICIDE only to the extent that in his sole opinion the benefit of PENDIM H₂O HERBICIDE use outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield, including but not limited to, insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain, heat, or cold), lack of or excessive moisture, crusting, fertility, or hardpans. Risk of loss or damage to crops may be associated with the use of **PENDIM H₂O HERBICIDE** and contribute to poor stands due to failure of crop to emerge, swelling of roots or other belowground plant parts, less vigorous plant growth and development, and reduction in yield potential. **PENDIM** H_2O **HERBICIDE** may also cause injury to sensitive rotational crops.

ALFALFA Grown for Forage, Hay or Seed

PENDIM H₂O HERBICIDE may be applied by ground, air, chemigation flooded basin irrigation systems, or on dry bulk fertilizer.

Use Methods, Timings and Rates

Established Alfalfa for Forage/Hay (defined as alfalfa planted in the fall or spring that has gone through a first cutting/mowing). Uniformly apply **PENDIM H**₂**O HERBICIDE** at a broadcast rate of 1.2 to 4.8 quarts per acre prior to weed emergence. Applications can be made in the fall after the last mowing/cutting, during winter domancy, in the spring, or between cuttings. Applications should be made prior to the alfalfa reaching 6 inches in regrowth.

Established Alfalfa Grown for Seed Production (defined as alfalfa planted in the fall or spring that has gone through a summer season of cutting/mowing): Uniformly apply **PENDIM** H_2O **HERBICIDE** at a broadcast rate of 1.0 to 4.0 quarts per acre prior to weed emergence in one of the following ways: 1. Apply to dormant established alfalfa.

2. Apply before alfalfa exceeds 10 inches in height

1435

after first mowing/beating.

3.Once the alfalfa reaches 10 inches in height or if the alfalfa has been mowed/beaten two or more times, **PENDIM H₂O HERBICIDE must be applied with drop nozzles** directing the spray so that there is little to no contact with the foliage.

Seedling Alfalfa (defined as alfalfa planted in the fall or spring which has NOT gone through a cutting/mowing): Uniformly apply PENDIM H₂O HERBICIDE at a broadcast rate of 1.0 to 2.0 pints per acre prior to weed emergence. Applications can be made once the seedling alfalfa has reached the second trifoliate stage of growth. Applications should be made prior to the alfalfa reaching 6 inches in growth.

Alfalfa Stand Establishment: Apply PENDIM H_2O HERBICIDE at a broadcast rate of 1.0 to 1.5 pints per acre as a preplant incorporated or preemergence treatment in direct-seeded alfalfa. Some crop stand reduction and stunting may occur with this use of PENDIM H_2O HERBICIDE; however, reduced weed competition will allow establishment of a quality stand. Use the lower rates on coarse-texture soil or in lower rainfall areas (receiving less than 20 inches of rainfall and irrigation a year).

- Preplant incorporated: Uniformly incorporate PENDIM H₂O HERBICIDE into the top 2 to 3 inches of the final seedbed prior to planting.
- Preemergence: Apply directly after drill seeding alfalfa. Alfalfa should be planted into a seedbed that is firm and free of clods.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions in the general section covering **Chemigation** in **Spraying Instructions**.

Flood, Flooded Basin and Gravity Flow Irrigation Systems

PENDIM H₂O HERBICIDE may be applied in flood, flooded basin and gravity flow irrigation systems. Follow all recommendations, special instructions and precautions about flood, flooded basin, and gravity flow irrigation systems in the **Spraying Instructions** of this label.

Restrictions and Limitations

- DO NOT exceed 4.0 quarts of PENDIM H₂O HERBICIDE per acre in any one crop season.
- Follow all precautions and restrictions on the labels of all products applied in combination with PENDIM H₂O HERBICIDE.

Always follow the most restrictive label.

- DO NOT apply PENDIM H₂O HERBICIDE less than 50 days prior to alfalfa harvest for forage or hay.
- DO NOT apply PENDIM H₂O HERBICIDE less than 90 days prior to alfalfa harvest for seed.
- Some stunting and chlorosis of the alfalfa may occur with postemergence applications.
- Applications made after the alfalfa exceeds 6 inches in height may result in poor weed control due to possible reduced spray coverage to the

soil.

ARTICHOKE

PENDIM H₂O HERBICIDE may be applied by ground or air.

With a single application, uniformly apply **PENDIM** H_2O **HERBICIDE** to artichoke up to 8.2 pints per acre as a broadcast spray to the soil surface at least 200 days prior to harvest. Application must be made pretransplant to artichoke, at no less than 1 to 2 days prior to transplanting.

Restrictions and Limitations

- DO NOT apply postemergence over the top of or to foliage of artichoke because severe injury may occur.
- DO NOT apply more than 8.2 pints per acre per season
- · DO NOT apply within 200 days of harvest.
- DO NOT feed forage or graze livestock in treated fields.

ASPARAGUS

PENDIM H₂O HERBICIDE may be applied by ground or air.

With a single application, uniformly apply **PENDIM** H_2O **HERBICIDE** to asparagus up to 8.2 pints per acre as a broadcast spray to the soil surface at least 14 days before the first harvest.

Application must be made prior to spear emergence or remove emerged spears prior to making the application. If asparagus is grown on sandy soils, **DO NOT** apply **PENDIM H₂O HERBICIDE** at more than 2.4 pts/A.

Restrictions and Limitations

- DO NOT apply postemergence over the top of emerged spears as severe injury may occur.
- DO NOT apply more than 8.2 pints per acre per season
- · DO NOT apply within 14 days of harvest.
- DO NOT feed forage or graze livestock in treated fields.
- · DO NOT apply by chemigation methods.

BEARING FRUIT AND NUT TREES

PENDIM H_2O **HERBICIDE** may be applied in the following individual crops within the fruit tree and nut tree crop groupings.

Citrus Fruit Crop Grouping		
calamondin	lime	
citrus citron	mandarin (tangerine)	
citrus hybrids	orange (sweet and sour)	
grapefruit	pummelo	
kumquat	Satsuma mandarin	
lemon	tangelo	

 7		

Tree Nuts Crop Grouping			
almond beach nut Brazil nut butternut cashew	chestnut chinquapin filbert (hazelnut) hickory nut macadamia nut	pecan pistachio walnut	

Use Methods, Timings and Rates

PENDIM H₂**O** may only be applied by ground, chemigation, or flood, flooded basin and gravity flow irrigation systems.

PENDIM H₂O HERBICIDE may be applied either in a single application or sequentially with an interval of 30 days or more. Apply **PENDIM HERBICIDE** at between 2.0 to 6.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy, (see chart following) per application, but not to exceed a total of 4.2 quarts/A per year in pome, stone and other fruit trees, and not to exceed a total of 6.3 quarts/A per year in citrus and nut trees.

PENDIM H₂O HERBICIDE Use Rate per Acre

Low Use Rate	2.0 quarts	
High Use Rate	4.0 to 6.3 quarts	

Ground Applications (Bearing)

PENDIM H₂O HERBICIDE may be applied surface incorporated or (surface) preemergence.

Apply **PENDIM H₂O HERBICIDE** as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the trees and/or in areas between rows. **DO NOT** apply over the top of trees with leaves or buds or fruit. Contact by the spray mixture with leaves, shoots, or buds may cause injury.

Ground Applications (Nonbearing)

PENDIM H₂O HERBICIDE may be applied for preplant incorporated, preplant surface, surface incorporated or preemergence weed control in several nonbearing fruit and nut tree crops. **PENDIM H₂O HERBICIDE** may be used before or after transplanting the nonbearing crops.

Preplant Surface. Prior to transplanting, uniformly apply with ground equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Preplant Incorporated. Uniformly apply **PENDIM H₂O HERBICIDE** prior to transplanting but before weeds emerge. Incorporate **PENDIM H₂O HERBICIDE** to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid foot contact with treated soil when placing transplants into the hole or injury may occur.

Preemergence. Applications may be in a band or broadcast.

Chemication Applications.

PENDIM H_2O may be applied through sprinkler irrigation and drip irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label. **DO NOT** apply **PENDIM** H_2O **HERBICIDE** -treated irrigation water over top of trees with leaves or buds or fruit. Contact with leaves, shoots, or buds by spray mixture may cause injury.

Flood, Flooded Basin and Gravity Flow Irrigation Systems

PENDIM H₂O HERBICIDE may be applied in flood, flooded basin and gravity flow irrigation systems. Follow all recommendations, special instructions and precautions about flooded basin irrigation in the **Spraying Instructions** section of the label.

Restrictions and Limitations

- DO NOT apply more than 4.2 quarts of PENDIM H₂O HERBICIDE per acre per year in pome, stone and other fruit trees.
- DO NOT apply more than 6.3 quarts of **PENDIM** H₂O HERBICIDE per acre per year in citrus and nut trees.
- · DO NOT apply by air.
- DO NOT feed forage or graze livestock in treated groves or orchards.
- DO NOT apply within 1 day of harvest of citrus fruit.
- DO NOT apply within 60 days of harvest of pome and stone fruit or other tree fruit.
- DO NOT apply within 60 days of harvest of nuts, except almonds.
- DO NOT apply within 120 days of harvest of almonds.
- DO NOT apply to newly seeded nursery stock.

BEARING AND NONBEARING GRAPE

PENDIM H₂O HERBICIDE may be only applied by ground, chemigation, or flood, flooded basin and gravity flow irrigation systems.

Use Methods, Timings and Rates

PENDIM H₂O HERBICIDE may be applied either in a single application or sequentially with an interval of 30 days or more. Uniformly apply **PENDIM H₂O HERBICIDE** in bearing grape vineyards up to 6.3 quarts per acre dePENDIMng on the grower's weed control program, level of weed infestation, and desired use strategy (see chart following).

PENDIM H₂O HERBICIDE Use Rate per Acre

Low Use Rate	3.2 quarts
High Use Rate	6.3 quarts

PENDIM H₂O may be applied anytime after fall harvest, during winter dormancy, and in the spring.

Ground Applications (Bearing)

PENDIM H₂O HERBICIDE may be applied surface incorporated or (surface) preemergence.

Apply **PENDIM** H₂O **HERBICIDE** as a broadcast or banded treatment using ground equipment before weed emergence. Apply the spray directly to the ground beneath the grape vines and/or in areas between rows. **DO NOT** apply over the top of grape vines with leaves or buds or fruit. Contact with leaves, shoots, or buds by the spray mixture may cause injury.

Ground Applications (Nonbearing)

PENDIM H₂O HERBICIDE may be applied for preplant incorporated, preplant surface, surface incorporated or preemergence weed control in nonbearing vineyards. **PENDIM H₂O** may be used before or after transplanting.

Preplant surface. Prior to transplanting, uniformly apply with ground equipment. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Preplant Incorporated. Uniformly apply **PENDIM H₂O HERBICIDE** prior to transplanting but before weeds emerge. Incorporate **PENDIM H₂O HERBICIDE** to a depth of 1 to 2 inches. Application and incorporation must be made prior to transplanting to avoid mechanical injury to the crop. Avoid root contact with treated soil when placing transplants into the hole or injury may occur.

Preemergence. Applications may be in a band or broadcast.

Nonbearing Grape

For Newly Transplanted and One-year-old Grapevines:

- · Apply only to dormant grapevines.
- DO NOT apply if buds have started to swell. Application after buds have started to swell may result in leaf distortion.
- DO NOT apply to newly transplanted trees or vines until ground has settled and no cracks are present.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler

irrigation and drip irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label. **DO NOT** apply **PENDIM H₂O HERBICIDE** treated irrigation water over the top of grape vines with leaves, or buds, or fruit.

Flood, Flooded Basin, and Gravity Flow Irrigation Systems

PENDIM H₂O HERBICIDE may be applied in flood, flooded basin, and gravity flow irrigation systems. Follow all recommendations, special instructions and precautions about flooded basin irrigation in the **Spraying Instructions** section of this label.

Restrictions and Limitations

- DO NOT apply over the top of grape vines with leaves, or buds, or fruit.
- DO NOT apply by air.
- DO NOT apply more than 6.3 quarts per acre per year (a single growing season).
- · DO NOT apply within 90 days of harvest of fruit.
- DO NOT feed forage or graze livestock in treated vineyards.

BRASSICA HEAD AND STEM VEGETABLES

PENDIM H2O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied to the following Brassica head and stem vegetables: Broccoli Chinese Broccoli

Brussels sprouts Cabbage Chinese cabbage (napa) Chinese mustard Cabbage Cauliflower Cavalo broccolo Kohlrabi

Use Methods, Timings and Rates

With a single application, uniformly apply **PENDIM** H_2O **HERBICIDE** to Brassica head and stem vegetables up to 2.1 pints per acre as a broadcast spray to the soil surface at pretransplant time, or as a broadcast postemergence foliar spray, or as a postemergence-directed spray between vegetable rows. Apply to 2-leaf to 4-leaf vegetables transplants at 1 to 3 days after transplanting, or to the 2-leaf to 4-leaf stage of direct-seeded vegetable plants. **PENDIM** H₂O **HERBICIDE** should be applied prior to weed emergence. Emerged weeds will not be controlled by this treatment.

Restrictions and Limitations

- DO NOT apply more than 2.1 pints per acre per season
- DO NOT apply within 60 days before broccoli,

- DO NOT apply 70 days before cabbage, Chinese Cabbage (napa) and Chinese Mustard Cabbage harvest
- DO NOT feed forage or graze livestock in treated fields.
- DO NOT apply via chemigation methods.

CARROTS

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation.

Use Methods, Timings and Rates

Preemergence. Make a single broadcast application by ground or by air or by chemigation at 2.0 pints per acre of **PENDIM** H_2O **HERBICIDE** as a post-plant treatment prior to emergence of the crop and before weed emergence. Apply as a preemergence treatment within 2 days after planting.

Layby. PENDIM H₂O HERBICIDE may be applied only by ground equipment at layby (last mechanical cultivation) at 2.0 pints per acre as a directed spray to the soil between rows. PENDIM H₂O HERBICIDE should be applied prior to weed emergence. Emerged weeds will not be controlled by this treatment. DO NOT allow the spray to contact carrot plants or injury may occur. DO NOT apply layby applications by chemigation or by air.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label. **DO NOT** allow **PENDIM** H₂O HERBICIDE –treated irrigation water to contact carrot plants.

DO NOT apply tank mixtures through any type of irrigation system unless the label instructions on chemigation of all products are followed.

Restrictions and Limitations

- DO NOT apply more than 2.0 pints per acre per season.
- · DO NOT apply within 60 days of harvest
- DO NOT feed forage or graze livestock in treated fields.
- DO NOT apply as a broadcast spray over top of carrots or crop injury may result.
- DO NOT apply layby applications by chemigation or by air.

CARROTS GROWN FOR SEED PRODUCTION

PENDIM H_2O **HERBICIDE** may be applied only by layby with ground equipment.

Use Methods, Timings and Rates

Last Cultivation (Layby). Apply PENDIM H_2O HERBICIDE following the last normal mechanical cultivation (layby) at a rate of 1.0 to 4.0 pints per acre (on a broadcast basis). Uniformly apply as a directed spray to the soil between rows. DO NOT allow the spray to contact carrot plants or injury may occur. Use protective shields to avoid contact with carrot foliage. Use properly calibrated and accurate nozzles and equipment. Layby applications can be applied to carrots previously treated with herbicides registered in/on carrots. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in carrots and for follow crop restrictions.

Restrictions and Limitations

- DO NOT apply as a broadcast spray over top of carrots or crop injury may result.
- DO NOT apply layby applications by chemigation or by air.
- DO NOT apply within 60 days before carrot seed harvest.
- DO NOT feed, forage or graze livestock in treated fields.
- DO NOT harvest carrots for food or feed use.

Special Crop Use Restrictions

The pesticide applicator, the producer of the crop, and the seed conditioner must be aware that use of this product according to this labeling is deemed a nonfeed/ nonfood use. If the applicator of this pesticide is not the producer, the applicator must provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product, or cause the product to be used on a field they operate, shall provide a copy of this pesticide label to the seed conditioner.

Consequently, no portion of this carrot seed crop, including but not limited to green chop, hay, pellets, meal, whole seed, cracked seed, roots, bulbs, foliage and seed screenings, may be used or distributed for food or feed purposes.

Processed carrot seed from a field treated with this product must bear a specific tag or conspicuous container labeling, or if shipped in bulk, on the shipment invoice or bill of lading, with the following statement: "Not for human consumption or animal feed." All seed screenings from seed processing shall be disposed of in such a manner that the screenings cannot be distributed or used for human food or animal feed purposes.

The seed conditioner shall keep records of screening disposal for three years from the date of disposal and shall furnish the records immediately upon request. Conditioner disposal records shall consist of documentation of on-farm disposal, disposal at a controlled dumpsite, incinerator, composter or other equivalent disposal site and shall include the lot numbers, amount of material disposed of, the grower(s), and the date of disposal.

CORN (Field, Pop, Field Seed, Pop Seed, Fresh Sweet)

PENDIM H2O HERBICIDE may be applied by ground, air or chemigation.

PENDIM H2O HERBICIDE may be applied in conventional, minimum, or no-till as a preemergence, postemergence, or postemergence incorporated (CULTI-SPRAY) application in field corn.

PENDIM H₂O HERBICIDE may be applied in conventional tillage as a preemergence or postemergence application in field corn, filed sweet corn, popcorn, popcorn seed corn, and fresh sweet corn.

Regardless of tillage system, plant corn at least 1-1/2 inches deep and completely cover with soil.

In conventional tillage systems, plant into a seedbed that is firm and free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the corn seed.

In no-till systems, utilize a no-till planter that is capable of planting through crop residue. The use of no-till planters under conditions that do not allow good soil coverage of the corn seed can result in reduced crop stand or injury if **PENDIM H₂O HERBICIDE** contacts the germinating corn seed. Check equipment to ensure good seed coverage.

PENDIM H₂O HERBICIDE or **PENDIM H₂O HERBICIDE** tank mix combination treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received after application. If cultivation is necessary because of soil crusting or weed germination, use shallow tillage and make certain corn seeds are below the tilled area.

Additional Weeds Controlled. In addition to the weeds listed in Table 2, PENDIM H₂O HERBICIDE will control the following weeds in corn with CULTI-SPRAY application: wild proso millet and shattercane.

Use Methods and Timings

Preemergence. Apply after planting but before weeds and crop emerge.

Postemergence. Apply postemergence until field corn is 30 inches tall (20 inches to 24 inches tall for pop, seed and fresh sweet corn) or in the V8 growth stage, whichever is more restrictive. If the corn canopy prevents applications from reaching the soil, use drop nozzles and apply as a directed spray.

CULTISPRAY. Apply **PENDIM** H_2O HERBICIDE alone or **PENDIM** H_2O plus atrazine when field corn is at least 4 inches tall until last cultivation (layby). **PENDIM** H_2O **HERBICIDE** plus atrazine must be applied before the field corn reaches 12 inches in height.

DO NOT exceed 1.2 Ibs ai per acre of atrazine, as specified on the atrazine label. Under situations of low rainfall or soil moisture, when deep germinating weeds such as shattercane or field sandbur are anticipated, mechanical incorporation will provide best results. If cultivation is needed after application and incorporation of **PENDIM H**₂O **HERBICIDE**, the depth of cut should be no deeper than the depth of cut used to incorporate.

Chemigation Applications

PENDIM H₂O may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

Use Rates

Preemergence or Postemergence Applications

Soil	Matter		
Texture	< 1.5% (pts/A)	1.5 to 3.0 % (pts/A)	> 3.0% (pts/A)
Course	2.0	3.0	3.0
Medium	3.0	3.0	4.0
Fine	3.0	4.0	4.0

CULTI-SPRAY Applications - Field Corn Only

Soil Texture	Southern States ¹ pts/A	Northern States ¹ pts/A	
Coarse	1.5	2.0	
Medium	2.0	3.0	
Fine	3.0	3.0	
'See Restri states	ctions and Limitations	s for map of specific	

Restrictions and Limitations

- DO NOT apply **PENDIM** H₂O **HERBICIDE** in reduced, minimum or no-til fresh sweet corn, seed corn or popcorn.
- DO NOT apply PENDIM H₂O HERBICIDE in no-till in California.
- DO NOT apply preplant incorporated.
- DO NOT apply postemergence in liquid fertilizer.
- Livestock can graze or be fed forage from treated corn after 21 days following application.
- **PENDIM** H₂O **HERBICIDE** may be applied sequentially in a single crop season as long as the total use rate applied in the crop season does not exceed the highest rate per acre for any given soil type.

COTTON

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation in conventional, minimum, stale seedbed, or no-till as a preplant surface, preplant incorporated, preemergence, layby, or postemergence application in cotton.

Preplant surface, preemergence, and layby treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received after application, use shallow tillage (rotary hoe or light harrow) and make sure cotton seeds are below tilled area. The use of a postemergence herbicide treatment may be required to control weed escapes at planting or following cotton emergence.

Additional Weeds Suppressed. In addition to the weeds listed in Table 2, **PENDIM H₂O HERBICIDE** will suppress Russian thistle in the state of Arizona.

Use Methods and Timings

1. Preplant Surface. Apply PENDIM H_2O HERBICIDE up to 15 days prior to planting. Apply PENDIM H_2O HERBICIDE tank mixes and sequential programs as specified under tank mix section.

2. Preplant Incorporated. Apply PENDIM H_2O HERBICIDE up to 60 days prior to planting and incorporate. Apply PENDIM H_2O HERBICIDE tank mixes and sequential programs as specified under the tank mix section.

3. Preemergence. Apply **PENDIM** H_2O at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply **PENDIM** H_2O tank mixes and sequential programs as specified under the tank mix section.

4. Preplant Incorporated followed by Preemergence.

Apply **PENDIM** H_2O up to 60 days prior to planting and incorporate. Apply overlay application of **PENDIM** H_2O at planting or up to 2 days after planting. Total amount of **PENDIM** H_2O applied per acre cannot exceed the highest given rate for a given soil type. Preplant incorporated and preemergence applications of may **PENDIM** H_2O be applied with the labeled tank mix herbicide(s).

5. Layby Application (at last cultivation). Apply PENDIM H_2O HERBICIDE directly to the soil between rows as a directed spray following the last normal cultivation (layby). Layby applications can be applied in cotton previously treated with PENDIM H_2O HERBICIDE or any herbicide(s) registered for use in cotton. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in cotton, and for followcrop restrictions. The total amount of PENDIM H_2O HERBICIDE supplied per acre per season cannot exceed the highest labeled rate for a given soil type. Glyphosatecontaining products may be applied with PENDIM H_2O HERBICIDE at layby in contton with the Roundup Ready[®] gene. DO NOT apply glyphosate-containing products at layby on non-Roundup Ready cotton.

6. Postemergence. PENDIM H_2O HERBICIDE may be applied by ground or air as a broadcast over-the-top postemergence application in cotton.

Postemergence treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received after application. Applications before weeds germinate or after clean cultivation to remove existing weeds are necessary because **PENDIM H₂O HERBICIDE** will not

control weeds that are emerged at time of application. The use of a postemergence herbicide treatment is required to control emerged weeds.

PENDIM H₂O may be used alone or tank mixed with Roundup PowerMAX™ herbicide (on Roundup Ready[®] cotton or Roundup Ready[®] Flex cotton), Roundup WeatherMAX[®] herbicide (on Roundup Ready cotton or Roundup Ready Flex cotton) or Ignite[®] herbicide (on LibertyLink[®]cotton). When tank mixing PENDIM H2O HERBICIDE with another herbicide product, always follow the most restrictive labeling. DO NOT tank mix and apply over-the-top postemergence with Dual®herbicide. Staple[®]herbicide, Sequence® herbicide. or Cotoran[®]herbicide. Caparol[®]herbicide Drv ammonium sulfate (AMS) at 17 lbs/100 gallons of spray solution must be used when tank mixing PENDIM H₂O HERBICIDE with Roundup PowerMax or Roundup WeatherMAX. Liquid AMS may also be used, but most be used at an equivalent rate to 17 lbs of dry weight AMS/100 gallons of spray solution. A nitrogen replacement should not be used with this tank mix unless specified as acceptable from REPAR in writing. The recommended mixing order is as follows: fill tank to at least 1/2 full with water; then add the following in order: AMS. PENDIM H₂O HERBICIDE. Roundup®herbicide; then fill the tank to capacity with water.

Postemergence applications of PENDIM H₂O HERBICIDE on Roundup Ready cotton or Roundup Ready Flex cotton only

Note: The instructions provided for the use of **PENDIM** H₂O HERBICIDE on Roundup Ready cotton or Roundup Ready Fled cotton are specific to and should only be used with varieties designated as Roundup Ready cotton or Roundup Ready Flex cotton.

Consult and follow the Roundup **PowerMAX** or **Roundup WeatherMAX** labels for their respective rates, application methods, precautions and application timing restrictions.

Roundup Ready Cotton

Tank mixing PENDIM H_2O HERBICIDE with Roundup PowerMAX or Roundup WeatherMAX (in water): Apply PENDIM H_2O broadcast postemergence over the top of cotton after cotton reaches the 4- to 5-leaf stage of growth. DO NOT apply prior to reaching the 4-leaf cotton stage or past the 5-leaf stage or significant crop injury and/or yield loss may occur.

Roundup Ready Flex Cotton

Tank mixing PENDIM H_2O HERBICIDE with Roundup PowerMax or Roundup WeatherMAX (in water): Apply PENDIM H_2O HERBICIDE broadcast postemergence over the top of cotton after cotton reaches the 4-leaf stage of growth, but not after the

20 35

8-leaf stage of growth. Over-the-top applications made before the 4-leaf stage or after the 8-leaf stage of development may result in crop injury and/or yield loss.

Postemergence applications of **PENDIM** H₂O HERBICIDE on LibertyLink cotton

Note: The instructions provided for the use of **PENDIM** H₂O HERBICIDE on LibertyLink cotton are specific to and may only be used with varieties designated as LibertyLink cotton.

Consult and follow the **Ignite** label for the respective rates, application method, precautions and application timing restrictions.

LibertyLink Cotton

Tank mixing PENDIM H_2O HERBICIDE with Ignite (in water): Apply PENDIM H_2O HERBICIDE broadcast postemergence over the top of cotton after cotton reaches the 4-leaf stage of growth, but not after the 8-leaf stage of growth. Over-the-top applications made before the 4-leaf stage or after the 8-leaf stage of development may result in crop injury and/or yield loss.

Postemergence applications of PENDIM H₂O HERBICIDE ALONE to all cotton (in water)

Apply **PENDIM H₂O HERBICIDE** broadcast postemergence over the top of cotton after cotton reaches the 4-leaf stage of growth, but not after the 8-leaf stage of growth. Over-the-top applications made before the 4-leaf stage or after the 8-leaf stage of development may result in crop injury and/or yield loss.

Over-the-top postemergence applications of **PENDIM** H_2O **HERBICIDE** can be applied in cotton previously treated with at-planting soil applications of **PENDIM** H_2O **HERBICIDE** or any other soil-applied herbicide(s) registered for use in cotton. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in cotton and for follow crop restrictions. Follow the most restrictive label instructions when using products in combination with soil-applied **PENDIM** H_2O **HERBICIDE**.

Precautions: Postemergence applications of **PENDIM** H₂O **HERBICIDE** may cause temporary growth reduction and/or leaf discoloration or malformation of cotton following application.

DO NOT apply over the top in fluid fertilizer.

DO NOT apply in tank mix with any adjuvant, surfactant, oil, or other pesticide (except for cotton insecticides).

DO NOT apply in any manner except as described in this label, or crop injury and/or yield reduction may occur.

DO NOT apply if cotton is under stress (including stress related to previous pesticide treatments, poor fertilization, environmental conditions and/or pest damage) at time of application. If cotton is under stress (including stress related to previous pesticide treatments, poor fertilization, environmental conditions and/or pest damage), **PENDIM H₂O HERBICIDE** may retard cotton recovery and/or adversely affect yield.

Chemigation Applications

PENDIM H₂O may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

Fall Application. PENDIM H_2O HERBICIDE may be applied for weed control in cotton in the fall, after October 15 (up to 140 days prior to planting cotton) in Arizona, California, Louisiana, Mississippi, New Mexico, Oklahoma and Texas. Apply **PENDIM** H_2O **HERBICIDE** at the broadcast rate of 2.0 pints per acre on coarse or medium soils and 3.0 pints per acre on fine soils.

Use Rates

Soil Texture	Conventional or Minimal Tillage (pts/A)	No- Till ² (pts/A)
Coarse	1.0 to 2.01	2.0
Medium	2.0	3.0
Fine	3.0	4.0

California. ²Not recommended for soils of more than 3% organic matter.

Postemergence Applications of PENDIM H₂O HERBICIDE Alone or in Tank Mix with Roundup PowerMAX[™] herbicide, or Roundup WeatherMAX[®] herbicide, or Ignite[®] herbicide

Soil Texture	Conventional Minimum Or No Tillege pts/A
Coarse	1.0 to 2.0
Medium	1.5 to 2.0
Fine	2.0

Restrictions and Limitations

- DO NOT apply PENDIM H2O HERBICIDE in no-till in California.
- DO NOT exceed the highest seasonal rate per acre for any given soil type.
- DO NOT exceed 2.0 pts/A of **PENDIM H₂O HERBICIDE** 0.95 lb active ingredient/A) when applied postemergence to cotton for any given soil type.
- Preharvest Interval (PHI) is 60 days between the last PENDIM H₂O HERBICIDE application and harvest.
- In treated cotton fields, forage may be fed to or grazed by livestock.
- DO NOT exceed the cumulative maximum seasonal rate of 4.2 pts of PENDIM H₂O HERBICIDE per acre (2 lbs active ingredient/A) for combined preplant/preemergence and postemergence applications.

EDIBLE BEANS

Dry(The dry beans, navy, great northern, red kidney, black turtle, cranberry and small white) Lima, Snap, Chickpeas (Garbanzo Beans), Southern Peas (Cowpeas), and Sweet Lupines

PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may only be applied (fall) preplant surface or preplant incorporated in chickpeas (garbanzo beans), dry beans, lima beans, snap beans, and Southern peas (cowpeas). **PENDIM H₂O HERBICIDE** may be applied (fall) preplant surface or preplant incorporated or preemergence in sweet lupines.

Use Methods and Timings

Preplant Surface and Preplant Incorporated (fall applications in Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming)

Apply **PENDIM** H₂**O HERBICIDE** and incorporate (rainfall, irrigation or mechanically) in late fall prior to planting edible beans (chickpeas [garbanzo beans], dry beans [including navy, great northern, red kidney, black turtle, cranberry, small white type etc.], lima beans, snap beans, Southern peas [cowpeas], and sweet lupines) the following spring. Apply **PENDIM** H₂**O HERBICIDE** in the late fall when soil temperatures are $45^{\circ}F$ or below but before the ground freezes.

DO NOT apply when the air temperature is below 45°F.

Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected because factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Preplant Incorporated. Apply up to 60 days prior to planting and incorporate.

Preemergence. Apply only to sweet lupines at planting or up to 2 days after planting. Apply to a seedbed that is firm and fee of clods.

Use Rates

Preplant	Surface	and	Preplant	Incorporated	(fall)
Applicatio	on ¹				

Soil Texture	Broadcast Rate <3.0% Organic Matter (pts/A)	Broadcast Rate >3.0% Organic Matter (pts/A)
Coarse	2.0	2.0
Medium	2.5	3.0
Fine	3.0	3.0
¹ For use in Ida	aho, Minnesota, Mont akota, Washington and	ana, North Dakota

Preplant Incorporated and Preemergence

1000	Southern	Northern States
Soil	States	<3.0% Organic

(pts/A)	Matter>3.0% pts/A	
1.5	2.0	2.0
2.0	2.5	3.0
3.0	3.0	3.0
	1.5 2.0 3.0	pts/A 1.5 2.0 2.0 2.5

State-specific Instructions

Idaho, Oregon, Washington

PENDIM H₂O HERBICIDE may be applied postplant preemergence to chickpeas in Idaho, Oregon, and Washington. Application must be made within 2 days of planting. Apply up to but not to exceed 1.5 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. Under certain environmental conditions, including cool temperatures, excessive moisture after application and wet soil conditions may result in delayed emergence and stunting with **PENDIM H₂O HERBICIDE** use in chickpeas. Adequate rainfall or irrigation after application prior to weed seedling emergence will provide the most effective weed control.

Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Oregon, Washington, and Wyoming

Apply **PENDIM H₂O HERBICIDE** by ground as a postplant preemergence treatment to dry beans grown under sprinkler irrigation in Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Oregon, Washington, and Wyoming. Dry beans must have a minimum planting depth of 2 inches. Prior to applying **PENDIM** H₂O HERBICIDE to dry beans, growers should check with their local seed company or seed supplier for sensitive varieties and to verify the selectivity of PENDIM H₂O HERBICIDE on the grower's specific dry bean variety. **PENDIM H₂O HERBICIDE** applications made postplant preemergence to dry beans must be immediately followed by 0.50 to 0.75 inch water from overhead irrigation/rainfall. PENDIM H₂O HERBICIDE application must be made within 1 to 4 days of planting and up to, but no to exceed, 2.0 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. DO NOT apply as a chemigation application. DO NOT apply PENDIM H₂O HERBICIDE in tank mix with Permit[®] herbicide or Valor[®] herbicide as a preemergence application to dry beans due to unacceptable crop response. Under certain environmental conditions including cool temperatures, excessive moisture after application and wet soil conditions may result in crop injury, delayed emergence, and/or stunting with PENDIM H₂O HERBICIDE use in dry beans. Adequate rainfall or irrigation after application prior to weed seedling emergence will provide the most effective weed control.

Restrictions and Limitations

• DO NOT feed lupine hay and forage or graze

- DO NOT apply PENDIM H₂O HERBICIDE more than once per cropping season.
- DO NOT apply in any type of irrigation system.

	FALL	WC

PENDIM H_2O **HERBICIDE** may be applied to fallow ground by ground, air, or chemigation.

PENDIM H₂**O HERBICIDE** may be applied to fallow ground following crop harvest as a planned residual treatment to control labeled broadleaf and grass weeds as they germinate.

Use Methods, Timings and Rates

Apply as a broadcast spray at rates up to, but not to exceed, 3.0 pts/A of **PENDIM H**₂**O HERBICIDE. EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT. PENDIM H**₂**O HERBICIDE** must be applied with an adequate tank mix partner (i.e. glyphosate) to provide control of emerged weeds.

DO NOT make more than one application of **PENDIM** H₂**O HERBICIDE** during a single fallow period.

DO NOT apply **PENDIM** H₂O **HERBICIDE** to fallow ground after July 1 if treated fields are to be planted the following spring to crops not labeled for preplant or preplant incorporated applications of **PENDIM** H₂O **HERBICIDE**.

There must be at least a 4-month interval between a **PENDIM** H_2O **HERBICIDE** fallow application and the rotational planting of any fall-seeded cereal crop. Otherwise, specific rotational crop intervals must be adhered to between a fallow application of **PENDIM** H_2O **HERBICIDE** and the planting of the following crop (see Crop Rotation Restrictions in the Restrictions and Limitations section of this label).

State-specific Instructions

In Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming, apply as a broadcast spray at rates up to, but not to exceed, 3.2 pts/A of **PENDIM H₂O HERBICIDE.**

FRUITING VEGETABLES

PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied to the following fruiting vegetables: eggplant, groundcherry (*Physalis* spp.), peppers (includes banana, bell pepper, chili pepper, cooking pepper, Jalapeno pepper, pimento, sweet pepper), pepino, tomatillo, tomato.

Use Methods and Timings

Uniformly apply **PENDIM H₂O HERBICIDE** as a broadcast preplant incorporated application, or as a broadcast preplant surface application prior to transplanting fruiting vegetables, or as a post-directed application to transplanted or established direct-seeded fruiting vegetables.

DO NOT apply prior to direct-seeded fruiting vegetables.

DO NOT apply postemergence over the top of or to foliage of fruiting vegetables because severe injury may occur. **PENDIM H₂O HERBICIDE** can be applied as a post-directed spray on the soil at the base of the plant, beneath plants, and between rows. Avoid direct contact with foliage or stems. Be sure roots of transplants are established. Following the post-directed spray and when sufficient rainfall or irrigation does not occur to activate the herbicide, mechanically incorporate at the time of blocking and thinning or at layby. **PENDIM H₂O HERBICIDE** should be applied prior to weed emergence. **EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT.**

PENDIM H₂O HERBICIDE applied at 2.0 to 3.0 pts/A may aid in the control or suppression of the following weeds when used as part of a comprehensive weed management program: black nightshade, hairy nightshade.

Use Rates

Soil Texture	Broadcast Rate pts/A
Coarse	1.0 to 1.5
Medium	1.5 to 2.0
Fine	1.5 to 3.0

Restrictions and Limitations

- DO NOT apply more than 3.0 pints **PENDIM H₂O HERBICIDE** per acre per season.
- DO NOT apply within 70 days before harvest
- Avoid root contact with PENDIM H₂O HERBICIDE treated soil when placing transplants into furrow or hole or injury may occur.
- [Alternate Text A] DO NOT apply PENDIM H₂O HERBICIDE if row is later to be covered with plastic.
- [Alternate Text B] PENDIM H₂O HERBICIDE may be applied if row is later to be covered with plastic.
- [Alternate Test C] DO NOT plant lettuce within 6 months after a PENDIM H₂O HERBICIDE application if the rows were covered with plastic.
 GARLIC

PENDIM H_2O may be applied by ground, air, or chemigation.

Use Methods and Timings

Preemergence. After planting but before crop and weeds emerge

Postemergence. 1st to 5th true-leaf growth stage

Split Application. At both preemergence and postemergence timings.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage **in California**). **DO NOT** irrigate in excess of 1/2 inch of water. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

Use Rates

Soil Texture	Broadcast Rate pts/A	
Coarse	1.5	
Medium	2.0	
Fine	3.0	

Restrictions and Limitations

- DO NOT exceed 3.0 pints per acre per crop.
- DO NOT apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- DO NOT feed or graze these crops.

GRAIN SORGHUM

PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied as a post emergence incorporated (CULTI-SPRAY) application in grain sorghum grown in all states.

In addition, **PENDIM H₂O HERBICIDE** may be applied early postemergence in grain sorghum frown in states east of the Mississippi River and in Arizona, Arkansas, California, eastern Texas, Louisiana, and the Missouri bootheel.

Additional Weeds Controlled. In addition to the weeds listed in Table 2, **PENDIM H₂O HERBICIDE** as a CULTI-SPRAY application will control the following weeds in grain sorghum: wild proso millet and shattercane.

Use Rates

CULTI-SPRAY Application

Soil Texture	Southern States pts/A	Northern States pts/A
Coarse	1.5	2.0
Medium	2.0	3.0
Fine	3.0	3.0
See Restriction	ns and Limitations for	or map of specific states

Early Post Emergence Application

Soil Texture	PENDIM H ₂ O HERBICIDE (pts/A)	
Coarse	DO NOT USE	
Medium, Fine	2.0	

Restrictions and Limitations

- DO NOT apply PENDIM H₂O HERBICIDE in grain sorghm preplant incorporated or preemergence because serious crop injury can result.
- DO NOT apply PENDIM H₂O HERBICIDE in grain sorghum more than once per crop season.

- DO NOT apply PENDIM H₂O HERBICIDE as a CULTI-SPRAY treatment in grain sorghum planted in double row beds.
- DO NOT replant grain sorghum if crop loss occurs.
- DO NOT apply in liquid fertilizer.
- Livestock can graze or be fed forage from PENDIM H₂O HERBICIDE - treated grain sorghum fields after 21 days following application.

GREEN ONIONS (Leeks, Spring Onions, or Scallions, Japanese Bunching Onions, Green Shallots, Or Green Eschalots)

PENDIM H_2O may be applied preemergence, postemergence, or split application by ground, air, or chemigation.

Use Methods, Timings and Rates

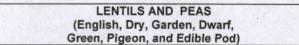
Uniformly apply 2.0 pints per acre of **PENDIM** H_2O **HERBICIDE** as a broadcast spray to the soil surface as preemergence spray or as a postemergence spray to the crop at the 2 to 3 true-leaf stage at least 30 days before harvest. If **PENDIM** H_2O **HERBICIDE** is to be applied sequentially as both a preemergence and postemergence spray, the preemergence spray must be applied 30 days prior to the postemergence spray.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Apply at 2 to 3 true-leaf stage at least 30 days before harvest. **DO NOT** irrigate in excess of ½ inch of water. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

Restrictions and Limitations

- DO NOT apply more than 2.0 pints per acre per allocation.
- DO NOT apply more than 4.0 pints per acre per season.
- DO NOT apply within 30 days before harvest.
- DO NOT feed forage or graze livestock in treated fields.



PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied (fall) preplant surface or preplant incorporated for weed control in lentils and peas.

Use Methods and Timing

Preplant Surface and Preplant Incorporated (fall applicatons in Idaho, Minnesota, Montana, North

Dakota, Oregon, South Dakota, Washington, and Wyoming)

Apply **PENDIM** H_2O **HERBICIDE** and incorporate (rainfall, irrigation or mechanically) in late fall prior to planting lentils or peas the following spring. Apply **PENDIM** H_2O **HERBICIDE** in late fall when soil temperatures are $45^{\circ}F$ or below but before the ground freezes.

DO NOT apply when the air temperature is below 45°F.

Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected because factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Preplant Incorporated. PENDIM H₂O HERBICIDE may be applied 60 days prior to planting up to immediately before planting. After application, rotary hoeing and shallow cultivation/tillage can be practiced without reducing weed control. Avoid tillage that will bring untreated soil to the surface.

Use Rates

Preplant Surface and Preplant Incorporated (fall) Application¹

Soil Texture	Broadcast Rate pts/A	
Coarse	1.5	
Medium	2.0	
Fine	3.0	

Preplant Incorporated

Soil Texture	Broadcast Rate pts/A	
Coarse	1.5	
Medium	2.0	
Fine	3.0	

State Specific Instructions

Idaho, Oregon, Washington

PENDIM H₂O HERBICIDE may be applied postplant preemergence to peas or lentils in **Idaho**, **Oregon** and **Washington**. Application must be made within 2 days of planting. Apply up to but not to exceed 1.5 pts/A. Apply to a firm seedbed free of clods. Soil conditions that cause poor seed furrow closure and coverage may result in delayed emergence and stunting of the crop. Under certain environmental conditions including cool temperatures, excessive moisture after application and wet soil conditions may result in delayed emergence and stunting with **PENDIM H₂O HERBICIDE** use in peas or lentils. Adequate rainfall or irrigation after application prior to weed seedling emergence will provide the most effective weed control.

Restrictions and Limitations

• DO NOT use in California.

- DO NOT apply PENDIM H₂O HERBICIDE preemergence in peas unless otherwise noted in state-specific instructions.
- DO NOT apply PENDIM H₂O HERBICIDE more than once per cropping season.
- DO NOT apply to peas, lentils, pea or lentil forage, pea silage, pea hay, or pea straw grown for livestock feed.
- DO NOT apply in any type of irrigation system.
- Any crop registered for a preplant incorporated application of **PENDIM H₂O HERBICIDE** can be double cropped after peas.

MINT (Peppermint and Spearmint)

PENDIM H₂O HERBICIDE may be applied by ground or air.

Use Methods and Timings

Make a single broadcast preemergence application of **PENDIM** H_2O **HERBICIDE** to mint at 1.5 pints to 4.0 pints per acre, depending on soil texture (see chart below), to dormant established mint before weed emergence. After a **PENDIM** H_2O **HERBICIDE** application, some temporary crop injury may be observed early in the growing season as mint breaks dormancy and begins to grow.

PENDIM H₂O HERBICIDE will not cause crop injury when applied according to the label under normal growing conditions. Non-uniform application may result in injury to crops, poor stands, or soil residues; conversely, uneven application may reduce weed control. Diseases, cold weather, excessive moisture, deep planting, low or high pH, salinity, or drought may weaken seedlings and plants and make them more susceptible to herbicidal damage.

Use Rates

Soil Texture	Broadcast Rate pts/A	
Coarse	1.5 to 2.0	
Medium	2.0 to 4.0	
Fine	2.0 to 4.0	

Restrictions and Limitations

- DO NOT apply PENDIM H₂O HERBICIDE to baby mint in the first year of growth and establishment.
- DO NOT apply to mint that has broken dormancy or crop injury may result. Application to mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to mint dormancy break.
- DO NOT apply to mint stands that have been weakened by age, disease, cold weather, excessive moisture, or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.

- DO NOT apply more than 4.0 pints per acre per season.
- DO NOT apply within 90 days of harvest.
- DO NOT allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- DO NOT apply this product on mint through any type of irrigation system.
- DO NOT use in California except as directed in supplemental labeling.

ONIONS (Direct-Seeded and Transplanted Dry-Bulb) and SHALLOTS (Dry-Bulb)

PENDIM H₂O HERBICIDE may be applied by ground, air or chemigation.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Apply between the 2^{nd} and 9^{th} true-leaf stage (2^{nd} to 6^{th} true-leaf stage in **California**) unless otherwise specified below. **DO NOT** irrigate in excess of $\frac{1}{2}$ inch of water. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** sections of this label.

Mineral Soils

Use Rates, Methods, and Timings

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.5
Medium	2.0
Fine	3.0

State specific Instructions

In All States Except California

Apply **PENDIM H_2O HERBICIDE** as a broadcast treatment when dry bulb onions or dry bulb shallots have 2 to 9 true leaves.

Additional Use in Colorado, Kansas, and Nebraska

PENDIM H₂O HERBICIDE may be applied sequentially in seeded dry bulb onions. Apply first application of **PENDIM** H₂O HERBICIDE at loop stage. Apply sequential application of **PENDIM H₂O HERBICIDE** early postemergence (2^{nd} to 9^{th} true-leaf stage). DO NOT exceed the maximum labeled rate for a given soil texture. DO NOT apply **PENDIM H₂O HERBICIDE** at loop stage through the 9^{th} true-leaf stage if heavy rains are expected, or severe crop injury may result.

Additional Use in Colorado and the High Plains of Texas

For transplanted dry bulb onions only, apply and shallow incorporate (less than 2 inches deep) **PENDIM** H_2O into preformed beds prior to transplanting.

Additional Use in Idaho, Oregon, and Washington

Apply **PENDIM H₂O HERBICIDE** as a broadcast treatment when dry bulb onions or dry bulb shallots are between the flag leaf to 9^{th} true-leaf stage.

PENDIM H₂O HERBICIDE may be used at 3.0 to 4.0 pints per acre for dodder control on medium- and fine-textured soils.

DO NOT apply **PENDIM** H₂**O HERBICIDE** using chemigation at the dodder control rate.

PENDIM H₂O HERBICIDE may be applied in the fall or spring to the furrow area of land bedded in the fall in preparation for planting seed of dry bulb onions the following spring. Apply **PENDIM H₂O HERBICIDE** as a banded application at rates based on appropriate soil texture. Band width is the width of the row spacing. Keep **PENDIM H₂O HERBICIDE** away from the area where dry bulb onion seed will be planted.

Harrow-off tops of beds following **PENDIM** H_2O **HERBICIDE** furrow applications prior to planting onions. For selective weed control in the onion row, apply **PENDIM** H_2O **HERBICIDE** as a banded postemergence application to flag leaf dry bulb onions at labeled rates based on soil texture. Apply **PENDIM** H_2O **HERBICIDE** only once to the furrow area and once to the dry bulb onion row as postemergence application.

Additional Use in Michigan:

For mineral soils containing >10% organic matter, follow the directions for muck soils (see following).

In California:

PENDIM H₂O HERBICIDE may only be applied as a single application when dry bulb onions or dry bulb shallots have 2 to 6 true leaves.

Restrictions and Limitations (Mineral Soils)

(Wineral Solis)

- DO NOT mechanically incorporate except as specified for use on dry bulb onions in Colorado and the Texas High Plains.
- **DO NOT** exceed 3.2 pints per acre per crop (except Idaho, Oregon, and Washington).
- DO NOT apply within 60 days of harvest in California and within 45 days of harvest in all other states.
- DO NOT feed or graze these crops.
- DO NOT apply PENDIM H₂O HERBICIDE preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after PENDIM H₂O application at the preemergence through loop stage, DO NOT irrigate in excess of ½ inch of water.

Muck Soils

Use Rates, Methods, and Timing

PENDIM H₂O HERBICIDE may be applied sequentially on muck soils as follows:

Application, Timing and Growth Stage	Rate (pts/A)
Preemergence through Loop Stage	4.0

26	35

	4.0
Late Postemergence (6t to 9 th true-leaf stage)	4.0

Restrictions and Limitations (Muck Soils)

- DO NOT apply to muck soils in California.
- DO NOT apply within 45 days before harvest.
- DO NOT feed or graze these crops.
- DO NOT apply more than 12.5 pints per acre per growing season on muck soils. To maximize crop safety, ensure good soil coverage during planting or transplanting and delay preemergence applications to the loop stage, if possible.
- DO NOT apply PENDIM H₂O HERBICIDE preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after PENDIM H₂O HERBICIDE application at the preemergence through loop stage, DO NOT irrigate in excess of ½ inch of water.
- **DO NOT** plant sugar beets, red beets, spinach, winter wheat, or winter barley as rotational crops on muck soils for 12 months from the time of last application if more than 3.2 pints per acre of **PENDIM H₂O HERBICIDE** is applied to the onion crop.
- If loss of onion crop occurs, DO NOT replant any crop other than onions in muck soil during the same cropping year and DO NOT work the soil deeper than 2 inches.

PEANUTS

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation.

PENDIM H₂O HERBICIDE may be applied preplant incorporated in peanuts.

PENDIM H₂O HERBICIDE may be applied preemergence to peanuts grown under overhead irrigation.

DO NOT use in California.

Use Methods and Timings

Preplant Incorporated. Apply PENDIM H₂O HERBICIDE up to 60 days prior to planting and incorporate.

Preemergence. Apply **PENDIM H₂O HERBICIDE** at planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of 0.75 inch of overhead irrigation or rainfall within 48 hours of applications.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the Spraying Instructions section of this label.

Use Rates

Region	Rate pts/A
New Mexico, Oklahoma, and Texas	1.0 to 2.0
Other peanut growing states*	2.0
*For heavy weed infestations, especially of T	exas panicum, up to

3.6 pts/A of **PENDIM H₂O HERBICIDE** can be used in Alabama, Georgia, or Florida

PERENNIAL GRASSES GROWN FOR SEED PRODUCTION

Application Instructions

PENDIM H₂O HERBICIDE may be applied by ground or chemigation, or by air.

Apply **PENDIM H₂O HERBICIDE** prior to target weed germination. Uniformly apply at a broadcast rate of 2.1 to 4.2 quarts of **PENDIM H₂O HERBICIDE** per acre in a single application. **PENDIM H₂O HERBICIDE** may also be applied in two split applications, with $\frac{1}{2}$ the seasonal application rate applied in the fall or winter followed by the other $\frac{1}{2}$ the seasonal application rate applied in the spring. **DO NOT** exceed a cumulative total of 4.2 quarts of **PENDIM H₂O HERBICIDE** per acre in any one crop season.

In both warm- and cool-season perennial grasses, use the higher application rate of **PENDIM** H_2O **HERBICIDE** where more dense infestations of targeted annual grasses, annual broadleaf, or volunteer grass seedlings are anticipated, or when a longer duration of residual weed control is desired. Excess grass straw and crop residue from the previous harvest should be evenly spread or removed by such methods as crew cutting, propane flaming, or open field burning (when local regulations allow) prior to **PENDIM** H_2O **HERBICIDE** application, or reduced weed control may result.

PENDIM H₂O HERBICIDE may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

PENDIM H₂O HERBICIDE may cause temporary injury to perennial grass stands. Applications made in periods of cold temperatures that temporarily limit normal crop growth or in extended cold temperature periods that initiate winter dormancy in grass crops may result in crop injury.

Diseases, extremely cold weather, drought, extensive frost heaving, low or high pH, or salinity may weaken stands and make them more susceptible to herbicidal damage.

PENDIM H₂O HERBICIDE may be applied in the following perennial grasses grown for seed production:

Warm-season perennial grasses

Apply **PENDIM** H_2O **HERBICIDE** to established (defined as planted in the fall or spring which has gone through a first

cutting/mowing) warm-season perennial grasses, such as Bermudagrass, switchgrass, and others. Apply **PENDIM** H_2O HERBICIDE to postharvest grass during the fall or during winter dormancy or after the riist seed harvest/cutting. **DO NOT** apply to warm-'season perennial grasses after green-up in the ping prior to the first seed harvest/cutting.

Cool-season perennial grasses

Apply **PENDIM H₂O HERBICIDE** to established (6 or more tillers per plant) cool-season perennial grasses, such as Kentucky bluegrass, tall fescue, orchardgrass, perennial ryegrass, fine fescue, and others. Apply **PENDIM H₂O HERBICIDE** to postharvest grass during regrowth at the beginning of significant fall rains or in spring prior to germination of targeted weeds.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions, and precautions in the general section covering **Chemigation** in **Spraying Instructions** of the **PENDIM H₂O HERBICIDE** container label. Uniform distribution of **PENDIM H₂O HERBICIDE** -treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.

Tank Mixes

PENDIM H₂O HERBICIDE may be tank mixed with **Outlook® herbicide** or with other herbicides labeled for use in perennial grasses grown for seed. REPAR recommends testing **PENDIM H₂O HERBICIDE** tank mixes on a small portion of the target crop to determine if damage is likely to occur.

Physical incompatibility, reduced weed control, or crop injury may result from mixing PENDIM H_2O HERBICIDE with other pesticides, additives, or fertilizers.

Applications of postemergence herbicides may cause crop injury. Consult your local BASF dealer regarding local tank mix options. Always perform a mixing test to check the compatibility of **PENDIM H₂O HERBICIDE** with all potential tank mix partners. Follow all precautions and restrictions on the labels of all products applied in combination with **PENDIM H₂O HERBICIDE**. Always follow the most restrictive label.

Restrictions and Limitations

- DO NOT apply if surface water is present in the field.
- DO NOT exceed a cumulative total of 4.2 quarts of PENDIM H₂O HERBICIDE per acre in any one crop season.
- Some stunting and chlorosis of the perennial grasses may occur with postemergence applications.
- Applications made after the perennial grasses exceed 6 inches in height may result in poor weed control due to possible reduced spray coverage to the soil.

- DO NOT harvest forage from treated fields of both warm-season and cool-season perennial grasses until 45 days after application.
- DO NOT harvest hay from treated fields of both warm-season and cool-season perennial grasses until **60 days** after application.
- From treated fields of both warm- and cool-season perennial grasses, DO NOT harvest seed within 90 days after application.
- The grass straw remaining after seed harvest of both warm- and cool-season perennial grasses may be used as livestock bedding, and/or grazed by or fed to livestock. The grower must notify the seed processor that there is no pesticide tolerance on grass seed screenings, therefore it cannot be used in livestock feed.

Weeds Controlled

PENDIM H₂O HERBICIDE applied according to this label, prior to weed germination, will control annual bluegrass, volunteer fescue, and volunteer ryegrass in addition to the weeds listed on the **PENDIM H₂O HERBICIDE** container label (see Table 2. Weeds Controlled). If weeds have germinated prior to the application of **PENDIM H₂O HERBICIDE**, it may be necessary to apply a herbicide labeled for postemergence activity on those weeds. Weed control may be enhanced by using sequential applications of other registered herbicides.

POTATOES

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation.

PENDIM H₂O HERBICIDE may be applied preemergence, preemergence incorporated, or early postemergence in potatoes.

Additional Weeds Controlled: In addition to the weeds listed in Table 2, PENDIM H₂O HERBICIDE will control stinging nettle in potatoes.

Use Methods and Timings

Preemergence. Apply **PENDIM H₂O HERBICIDE** after planting, but before potatoes and weeds emerge, or after dragoff.

Preemergence Incorporated. Apply **PENDIM H**₂**O HERBICIDE** and incorporate after planting but before potatoes and weeds emerge. Where dragoff is practiced, apply **PENDIM H**₂**O HERBICIDE** and incorporate before, at, or after dragoff, but before potatoes and weeds emerge. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

Early Postemergence. Apply **PENDIM H₂O HERBICIDE** from frop emergence to the 6-inch stage of growth. **DO NOT** apply **PENDIM H₂O HERBICIDE** postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Apply **PENDIM H₂O HERBICIDE** preemergence after planting, after dragoff, or early postemergence through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

Use Rates

Soil Texture	•	nic Matter >3.0% ots/A)	
Coarse	1.5	1.5	
Medium	2.0	3.0	
Fine	3.0	3.0	

Restrictions and Limitations (Muck Soils)

- DO NOT apply to sweet potatoes or yams.
- DO NOT apply preplant.
- DO NOT make more than one application of PENDIM H₂O HERBICIDE per season.
- Application of PENDIM H₂O HERBICIDE on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

RICE

PENDIM H₂O HERBICIDE may be applied as a pre-flood, preemergence application in drilled dry-seeded rice or as an early postemergence application in dry-seeded rice. Treatments may be applied to conventional, reduced or minimum tillage, and no-till (stale seedbed) rice. The seedbed should be firm and free of clods and must be prepared to allow for good seed coverage. The use of a planter under conditions that do not allow good soil coverage of the rice seed can result in reduced stand or stunting if **PENDIM H₂O HERBICIDE** contacts germinating rice seed. **PENDIM H₂O HERBICIDE** may also be applied postemergence in California water-seeded rice as a component of a comprehensive weed management program.

Additional Weeds Controlled: In addition to the weeds listed in Table 2, **PENDIM H₂O HERBICIDE** will control the following weeds in rice: junglerice and sprangletop.

Use Methods and Timings

Delayed Preemergence. Apply PENDIM H₂O HERBICIDE alone or with tank mix partner for delayed preemergence weed control in grain-drilled, dry-seeded rice. Apply PENDIM H₂O HERBICIDE alone or in tank mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with PENDIM H₂O HERBICIDE may be injured. Apply only when growing conditions favor vigorous rice growth. The seedbed should have adequate moisture for seed germination. Not for use in grain drilled dry seeded rice in California.

Uniformly apply the labeled rate of **PENDIM H₂O HERBICIDE** after rice planting and before rice and weed emergence (spiking). Apply after the rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch or rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80 percent of germinated seeds have a primary root (radicle) or shoot at least $\frac{1}{2}$ inch long. If there is insufficient moisture, flushing is recommended before **PENDIM H₂O HERBICIDE** application to supply moisture for root (radicle) initiation and for vigorous rice and weed growth.

If applied to soil prior to these conditions, or to cracked soil, stand reduction or stunting or rice may occur. Under some conditions, use of gibberellic acid-treated seed, heavy rainfall after application, or flushing after application may result in herbicide injury to rice. Rice can overcome moderate injury with appropriate cultural practices.

Due to the residual activity of **PENDIM** H_2O **HERBICIDE**, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of **PENDIM** H_2O **HERBICIDE**.

Early Postemergence. PENDIM Apply H₂O HERBICIDE as a tank mix partner. Base applications on weed and crop size guidelines of the tank mix partner. DO NOT apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous rice and weed growth. Because soil and weeds must be completely exposed to spray coverage, no flood water should be on the field at the time of application. Cloddy soil, standing water (puddles) at the time of application, or cracks in the soil that form after application may result in reduced weed control. Because of residual activity of PENDIM, H2O HERBICIDE, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of PENDIM H₂O HERBICIDE.

Postemergence (California water-seeded rice only). Apply **PENDIM H₂O HERBICIDE** alone or tank mixed with a postemergence herbicide after water-seeded rice has reached the 4-leaf to 6-leaf stage (spike plus 3 to 5 true leaves). Applications made prior to the 4-leaf stage may result in crop injury.

Water-seeded rice must also be well-rooted/pegged (i.e. standing erect after the flood is removed) prior to application. **DO NOT** apply to rice that is leaning over and/or laying flat to the ground following flood removal since this is characteristic of a poorly established root system. Rice roots must be below the **PENDIM H**₂**O HERBICIDE** treated soil zone. Injury, stunting, and/or stand reduction can occur if **PENDIM H**₂**O HERBICIDE** contacts the rice roots.

Fields must be completely drained and free of standing water (moist/saturated soil) prior to application. If the

soil is saturated at the time of application, allow the soil surface to dry prior to restoring the permanent flood. **PENDIM H₂O HERBICIDE** requires alternate wetting/drying cycles to be activated. Weed control will be reduced if the soil surface is not allowed to dry out prior to restoration of the permanent flood. Resume normal water management practices following permanent flood restoration.

PENDIM H₂O HERBICIDE does not control weeds postemergence; therefore, **PENDIM H₂O HERBICIDE** must be tank mixed with a post-emergence herbicide to control emerged weeds at the time of application.

PENDIM H₂O HERBICIDE will aid in the control or suppression of the following weeds when used as part of a comprehensive weed management program:

Barnyardgrass, early and late watergrass (including biotypes resistant to other herbicide modes of action, e.g. rice mimic), sprangletop, smallflower umbrella sedge*, redstem*

In California water-seeded rice, **PENDIM H₂O HERBICIDE** may be applied with either aerial or ground application equipment. For aerial application, apply the labeled rate of **PENDIM H₂O HERBICIDE** in 5 gallons to 10 gallons of water per acre. If applied as a tank mixture with another herbicide, make sure proper gallonage per acre per label rates (i.e, 10 to 15 with propanil) is used to ensure adequate coverage. To minimize drift, **DO NOT** apply during periods of wind greater than 10 mph, or when wind conditions favor drifting, or if there is a temperature inversion. It is recommended that a flagman or an automatic mechanical flagging unit on the aircraft be used to avoid overlapping and possible crop injury.

For ground equipment, apply the labeled rate of **PENDIM** H₂O **HERBICIDE** in 10 gallons to 20 gallons of water per acre. If **PENDIM** H₂O **HERBICIDE** is applied as a tank mixture with another herbicide, make sure proper gallonage per acre per label rates (i.e. 20 to 30 for propanil) is used to ensure adequate coverage. Use a properly calibrated lowpressure (20 psi to 40 psi) sprayer equipped with appropriate nozzles to achieve uniform spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle screens must be no finer than 50 mesh. DO NOT apply **PENDIM** H₂O **HERBICIDE** during periods of gusty winds or when wind velocity is greater than 20 mph.

Postemergence TankMixtures: To control emerged weeds at application, **PENDIM H₂O HERBICIDE** may be tank mixed with one of the following postemergence herbicides:

Clincher[®] Grandstand[®] Granite™SC propanil (e.g Super WHAM![®]) Regiment[®] Strada™WG Whip360[®]

When using tank mixtures with **PENDIM** H_2O **HERBICIDE** always read the companion product label(s) and follow all precautions and restrictions. Always follow the most restrictive label.

Observe all restrictions regarding propanil-restricted zones.

Restrictions and Limitations (for water-seeded rice)

- DO NOT apply PENDIM H₂O HERBICIDE prior to the 4-leaf rice stage (spike plus 3 true leaves) or to rice that is not well-rooted/pegged. The rice must be standing erect after the flood is removed and prior to application.
- DO NOT apply to fields with standing water.
- DO NOT apply PENDIM H₂O HERBICIDE through any type of irrigation system.
- DO NOT apply in liquid fertilizer.
- DO NOT spray target crop within 60 feet of crops labeled for PENDIM H₂O HERBICIDE applications where the method of application, rate, or timing of spray application is prohibited.
- **DO NOT** exceed the maximum rate for any soil type in one season.
- DO NOT use water containing PENDIM H₂O HERBICIDE residues from rice cultivation to irrigate food or feed crops that are not registered for use with PENDIM H₂O HERBICIDE.

In case of a crop failure due to weather conditions or disease following treatment with **PENDIM** H₂O **HERBICIDE** alone or in a tank mixture, only drilled dryseeded rice may be immediately replanted; however, the grower assumes all risks and consequences associated with replanting of rice because there is the potential for stand reduction or stunting. A 10% increase in seeding rate is recommended. Replant see below the herbicide layer because reduced stand or stunting may occur if **PENDIM** H₂O **HERBICIDE** contacts germinating rice seed. **DO NOT** replant gibberellic acid-treated seed. **DO NOT** reapply **PENDIM** H₂O **HERBICIDE** alone or in a tank mixture.

DO NOT apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after applications.

Use Rates

Delayed Preemergence Applications

Soil Texture	Rate (pt/A) DO NOT USE	
Sandy, loamy sands		
Sandy loams	1.5	
Loams, silt loams, silts, sandy clay loams	2.0	
Silty clay loams, clay loams, sandy clays, silty clays, clays	2.0	

Early Postemergence Application

Rate

Soil Texture	(pt/A)
Coarse	1.5
Medium	2.0
Fine	2.0

Postemergence in Water-seeded Rice

Soil Texture	Rate (pt/A)
Coarse	1.5
Medium	2.0
Fine	2.0

Restrictions and Limitations

- DO NOT apply PENDIM H₂O HERBICIDE through any type of irrigation system.
- DO NOT apply in liquid fertilizer.
- DO NOT use on water-seeded rice except as specified in other REPAR labeling.
- DO NOT apply to rice fields if fields are used for fish production, especially catfish or crayfish farming.
- PENDIM H₂O HERBICIDE may be applied to rice fields used for crayfish production.
- DO NOT use water containing PENDIM H₂O HERBICIDE residues from rice cultivation to irrigate food or feed crops that are not registered for use with PENDIM H₂O HERBICIDE.
- In case of a crop failure due to weather conditions or disease following treatment with PENDIM H₂O HERBICIDE alone or in a tank mixture, only drilled dryseeded rice may be immediately replanted; however, the grower assumes all risks and consequences associated with replanting of rice because there is the potential for stand reduction or stunting. A 10 % increase in seeding rate is recommended. Replant seed below the herbicide layer because reduced stand or stunting may occur if PENDIM H₂O HERBICIDE contacts germinating rice seed. DO NOT replant with gibberellic acid-treated seed. DO NOT reapply PENDIM H₂O HERBICIDE alone or in a tank mixture.
- DO NOT apply PENDIM H₂O HERBICIDE and then flush for germination.
- DO NOT apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after application.
- DO NOT apply early preemergence nor preplant incorporated as severe rice injury is possible.

SOYBEANS

PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied in conventional, minimum, or no-till as a fall surface, fall incorporated, preplant surface, preplant incorporated, or preemergence application in soybeans.

Additional Weeds Controlled. In addition to the weeds listed in Table 2, **PENDIM H₂O HERBICIDE** will control or reduce competition from the following weeds in soybeans: itchgrass and red rice. For specific rates for red rice and itchgrass management, see table at end of this

section.

Use Methods and Timings

Fall Applied. PENDIM H_2O HERBICIDE may be surface applied or incorporated in the fall, after fall harvest and prior to ground freeze in states north of 1-80 and the entire states of Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma, and Texas. Fall applications of PENDIM H_2O HERBICIDE will not provide season-long weed control.

Preplant Surface. Apply **PENDIM H₂O HERBICIDE** up to 15 days prior to planting. **PENDIM H₂O HERBICIDE** may be applied up to 45 days prior to planting when used in a tank mix or applied sequentially with **Extreme**[®] herbicide, **Raptor**[®] herbicide, or **Pursuit**[®] herbicide. Apply **PENDIM** H₂O HERBICIDE tank mixes and sequential programs as specified under the tank mix section.

Preplant Incorporated. Apply **PENDIM H₂O HERBICIDE** up to 60 days prior to planting and incorporate.

Preemergence. Apply **PENDIM H₂O HERBICIDE** at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. **DO NOT** make applications of **PENDIM H₂O HERBICIDE** preemergence north of Interstate 80, except in the states of Indiana, Michigan and Ohio, or as specified in REPAR Supplemental labeling.

Use Rates

Fall Surface, Fall Incorporated,

Preplanat Surface, or Preplant Incorporated <3.0% Organic Matter >3.0% Soil Texture (pts/A) Coarse 1.5 2.0 Medium 2.5¹ 3.0 Fine² 3.0 3.0

¹DO NOT exceed 2.1pts for southern states; See Restrictions and Limitations for map of specific states.

²For heavy clay soils, apply **PENDIM H₂O HERBICIDE** at the broadcast rate of 3.2 pints per acre.

Preemergence Applications

Soil Texture	<3.0% Organic Matter >3.0% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	2.0
Fine	2.0	2.5

Preplant Incorporated Applications for Red Rice Control and Itchgrass Supression

Soil Texture	Up to 3% Organic Matter' pts/A
Coarse	3.0
Medium	3.0
Fine	4.0
¹ This use is not recomm	nended for soils with more than 3%

31 35

organic matter

Restrictions and Limitations

- DO NOT use PENDIM H2O HERBICIDE in soybeans in California.
- Livestock can graze or be fed forage from treated soybean fields.
- DO NOT apply within 85 days before harvest.
- DO NOT exceed one application per crop season at the highest rate per acre for any given soil type and application method

STRAWBERRY

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation.

Use Methods and Timings

Stunting, reduced growth, or reduction in daughter plants may occur with this use.

Uniformly apply 1.5 to 3.0 pints per acre of **PENDIM** H_2O **HERBICIDE** as a broadcast spray to the soil surface at pretransplant time or post-transplant time (must be within 7 days of transplanting of rootstock in the Pacific Northwest). However, in geographies where irrigation is used daily (frequently) after transplanting, application of **PENDIM** H_2O **HERBICIDE** should be applied just before the end of the watering regime to maximize the weed control benefits of **PENDIM** H_2O **HERBICIDE**. Extended periods of irrigation may reduce the residual control provided by **PENDIM** H_2O **HERBICIDE**.

- [Alternate Text A] DO NOT apply PENDIM H₂O HERBICIDE to strawberry bed if bed is later to be covered with plastic.
- [Alternate Text B] PENDIM H₂O HERBICIDE may be applied if strawberry bed is later to be covered with plastic.
- [Alternate Text C] DO NOT plant lettuce within 6 months after a PENDIM H₂O HERBICIDE application if the strawberry beds were covered with plastic.

However, **PENDIM** H_2O **HERBICIDE** applications to row middles between the beds are allowed. DO NOT apply post-transplant if new foliage from rootstock is exposed to spray area. A second application of 1.5 to 3.0 pints per acre of **PENDIM** H_2O **HERBICIDE** may be applied in a band to the soil between crop rows (or between the plastic beds) 35 days before harvest, but **DO NOT CONCENTRATE THE RATE** per acre into the treated area, and **DO NOT** allow spray to contact strawberry plants. The second application rate is based on per unit of treated area.

PENDIM H_2O **HERBICIDE** may also be applied to strawberries in fall or winter dormancy. Uniformly apply 1.5 to 3.0 pints per acre of **PENDIM** H_2O **HERBICIDE** as a broadcast spray to the soil surface prior to onset of new seasonal growth from strawberry crowns. **DO NOT** apply if new seasonal growth (leaves) have emerged or are exposed.

PENDIM H₂O HERBICIDE may also be applied to perennial strawberries after renovation. Uniformly apply 1.5 to 3.0 pints per acre of **PENDIM H₂O HERBICIDE** as a broadcast spray

to the soil surface after renovation (mowing or other defoliation operation) when no foliage is exposed but prior to onset of new seasonal growth from strawberry crowns. **DO NOT** apply if new seasonal growth (leaves) has emerged or leaves are exposed.

Chemigation Applications

PENDIM H_2O may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label. **DO NOT** allow **PENDIM** H_2O **HERBICIDE** -treated irrigation water to contact strawberry plants.

Use Rates

Soil Texture	Broadcast Rate pts/A
Coarse	1.5
Medium	2.0 to 2.5
Fine	2.5 to 3.0

Restrictions and Limitations

- DO NOT apply more than 3.0 pints per acre per application.
- DO NOT apply more than 6.0 pints per acre per season.
- DO NOT apply within 35 days before harvest.
- DO NOT feed forage or graze livestock in treated fields.

SUGARCANE

PENDIM H_2O HERBICIDE may be applied by ground or air.

Use Methods and Timings

PENDIM H_2O **HERBICIDE** may be applied preemergence through layby to plant or ratoon sugarcane. Although there may be adequate crop tolerance for postemergence applications at layby, the spray must be directed under the sugarcane canopy to obtain effective weed control.

Use Rates

Use Area	Broadcast Rate ¹ pts/A
All states, except Hawaii	4.2 to 6.2
Muck soils (Florida only)	4.2 to 8.4
Hawaii	4.2 to 8.4
¹ Use the high rate if: clay incorporation is planned; heavy anticipated; itchgrass infestation is planned.	weed populations are

Additional Use as Fallow Ground Application only in Louisiana. Apply PENDIM H₂O HERBICIDE prior to weed germination for control of annual grasses such as itchgrass (Raoulgrass), seedling Johnsongrass and *Panicum* spp. in preplant fallow ground sugarcane. If necessary, control weeds that have emerged prior to application of **PENDIM H₂O HERBICIDE** with postemergence herbicides and/or mechanical cultivation.

After cultivation and forming the beds in the spring, apply **PENDIM H₂O HERBICIDE** at 2.6 qts/A using ground equipment. Sugarcane beds should be free of trash or clods at the time of application. If sufficient rainfall (1/2 to 3/4 inch) has not occurred within 7 days of application, perform a shallow incorporation (1 to 2 inches) with an additional pass of a Lilliston-type Lely **Roterra**TM cultivator set to cut 2 or 3 inches deep. A minimum interval of 60 days between **PENDIM H₂O HERBICIDE** application and planting of sugarcane is required or crop injury may occur. After planting, apply **PENDIM H₂O HERBICIDE** to sugarcane preemergence through layby, but **NO NOT** exceed 12.5 pts/A of **PENDIM H₂O HERBICIDE** during one growing season.

Non-cropped Water Drainage Areas Application only in Louisiana. Apply PENDIM H₂O HERBICIDE prior to weed germination to non-irrigated, non-cropped water drainage areas (ditchbanks) adjacent to sugarcane fields. If necessary, control weeds that have emerged prior to application of **PENDIM H₂O HERBICIDE** with postemergence herbicides and/or mechanical cultivation.

Apply **PENDIM H₂O HERBICIDE** at 2.6 to 3.5 qts/A using ground equipment. **DO NOT** apply **PENDIM H₂O HERBICIDE** below the high water mark or when water is present in the drainage area (ditchbank). **DO NOT** exceed 12.5 pts/A of **PENDIM H₂O HERBICIDE** during one growing season.

Restrictions and Limitations

- DO NOT exceed 12.5 pints of PENDIM H₂O HERBICIDE per acre in one growing season.
- DO NOT use less than 11 gallons of water as a carrier when applying PENDIM H₂O HERBICIDE for weed control.
- Ratoon sugarcane must be lightly shaved in early spring to remove the old stubble before incorporation over the line of sugarcane is possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots.
- DO NOT make aerial applications at close-in because complete and uniform coverage cannot be obtained.
- DO NOT apply through any type of irrigation system.
- DO NOT apply within 90 days before harvest.
- DO NOT graze treated fields or feed treated forage or fodder to livestock.

SUNFLOWERS

PENDIM H₂O HERBICIDE may be applied by ground or air.

PENDIM H₂O HERBICIDE may be applied preplant incorporated in all states. Fall preplant incorporated applications may be made in Minnesota, North Dakota, and South Dakota only.

PENDIM H₂O HERBICIDE may be applied preemergence in conventional tillage sunflowers, except in the state of California.

Plant sunflowers 1-1/2 inches to 2 inches deep and completely cover with soil.

Use Methods and Timings

Preplant Incorporated (Spring). Apply up to 60 days prior to planting and incorporate.

Preplant Incorporated (Fall Applications in North Dakota, South Dakota and Minnesota). Apply PENDIM H₂O HERBICIDE and immediately incorporate in late fall prior to planting sunflowers the following spring. Apply PENDIM H₂O HERBICIDE in the late fall when soil temperatures are 45° F or below but before the ground freezes. DO NOT apply when the air temperature is below 45° F.

Prior to sunflower planting in the spring, fields treated with **PENDIM** H_2O **HERBICIDE** should receive at least one shallow additional incorporation. Spring incorporaton should be at an angle to the last tillage operation.

Preemergence. Apply **PENDIM H₂O HERBICIDE** at planting or up to 2 days after planting. Preemergence applications of **PENDIM H₂O HERBICIDE** to sunflowers may increase the likelihood of crop injury, especially when sunflowers are grown in stress situations, such as compacted soils. Decreased herbicide performance compared to preplant incorporated applications may also result from a preemergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecast, apply **PENDIM H₂O HERBICIDE** prior to planting and mechanically incorporate withtillage.

No-till Sunflowers. PENDIM H₂O HERBICIDE may be applied at 3.0 qts/A up to 30 days before planting (preplant) to immediately after planting (preemergence). **Use Rates**

Preplant Incorporated (Spring) or Preemergence (Conventional Tillage)

Southern States ¹ pts/A	<u>Northern</u> States <3.0% Organi Matter>3.0 pts/A	
1.5	2.0	2.0
2.0	2.5	3.0
3.0	3.0	3.0
	States ¹ pts/A 1.5 2.0	Southern States1States <3.0% Organi Matter>3.0 pts/A1.52.0 2.5

Preplant Incorporated (Fall) Application¹

Soil Texture	<3.0% Organic Matter >3.0% (pts/A)	
Coarse	2.5	2.5
Medium	3.0	3.5
Fine	3.5	3.5

Restrictions and Limitations (All Tililage Types)

 DO NOT apply PENDIM H₂O HERBICIDE postemergence.

- DO NOT feed forage or graze livestock in treated sunflower fields.
- DO NOT use in California

TOBACCO

PENDIM H₂O HERBICIDE may be applied with ground equipment only preplant incorporated or as a layby application in transplanted tobacco.

Use Methods and Timings

Preplant Incorporated. Apply **PENDIM H_2O HERBICIDE** with ground sprayer up to 60 days prior to transplanting tobacco.

Applied according to directions and under normal growing conditions, **PENDIM** H_2O **HERBICIDE** will not harm transplanted tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, **PENDIM** H_2O **HERBICIDE** can produce a temporary retardation of tobacco development.

Layby. PENDIM H_2O **HERBICIDE** may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply **PENDIM** H_2O **HERBICIDE** in a 16- to 24- inch band between the crop rows. The spray should not contact tobacco plants.

Use Rates

Preplant Incorporated Application

Use Area	Soil Texture	Rate (pts/A)
Florida	Coarse	2.0
Georgia	Medium	
Maryland North Carolina South Carolina	sandy clay loams, loam	2.0
Virginia	silt loams, silts	2.5
	Fine	2.5
	Coarse	2.0
Other states	Medium	3.0
	Fine	3.0

Layby Application

Soil Texture	Broadcast Rate pts/A
Coarse	1.5
Medium	2.0
Fine	2.0

Restrictions and Limitations

 DO NOT apply as a broadcast spray as contact may cause malformed tobacco leaves.

TRITICALE and WHEAT

PENDIM H₂O HERBICIDE may be applied by ground, air, or chemigation.

PENDIM H₂O HERBICIDE may be applied preemergence, delayed pre-emergence, or postemergence to wheat for

weed control in fall-seeded, winter-seeded or spring seeded wheat or triticale.

Use Methods and Timings

Apply to a seedbed which is firm and free of clouds and trash. The seedbed **MUST** be prepared to ensure good seed coverage by the soil and seed-to-soil contact. Use high quality seed. When applications of **PENDIM H**₂**O HERBICIDE** are intended to be made preemergence or delayed preemergence, plant seed at least 1 inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of **PENDIM H**₂**O HERBICIDE** are intended to be made postemergence, plant seed at least 1 inch deep to avoid possible crop injury, but not too deep for proper germination. When applications of **PENDIM H**₂**O HERBICIDE** are intended to be made postemergence, plant seed at least 1/2 inch to 1.0 inch to avoid crop injury.

Uniformly apply **PENDIM** H_2O **HERBICIDE** as a preemergence, or delayed preemergence (after wheat or tricale seed has germinated), or postemergence treatment from the 1st – leaf stage of wheat or tricale until before the flag leaf is visible/emerged for weed control. Apply **PENDIM** H_2O **HERBICIDE** prior to weed emergence. **EMERGED WEEDS WILL NOT BE CONTROLLED** BY THIS TREATMENT.

For control of established weeds, **PENDIM** H_2O **HERBICIDE** may be tank mixed with any postemergence herbicide registered for use in wheat or tricale. **PENDIM** H_2O **HERBICIDE** will provide residual control of the weeds listed in this label. Always perform a mixing test to check the compatibility of **PENDIM** H_2O **HERBICIDE** with all potential tank mix partners.

Use Rates

Soil Texture	Southern S tates ¹ pts/A	Northern States ¹ pts/A
Coarse	1.5 to 2.0	1.5
Medium	1.5 to 3.0	1.5 to 2.5
Fine	2.0 to 3.0	2.0 to 3.0
See Use Are	a map in Restrictions	and Limitations

In wheat stubble, PENDIM H2O HERBICIDE may be applied in the fall, spring or early summer during the fallow period following wheat harvest as a planned residual treatment to control labeled broadleaf and grass weeds. PENDIM H2O HERBICIDE must be applied with an adequate tank mix partner (i.e. glyphosate) to provide control of emerged weeds. There must be at least a 4-month interval between a PENDIM H₂O HERBICIDE fallow application and the rotational planting of any fall-seeded cereal crop. Apply up to, but DO NOT exceed, 3 pints/acre of PENDIM H₂O HERBICIDE in any fallow application. DO NOT make more than one application of PENDIM H2O HERBICIDE during a single fallow period prior to rotational planting of any fall-seeded cereal crops. Rotational crop restrictions must be adhered to when planting a rotational crop following a fallow application of PENDIM H₂O HERBICIDE.

Restrictions and Limitations

- DO NOT apply more than 3.0 pints PENDIM H₂O HERBICIDE per season.
- DO NOT apply PENDIM H₂O HERBICIDE within 60 days before harvest of wheat or triticale grain or straw.
- DO NOT apply PENDIM H₂O HERBICIDE within 28 days before harvest of wheat or triticale hay.
- DO NOT apply PENDIM H₂O HERBICIDE within 11 days before harvesting or allowing livestock to graze wheat or triticale forage.

NOTE: If loss of grain crop occurs, any crop registered for **PENDIM H₂O HERBICIDE** preplant incorporated use may be replanted the same year without adverse effects. **DO NOT** replant wheat or triticale.

FOR WEED CONTROL IN WINTER DORMANT BERMUDAGRASS PASTURE AND HAY FIELDS

Application Instructions

PENDIM H₂O HERBICIDE may be applied by ground or chemigation, or by air.

PENDIM H2O HERBICIDE may be applied in fields of Bermudagrass

grown for hay production and/or grown in pastures for livestock grazing. **Apply PENDIM H2O HERBICIDE only to established Bermudagrass** (defined as planted in the fall or spring which has gone through a first cutting/mowing) when in winter dormancy.

Apply **PENDIM H₂O HERBICIDE** prior to target weed germination.

Uniformly apply at a broadcast rate of 1.1 to 4.2 quarts of **PENDIM H₂O HERBICIDE** per acre in a single application. **PENDIM H₂O HERBICIDE** may also be applied in two split applications, with 1/2 the seasonal application rate applied at the onset of winter dormancy followed by the other 1/2 the seasonal application rate applied just prior to spring greenup. **DO NOT** exceed a cumulative total of 4.2 quarts of **PENDIM H₂O HERBICIDE** per acre in any one crop season.

Use the higher application rate of **PENDIM** H_2O **HERBICIDE** where more dense infestations of targeted annual grasses and annual broadleaf weeds are anticipated or when a longer duration of residual weed control is desired.

PENDIM H₂O HERBICIDE may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

PENDIM H₂O HERBICIDE ase, extremely cold weather, drought,

extensive frost heaving, low or high pH, or salinity may weaken stands and make the crop more susceptible to herbicidal injury.

Chemigation Applications

PENDIM H₂O HERBICIDE may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions in the general section covering

Chemigation in **Spraying Instructions** of the **PENDIM H₂O HERBICIDE** container label. Uniform distribution of **PENDIM H₂O HERBICIDE** treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.

Tank Mixes

PENDIM H₂O HERBICIDE may be tank mixed with other herbicides labeled for use in Bermudagrass fields. REPAR recommends testing **PENDIM H₂O HERBICIDE** tank mixes on a small portion of the target crop to determine if damage is likely to occur.

Physical incompatibility, reduced weed control, or crop injury may result from mixing PENDIM H_2O HERBICIDE with other pesticides, additives, or fertilizers.

Applications of postemergence herbicide may cause crop injury, such as stunting or, chlorosis of Bermudagrass. Consult with your local REPAR dealer regarding local tank mix options, Always perform a mixing test to check the compatibility of **PENDIM H₂O HERBICIDE** with all potential tank mix partners and fertilizers.

Follow all precautions and restrictions on the labels of all products applied in combination with **PENDIM H₂O HERBICIDE**. Always follow the most restrictive label.

Restrictions and Limitations

- DO NOT apply PENDIM H₂O HERBICIDE if surface water is present in the field.
- DO NOT exceed a cumulative total of 4.2 quarts of PENDIM H₂O HERBICIDE per acre per year.
- DO NOT harvest Bermudagrass hay until 60 days after treatment with PENDIM H₂O HERBICIDE.
- DO NOT harvest for forage or allow livestock to graze Bermudagrass until 45 days after treatment with PENDIM H₂O HERBICIDE.
- Use only on Bermudagrass grazing areas that are controlled/fenced and livestock are excluded for a minimum restriction period of 45 days after treatment with PENDIM H₂O HERBICIDE.
- Use of PENDIM H₂O HERBICIDE on rangeland is prohibited.

Weeds Controlled

PENDIM H₂O HERBICIDE applied according to this label, prior to weed germination, will control sandbur in addition to the weeds listed on the **PENDIM H₂O HERBICIDE** container label (see Table 2. Weeds Controlled). If weeds have germinated prior to the application of **PENDIM H₂O HERBICIDE**, it may be necessary to apply a herbicide labeled for postemergence activity on those weeds. Weed control may be enhanced by using sequential applications of other registered herbicides.

CONDITIONS OF SALE AND WARRENTY

The **DIRECTIONS FOR USE** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of REPAR CORPORATION (REPAR) or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

REPAR warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Direction For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, REPAR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANT-ABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND REPAR'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, REPAR AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL ORINDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

REPAR and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of REPAR.

Uses with other Products (Tank Mixes)

If this product is used in combination with any other product except as specifically recommended in writing by REPAR, then REPAR shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. If used in combination recommended by REPAR, the liability of REPAR shall in no manner extend to any damage, loss, or injury not directly caused by the inclusion of the REPAR product in such combination use, and in any event shall be limited to return to the amount of the purchase price of the product. *Extreme, Pursuit* and *Raptor* are registered trademarks of BASF.

Caparol, Dual, and *Sequence* are registered trademarks of a Syngenta Group Company.

Clincher and **Grandstand** are registered trademarks and **Granite** is a trademark of Dow AgroSciences LLC.

Cotoran is a registered trademark of Agan Chemical Manufacturers Ltd.

Ignite, LiberyLink, and *Whip* are registered trademarks of Bayer.

Permit is a registered trademark of Nissan Chemical Industries, Ltd.

Regiment is a registered trademark of Kumiai Chemical Industry Co., Ltd.

Roterra is a trademark of Lely USA, Inc

Roundup, Roundup Ready and **Roundup WeatherMAX** are registered trademarks and **Roundup PoweMAX** is a registered trademark of Monsanto Company, LLC.

Staple is a registered trademark of RiceCo LLC.

Strada is a trademark of Isagro USS.

Valor is a registered trademark of Valent U.S.A. Corporation.