

69361-32

Michael up by Boba 1/17/11
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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

69361-32

Date of Issuance:

JAN 12 2011

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

PENDIM H₂O HERBICIDE

Name and Address of Registrant (include ZIP Code):

Mr. N. Bhushan Mandava, Agent for Repair Corporation
Repair Corporation
P.O. Box 4321
Silver Spring, MD 20914

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Your draft submitted label cannot be accepted as submitted. However, your requested product can be unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for registration review of your product under FIFRA section 3(g).
2. Submit the required one year storage stability and corrosion characteristics studies (Guidelines 830.6317 and 830.6320) by January 31, 2013. The observation intervals are 0, 1, 3, 6, 9, and 12 months.
3. Make the following changes to the label:
 - a. Add the product registration number "EPA Reg. No. 69361-32, and the complete EPA Establishment Number to your product label before shipment".
 - b. Add the batch number to all products in disposable containers before shipment.
 - c. On page 1, under the phrase "FOR USE IN SELECTED CROPS", add "SEE TABLE 1 FOR LIST OF CROP USES". Correct the ingredient statement by changing "PENDIMmethalin" to "Pendimethalin".

- d. On page 2, Under "(PPE)", correct the typos to "≥14 mils".
- e. On page 4, left column, bottom of page, move "Table 1. Crop Uses" outside and to the top of the table. Realign the crop, "alfalfa" in Table 1, replace the existing crop with "fruiting vegetables (eggplant, tomato, tomatillo, pepper)", and add "triticale". You mention "triticale" under "wheat. Correct the typo "S[irge" to "Spurge"
- f. Starting on page 5, replace "PENDIM H₂O", and any other variation of the product name, with "PENDIM H₂O HERBICIDE".
- g. On page 6, under "Ground Applications (Broadcast)", correct the typo to "depending" in paragraph numbered 2. Also in paragraph numbered 2, change "pits" to "pts" in the equation. Under "Ground Applications (Dry Bulk Fertilizer)", correct the equation to

2000	X	Pints of PENDIM H ₂ O HERBICIDE	=	Pints of PENDIM
-----		(Recommended Rate per Acre)		H ₂ O HERBICIDE Per
Pounds of fertilizer				Ton of Fertilizer
Per Acre				
- h. On page 7, under "Chemigation Calculation, add "radius in inches" in the formula in number 1. On the right hand side of page, add "(desired application rate)" after "R". Correctly realign the components of the equation that follows, Change "S=should be injected into the system" to "S= is injected into the system".
- i. On page 8, under "Use instructions and Precautions for Flooded Basin Irrigation", item number "5", change the beginning of the first sentence to "Mix PENDIM H₂O HERBICIDE with water at a 1:1 ratio..."
- j. On page 10, under "Restrictions and Limitations", 3rd bullet, add "when" after "...controlling weeds..."
- k. On page 11, remove the hyphen in "Applica-tions". Correct the number 1 heading to "Application Rate less than or equal to 4.3 pts/A (2.0 lbs/A):"
- l. On page 12, change "Grain" to "Hay" in the "ALFALFA" box.
- m. On page 15, under "BRASSICA HEAD AND STEM VEGETABLES" and under "Restrictions and Limitations", on the right column, change the second bullet to read "DO NOT apply within 60 days before broccoli, Chinese Broccoli, Brussels Sprouts, Cauliflower, Cavalo Broccolo and Kohlrabi harvest. DO NOT apply within 70 days of cabbage, Chinese Cabbage (napa) and Chinese Mustard Cabbage".
- n. On page 16, under "CARROTS GROWN FOR SEED PRODUCTION", and under "Restrictions and Limitations", change the third bullet to "DO NOT apply within 60 days before carrot seed harvest."
- o. On page 22, under the "Restrictions and Limitations" for GREEN ONIONS, change the third bullet to "DO NOT apply within 30 days before harvest."
- p. On page 24, correct the typo "FO" in the "PERENNIAL GRASSES GROWN FOR WEED PRODUCTION" Box.
- q. On page 27, under the "Restrictions and Limitations (for water-seeded rice), correct the typo "soild" to "soil" in the 6th bullet.
- r. On pages 29 and 30, under soybean "Restrictions and Limitations", change the 4th bullet to "DO NOT apply within 85 days before harvest." Under strawberry and sugarcane "Restrictions and Limitations", change the wording of the PHI to "DO NOT apply within X days before harvest."
- s. On pages 31 and 32, add "TRITICALE" in the "WHEAT" box. You mention triticale under the wheat "Restrictions and Limitations", and the tolerances for wheat commodities cover the triticale commodities under 40CFR180.1(g). Under the wheat "Restrictions and Limitations", change the 2nd and 3rd bullets to "DO NOT apply PENDIM H₂O HERBICIDE within 60 days before harvest of wheat or triticale grain or straw.", and

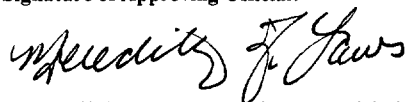
"DO NOT apply PENDIM H₂O HERBICIDE within 28 days before harvest of wheat or triticale hay." Change the 4th bullet to "DO NOT apply PENDIM H₂O HERBICIDE within 11 days before harvesting or allowing livestock to graze wheat or triticale forage." Under the "Restrictions and Limitations" for winter dormant bermudagrass, remove the unnecessary space in the 4th bullet.

- 4. Submit one copy of the revised final printed label for the record before the product is released for shipment.
- 5. A stamped Accepted Label with Comments is enclosed for your files.

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

Please contact Phil Errico at 703-305-6663/ errico.philip@epa.com for any assistance in this matter.

Signature of Approving Official:



Meredith Laws, Acting Herbicide Branch Chief
Herbicide Branch, Registration Division (7505P)

Date:

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PENDIM H₂O HERBICIDE

FOR USE IN SELECTED CROPS

Active Ingredient*:

PENDIMmethalin: N-(1-ethylpropyl)-3,4-dimethyl 2,6-dinitrobenzamine 38.7%

Other Ingredients: 61.3%

Total:..... 100.0%

*1 gallon contains 3.8 pounds of PENDIMmethalin formulated as an aqueous capsule suspension

EPA Reg. No. 69361-

EPA Est. No.

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

JAN 12 2011

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

69361-32

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCIÓN

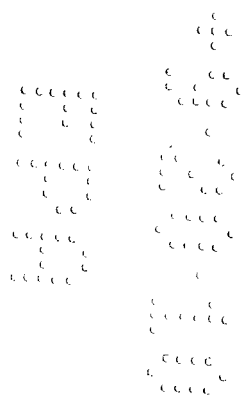
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and statespecific 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:



FIRST AID

If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • 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.
If in eyes	<ul style="list-style-type: none"> • 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.
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • 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 \geq 14 mils, nitrile rubber \geq 14 mils, or neoprene rubber \geq 14 mils
- Shoes plus socks

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

Engineering Controls:

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 H₂O HERBICIDE**. The use of **PENDIM H₂O**

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 through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide 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. PENDING H₂O herbicide freezes around 15°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 ≤ 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 ¼ 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 and 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

GENERAL 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** 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 (tomato, 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
- wheat

Table 2. Weeds Controlled

(see crop sections for additional weeds controlled)

Weeds controlled with PENDIM H₂O HERBICIDE applied up 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*	Woolly cupgrass*
Broadleaves	
Amaranth, Palmer	Mustard, black
Bugloss, small	Pigweed species
Carpetweed	Purslane
Chickweed, common*	Pusley, Florida
Henbit	Shepherdspurse*
Kochia	Smartweed, Pennsylvania*
Lady's thumb	Stirge. Ammia;
Lambsquarters, common	Velvet leaf*
Lambsquarters, slimleaf	Waterhemp species
London rocket*	
* Suppression, but controlled when PENDIM H ₂ O use rate exceeds 4.8 pts/A.	
Weeds controlled with PENDIM H₂O HERBICIDE applied at 4.8 pts/A or greater	
Grasses	
Annual bluegrass	Lovegrass
Browntop panicum	Sprangletop, Mexican
Grass, Guinea	Sprangletop, red
Junglerice	Swollen fingergrass
Broadleaves	
Dodder†	Prostate, knotweed
Fiddleneck	Puncturevine
Morningglory**	
† For optimum dodder control, use the highest labeled rate of PENDIM H ₂ O specified in the specific crop.	
** Suppression	

MODE OF ACTION

PENDIM H₂O 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** 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 when used alone, in tank mix, or sequential applications are given in **Crop-specific 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 loamy sands sandy loams	sandy clay loams* sandy clays loams silt loams silts	silty clay loams* silty clays clay loams clays
*Sometimes considered transitional soils and may be classified as either medium- or fine-textured soils.		
Peat and Muck soils: PENDIM H₂O may be used on peat and muck soils, but weed control may be inconsistent and/or reduced. Use maximum labeled use rate allowed in the specific crop.		

Application Timings

PENDIM H₂O 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** can also be applied through chemigation, including flood basin irrigation systems. **PENDIM H₂O** is recommended 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 H₂O** 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 H₂O** 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 H₂O** 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 H₂O** 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 H₂O** 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 H₂O** 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 recommendations 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** and the zone of brace root formation. **PENDIM H₂O** 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** 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** 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: PENDING H₂O 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 PENDING H₂O applied per acre per season cannot exceed the highest labeled rate for any given soil type. See **Crop-specific Information** for more details on split applications.

Fall Applications: PENDING H₂O may be used in fall applications programs in certain crops. See **Crop-specific Information** for details on fall application timing.

Spraying Instructions

PENDING H₂O 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, PENDING H₂O 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 PENDING H₂O during periods of gusty winds may result in uneven applications. **DO NOT** apply PENDING H₂O 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 PENDING H₂O 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 (dePENDINGng on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to add can be determined by the following formula.

$$\frac{\text{lbs or pints of product/acre}}{\text{gallons of fertilizer/acre}} \times 11.4 = \text{teaspoons of herbicide to add to 1 pint of fertilizer}$$

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 PENDING H₂O 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 ½ 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 PENDING H₂O herbicide with that specific liquid fertilizer.

Ground Applications (Band)

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

$$\frac{\text{Band Width inches}}{\text{Row Width in Inches}} \times \text{Broadcast Rate per Acre} = \text{Band Rate per Acre}$$

$$\frac{\text{Band Width inches}}{\text{Volume Row Width in Inches}} \times \text{Broadcast Volume per Acre} = \text{Band per Acre}$$

Ground Applications (Dry Bulk Fertilizer)

Apply PENDING H₂O/dry bulk fertilizer mixtures only with ground equipment. **DO NOT** impregnate PENDING H₂O 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 PENDING H₂O. A minimum of 200 pounds of dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

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

$$\frac{2000}{\text{Pounds of Dry Fertilizer per Acre}} \times \frac{\text{Pints of PENDING H}_2\text{O (Recommended Rate per Acre)}}{\text{Pints of PENDING H}_2\text{O of ammonium nitrate or limestone}} = \text{Pints of PENDING H}_2\text{O of ammonium nitrate or limestone}$$

To impregnate PENDING H₂O 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 PENDING H₂O onto the fertilizer during mixing.

Apply the PENDING H₂O/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The PENDING H₂O/dry bulk fertilizer mixture must be spread

uniformly on the soil surface.

Chemigation Applications via Sprinkler Irrigation Systems

PENDIM H₂O may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to **Crop-specific Information** sections for individual crops. **DO NOT** apply **PENDIM H₂O** 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**-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 H₂O** applied corresponds to the recommended rate. Apply **PENDIM H₂O** 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 H₂O** is mixed 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.

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** 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**-treated water. Add **PENDIM H₂O** 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** should be mixed in clean water and injected down-line from filters. Following **PENDIM H₂O** injection, system should be flushed for a period of time sufficient to clear the line of **PENDIM H₂O**. (If **PENDIM H₂O** 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**, use the following formula:

1. Treated area per each emitter = A
A=3.14 x (radius x radius)

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

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

$$C = B \times \text{acres covered by system.}$$

$$4. \text{ Rate per treated acre of } \text{PENDIM H}_2\text{O HERBICIDE (based on length of control desired)} = R$$

$$\text{Amount of } \text{PENDIM H}_2\text{O to inject} = S \quad S = \frac{C}{43,560} \times R = \text{qts of } \text{PENDIM H}_2\text{O}$$

Example

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

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

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

If there are 300 emitters per acre, then

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

If the system cover 20 acres, then

$$C = 1105.6 \text{ square feet per acre} \times 20 \text{ acres and}$$

$$C = 22,112 \text{ square feet wetted by system}$$

If the desired application rate per treated acre is 2.4 qts of **PENDIM H₂O**, then

$$S = \frac{22,112}{43,560} \times 2.4 \text{ and } S = 1.2 \text{ qts of } \text{PENDIM H}_2\text{O}$$

1.2 qts of **PENDIM H₂O** should be injected into the system

Special Precautions for Chemigation

1. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
2. **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 supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
4. Tail water (runoff water) from chemigation that contains **PENDIM H₂O** 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** 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.
- 8. 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

- 1. 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 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

- 1. **PENDIM H₂O** 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.
- 2. Follow all label recommendations for **PENDIM H₂O** 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. REPAR recommends that **PENDIM H₂O herbicide** is mixed 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.
- 7. 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** 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 pesticides and capable of being fitted with a system interlock.
 - 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** 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** can vary with water temperature and

speed of water flow across the field.

- 10. Uniform distribution of **PENDIM H₂O**-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.
- 2. 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 Spray Drift Reduction Advisory Information 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 H₂O herbicide** when applications are made prior to weed emergence. However, several tank mixes with **PENDIM H₂O** 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 H₂O** 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.

General Tank Mixing Information

PENDIM H₂O 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** alone.

When using tank mixtures or sequential applications with **PENDIM H₂O**, 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 H₂O** 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 H₂O** or **PENDIM H₂O** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

NOTE: PENDIM H₂O 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-slurry **PENDIM H₂O** in water prior to adding to tank; use 1:1 ratio of water to **PENDIM H₂O**.

- (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.

2. **PENDIM H₂O herbicide Alone**

When using **PENDIM H₂O** alone, add **PENDIM H₂O** to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

3. **PENDIM H₂O Tank Mixes**

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

- (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** 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**. 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

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** will not control established weeds. Destroy emerged weeds prior to application.
- **PENDIM H₂O** is most effective in controlling weeds 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**, 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** 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** 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** include:
coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought, and heavy rainfall soon after application.
- When **PENDIM H₂O** 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 are dependent on the application use rate of PENDIM H₂O 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 H₂O to Field and Row Crops

1. **Application Rate less than or equal to 4.8 pts/A (2.0 lbs ai/A):**
 - a. Crops which are labeled for preplant incorporated application may be planted the same season in which **PENDIM H₂O** 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** or 14 months following a fall application of **PENDIM H₂O**.

These crops should not be planted for 18 months following a spring application of **PENDIM H₂O** or 20 months following a fall application of **PENDIM H₂O** 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** or 12 months after a fall application of **PENDIM H₂O** 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**.

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** 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** 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** 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 H₂O**, 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** or 14 months after a fall application of **PENDIM H₂O**.

In dryland areas and/or areas where irrigation is necessary to produce the crop treated with **PENDIM H₂O**, **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 H₂O** may be applied as a preplant incorporated treatment, may be planted the year following application of **PENDIM H₂O**, 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** or 20 months following a fall application of **PENDIM H₂O**.

- 2. **Application Rate greater than 4.8 pts/A (2.0 lbs. ai/A):** In the growing season following application of **PENDIM H₂O** to field and row crops at greater than 4.8 pts/A, plant only those crops for which **PENDIM H₂O** 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 to Orchard, Grove, and Vineyard Crops

In the growing season following application of **PENDIM H₂O** to bearing fruit and nut trees, plant only those crops for which **PENDIM H₂O** is labeled for preplant incorporated treatment or crop injury may occur. **DO NOT** rotate to other crops (except for nut crops, fruit trees, or grapes) for 24 months following a **PENDIM H₂O** application to bearing fruit or nut trees.

Use Area



Crop Specific Information

Crop Injury Disclaimer: **PENDIM H₂O** 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** even when directions for use are followed completely. The user or grower should 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** to determine its suitability. A grower should use **PENDIM H₂O** only to the extent that in his sole opinion the benefit of **PENDIM H₂O** 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** and contribute to poor stands due to failure of crop to emerge, swelling of roots or other below-ground plant parts, less vigorous plant growth and development, and reduction in yield potential. **PENDIM H₂O** may also cause injury to sensitive rotational crops.

ALFALFA
Grown for Forage, Grain or Seed

PENDIM H₂O 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 H₂O** 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 dormancy, 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 H₂O** 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 after first mowing/beatng.
3. Once the alfalfa reaches 10 inches in height or if the alfalfa has been mowed/beaten two or more times, **PENDIM H₂O 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** 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 trifoliolate stage of growth. Applications should be made prior to the alfalfa reaching 6 inches in growth.

Alfalfa Stand Establishment: Apply **PENDIM H₂O** 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 H₂O**; 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** 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 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 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** per acre in any one crop season.
- Follow all precautions and restrictions on the labels of all products applied in combination with **PENDIM H₂O**. Always follow the most restrictive label.
- **DO NOT** apply **PENDIM H₂O** less than 50 days prior to alfalfa harvest for forage or hay.
- **DO NOT** apply **PENDIM H₂O** 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 may be applied by ground or air.

With a single application, uniformly apply **PENDIM H₂O** 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 pre-transplant 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 may be applied by ground or air.

With a single application, uniformly apply **PENDIM H₂O** 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** 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 H₂O 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

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

Pome Fruits Crop Grouping	Stone Fruits Crop Grouping
apple	apricot
crabapple	aprium
loquat	cherry, sweet
mayhaw	cherry, tart
pear	nectarine
pear, oriental	peach
quince	plum
	plum, chicksaw
	plum, Damson
	plum, Japanese
	plumcot
	pluot
	prune

Other Fruit Trees
Pomegranate and Juneberry

Use Methods, Timings and Rates

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

PENDIM H₂O may be applied either in a single application or sequentially with an interval of 30 days or more. Apply **PENDIM H₂O** at between 2.0 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) 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 Use Rate per Acre

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

Ground Applications (Bearing)

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

Apply **PENDIM H₂O** 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 may be applied for preplant incorporated, preplant surface, surface incorporated or preemergence weed control in several nonbearing fruit and nut tree crops. **PENDIM H₂O** 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** prior to transplanting but before weeds emerge. Incorporate **PENDIM H₂O** 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.

Chemigation Applications.

PENDIM H₂O 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**-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 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** per acre per year in pome, stone and other fruit trees.
- **DO NOT** apply more than 6.3 quarts of **PENDIM H₂O** 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 may be applied either in a single application or sequentially with an interval of 30 days or more. Uniformly apply **PENDIM H₂O** 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 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 may be applied surface incorporated or (surface) preemergence.

Apply **PENDIM H₂O** 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 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** prior to transplanting but before weeds emerge. Incorporate **PENDIM H₂O** 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 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** 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 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 may be applied by ground or air.

PENDIM H₂O 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 H₂O** 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** 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 60 days before broccoli harvest
- **DO NOT** apply 70 days before 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 H₂O** 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** 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** 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 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** -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 H₂O may be applied only by layby with ground equipment.

Use Methods, Timings and Rates

Last Cultivation (Layby). Apply **PENDIM H₂O** 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 of 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 should 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 may be applied by ground, air or chemigation.

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

PENDIM H₂O may be applied in conventional tillage as a preemergence or postemergence application in field corn, field 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** contacts the germinating corn seed. Check equipment to ensure good seed coverage.

PENDIM H₂O or **PENDIM H₂O** 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** 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 H₂O** alone or **PENDIM H₂O** plus atrazine when field corn is at least 4 inches tall until last cultivation (layby). **PENDIM H₂O** plus atrazine must be applied before the field corn reaches 12 inches in height.

DO NOT exceed 1.2 lbs 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 H₂O**, 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 Texture	Matter		
	Organic < 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 pts/A	Northern States ¹ pts/A
Coarse	1.5	2.0
Medium	2.0	3.0
Fine	3.0	3.0

¹See Restrictions and Limitations for map of specific states

Restrictions and Limitations

- **DO NOT** apply **PENDIM H₂O** in reduced, minimum or no-till fresh sweet corn, seed corn or popcorn.
- **DO NOT** apply **PENDIM H₂O** 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** 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 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** will suppress Russian thistle in the state of Arizona.

Use Methods and Timings

1. Preplant Surface. Apply **PENDIM H₂O** up to 15 days prior to planting. Apply **PENDIM H₂O** tank mixes and sequential programs as specified under tank mix section.

2. Preplant Incorporated. Apply **PENDIM H₂O** herbicide up to 60 days prior to planting and incorporate. Apply **PENDIM H₂O** tank mixes and sequential programs as specified under the tank mix section.

3. Preemergence. Apply **PENDIM H₂O** at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply **PENDIM H₂O** tank mixes and sequential programs as specified under the tank mix section.

4. Preplant Incorporated followed by Preemergence. Apply **PENDIM H₂O** up to 60 days prior to planting and incorporate. Apply overlay application of **PENDIM H₂O** at planting or up to 2 days after planting. Total amount of **PENDIM H₂O** applied per acre cannot exceed the highest given rate for a given soil type. Preplant incorporated and preemergence applications of may **PENDIM H₂O** be applied with the labeled tank mix herbicide(s).

5. Layby Application (at last cultivation). Apply **PENDIM H₂O** 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 H₂O** 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 H₂O** supplied per acre per season cannot exceed the highest labeled rate for a given soil type. Glyphosate-containing products may be applied with **PENDIM H₂O** at layby in cotton with the **Roundup Ready[®]** gene. **DO NOT** apply glyphosate-containing products at layby on non-Roundup Ready cotton.

6. Postemergence. **PENDIM H₂O** 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** 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** 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, **Caparol[®]** herbicide or **Cotoran[®]** herbicide. Dry ammonium sulfate (AMS) at 17 lbs/100 gallons of spray solution must be used when tank mixing **PENDIM H₂O** with **Roundup PowerMax** or **Roundup WeatherMAX**. Liquid AMS may also be used, but must 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**, **Roundup[®]** herbicide; then fill the tank to capacity with water.

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

Note: The instructions provided for the use of **PENDIM H₂O** on **Roundup Ready cotton** or **Roundup Ready Fied 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 H₂O** with **Roundup PowerMAX** or **Roundup WeatherMAX** (in water): Apply **PENDIM H₂O**

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 H₂O** with **Roundup PowerMax** or **Roundup WeatherMAX** (in water): Apply **PENDIM H₂O** 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 on LibertyLink cotton

Note: The instructions provided for the use of **PENDIM H₂O** on **LibertyLink cotton** are specific to and should 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 H₂O** with **Ignite** (in water): Apply **PENDIM H₂O** 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** 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 H₂O** can be applied in cotton previously treated with at-planting soil applications of **PENDIM H₂O** 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 H₂O**.

Precautions: Postemergence applications of **PENDIM H₂O** 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** 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 H₂O** 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 H₂O** 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 2.0 ¹	2.0
Medium	2.0	3.0
Fine	3.0	4.0

¹DO NOT exceed 1.6 pts/A on coarse-textured soils in California.

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

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

Soil Texture	Conventional Minimum Or No Tillage 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** 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** (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** 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** 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 may be applied by ground or air.

PENDIM H₂O 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** 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 H₂O** 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 H₂O** 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.

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 free of clods.

Use Rates

Preplant Surface and Preplant Incorporated (fall) Application¹

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 Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington and Wyoming only.		

Preplant Incorporated and Preemergence

Soil Texture	Southern States (pts/A)	Northern States ¹	
		<3.0% Organic Matter	>3.0% pts/A
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0

¹ See Restrictions and Limitations for map of specific states.

State-specific Instructions

Idaho, Oregon, Washington

PENDIM H₂O 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** 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** 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** 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** on the grower's specific dry bean variety. **PENDIM H₂O** 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** 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** 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** 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 livestock in treated lupine fields.
- **DO NOT** apply **PENDIM H₂O** more than once per cropping season.
- **DO NOT** apply in any type of irrigation system.

FALLOW

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

PENDIM H₂O 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 H₂O herbicide**. **EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT.** **PENDIM H₂O** 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 H₂O** during a single fallow period.

DO NOT apply **PENDIM H₂O** 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**.

There must be at least a 4-month interval between a **PENDIM H₂O** 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 H₂O** 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**.

FRUITING VEGETABLES

PENDIM H₂O may be applied by ground or air.

PENDIM H₂O 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** 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** 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** should be applied prior to weed emergence. **EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT.**

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

GARLIC

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

In addition, **PENDIM H₂O** may be applied early postemergence in grain sorghum grown 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** 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

¹See **Restrictions and Limitations** for map of specific states

Early Post Emergence Application

Soil Texture	PENDIM H₂O (pts/A)
Coarse	DO NOT USE
Medium, Fine	2.0

Restrictions and Limitations

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

- **DO NOT** apply **PENDIM H₂O** 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**-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 H₂O may be applied preemergence, post-emergence, or split application by ground, air, or chemigation.

Use Methods, Timings and Rates

Uniformly apply 2.0 pints per acre of **PENDIM H₂O** 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 H₂O** 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 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 of harvest.
- **DO NOT** feed forage or graze livestock in treated fields.

LENTILS AND PEAS
(English, Dry, Garden, Dwarf,
Green, Pigeon, and Edible Pod)

PENDIM H₂O may be applied by ground or air.

PENDIM H₂O 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 H₂O** and incorporate (rainfall, irrigation or mechanically) in late fall prior to planting lentils or peas the following spring. Apply **PENDIM H₂O** in 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.

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 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** 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** preemergence in peas unless otherwise noted in state-specific instructions.
- **DO NOT** apply **PENDIM H₂O** 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** can be double cropped after peas.

MINT
(Peppermint and Spearmint)

PENDIM H₂O may be applied by ground or air.

Use Methods and Timings

Make a single broadcast preemergence application of **PENDIM H₂O** 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 H₂O** application, some temporary crop injury may be observed early in the growing season as mint breaks dormancy and begins to grow.

PENDIM H₂O 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** 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 may be applied by ground, air or

chemigation.

Chemigation Applications

PENDIM H₂O may be applied through sprinkler irrigation systems. Apply between the 2nd and 9th true-leaf stage (2nd to 6th true-leaf stage in California) unless otherwise specified below. **DO NOT** irrigate in excess of ½ 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 H₂O** 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 may be applied sequentially in seeded dry bulb onions. Apply first application of **PENDIM H₂O** at loop stage. Apply sequential application of **PENDIM H₂O** early postemergence (2nd to 9th true-leaf stage). **DO NOT** exceed the maximum labeled rate for a given soil texture. **DO NOT** apply **PENDIM H₂O** at loop stage through the 9th 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 H₂O** into preformed beds prior to transplanting.

Additional Use in Idaho, Oregon, and Washington

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

PENDIM H₂O 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 H₂O** using chemigation at the dodder control rate.

PENDIM H₂O 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** as a banded application at rates based on appropriate soil texture. Band width is the width of the row spacing. Keep **PENDIM H₂O** away from the area where dry bulb onion

seed will be planted.

Harrow-off tops of beds following **PENDIM H₂O** furrow applications prior to planting onions. For selective weed control in the onion row, apply **PENDIM H₂O** as a banded postemergence application to flag leaf dry bulb onions at labeled rates based on soil texture. Apply **PENDIM H₂O** 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 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)

- **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** 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 may be applied sequentially on muck soils as follows:

Application, Timing and Growth Stage	Rate (pts/A)
Preemergence through Loop Stage	4.0
Early Postemergence (2 nd to 6 th true leaf stage)	4.0
Late Postemergence (6 th 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** 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.
- **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** 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 may be applied by ground, air, or chemigation.

PENDIM H₂O may be applied preplant incorporated in peanuts.

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

DO NOT use in California.

Use Methods and Timings

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

Preemergence. Apply **PENDIM H₂O** 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 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 Texas panicum, up to 3.6 pts/A of **PENDIM H₂O** 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** prior to target weed germination. Uniformly apply at a broadcast rate of 2.1 to 4.2 quarts of **PENDIM H₂O** per acre in a single application. **PENDIM H₂O** may also be applied in two split applications, with ½ the seasonal application rate applied in the fall or winter followed by the other ½ the

seasonal application rate applied in the spring. **DO NOT** exceed a cumulative total of 4.2 quarts of **PENDIM H₂O** per acre in any one crop season.

In both warm- and cool-season perennial grasses, use the higher application rate of **PENDIM H₂O** 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 H₂O** application, or reduced weed control may result.

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

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

• **Warm-season perennial grasses**

Apply **PENDIM H₂O** 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 H₂O** to postharvest grass during the fall or during winter dormancy or after the first seed harvest/cutting. **DO NOT** apply to warm-season perennial grasses after green-up in the spring prior to the first seed harvest/cutting.

• **Cool-season perennial grasses**

Apply **PENDIM H₂O** 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** 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 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** container label. Uniform distribution of **PENDIM H₂O**-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 may be tank mixed with **Outlook® herbicide** or with other herbicides labeled for use in perennial grasses grown for seed. BASF recommends testing **PENDIM H₂O** 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 Prowl H₂O 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** with all potential tank mix partners. Follow all precautions and restrictions on the labels of all products applied in combination with **PENDIM H₂O**. 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 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** container label (see Table 2. Weeds Controlled). If weeds have germinated prior to the application of **PENDIM H₂O**, 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 may be applied by ground, air, or chemigation.

PENDIM H₂O 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** will control stinging nettle in potatoes.

Use Methods and Timings

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

Preemergence Incorporated. Apply **PENDIM H₂O** and incorporate after planting but before potatoes and weeds emerge. Where dragoff is practiced, apply **PENDIM H₂O** 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** from from emergence to the 6-inch stage of growth. **DO NOT** apply **PENDIM H₂O** postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

Chemigation Applications

PENDIM H₂O may be applied through sprinkler irrigation systems. Apply **PENDIM H₂O** 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	<3.0% Organic Matter >3.0%	
	(pts/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** per season.
- Application of **PENDIM H₂O** on White Rose variety potatoes

during or followed by cool and/or wet weather conditions may result in crop injury.

RICE

PENDIM H₂O 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** contacts germinating rice seed. **PENDIM H₂O** 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** 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** alone or in tank mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with **PENDIM H₂O** 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 recommended rate of **PENDIM H₂O** 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 ½ inch long. If there is insufficient moisture, flushing is recommended before **PENDIM H₂O** 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 H₂O**, 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**.

Early Postemergence. Apply **PENDIM H₂O** 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**, 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**.

Postemergence (California water-seeded rice only). Apply **PENDIM H₂O** 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 H₂O** treated soil zone. Injury, stunting, and/or stand reduction can occur if **PENDIM H₂O** 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** 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 does not control weeds postemergence; therefore, **PENDIM H₂O** must be tank mixed with a post-emergence herbicide to control emerged weeds at the time of application.

PENDIM H₂O 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*
*suppression only

In California water-seeded rice, **PENDIM H₂O** may be applied with either aerial or ground application equipment. For aerial application, apply the recommended rate of **PENDIM H₂O** 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 recommendations (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 recommended rate of **PENDIM H₂O** in 10 gallons to 20 gallons of water per acre. If **PENDIM H₂O** is applied as a tank mixture with another herbicide, make sure proper gallonage per acre per label recommendations (i.e. 20 to 30 for propanil) is used to ensure adequate coverage. Use a properly calibrated low-pressure (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** during periods of gusty winds or when wind velocity is greater than 20 mph.

Postemergence Tank Mixtures: To control emerged weeds at application, **PENDIM H₂O** herbicide may be tank mixed with one of the following postemergence herbicides:
Clincher[®]
Grandstand[®]
GraniteTM**SC**
propanil (e.g. **Super WHAM!**[®])
Regiment[®]
StradaTM**WG**
Whip360[®]

When using tank mixtures with **PENDIM H₂O** 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** 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** 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** 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** residues from rice cultivation to irrigate food or feed crops that are not registered for use with **PENDIM H₂O**.

In case of a crop failure due to weather conditions or

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disease following treatment with **PENDIM H₂O** alone or in a tank mixture, only drilled dry-seeded 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** contacts germinating rice seed. **DO NOT** replant gibberellic acid-treated seed. **DO NOT** reapply **PENDIM H₂O** 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)
Sandy, loamy sands	DO NOT USE
Sandy loams	1.5
Loams, silt loams, silts, sandy clay loams	2.0
Silty clay loams, clay loams, sandy clays, silty clays	2.0

Early Postemergence Application

Soil Texture	Rate (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** 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** may be applied to rice fields used for crayfish production.
- **DO NOT** use water containing **PENDIM H₂O** residues from rice cultivation to irrigate food or feed crops that are not registered for use with **PENDIM H₂O**.
- In case of a crop failure due to weather conditions or disease following treatment with **PENDIM H₂O** alone or in a tank mixture, only drilled dry-seeded 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** contacts germinating rice seed. **DO NOT** replant with gibberellic acid-treated seed. **DO NOT** reapply **PENDIM H₂O** alone or in a tank mixture.

- **DO NOT** apply **PENDIM H₂O** 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 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** 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 H₂O** 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 H₂O** will not provide season-long weed control.

Preplant Surface. Apply **PENDIM H₂O** up to 15 days prior to planting. **PENDIM H₂O** 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** tank mixes and sequential programs as specified under the tank mix section.

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

Preemergence. Apply **PENDIM H₂O** at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. **DO NOT** make applications of **PENDIM H₂O** 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,
Preplant Surface, or Preplant Incorporated**

Soil Texture	<3.0% Organic Matter >3.0% (pts/A)	
	Coarse	1.5
Medium	2.5 ¹	3.0
Fine ²	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 PENDING H₂O 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
Medium	2.0	2.0
Fine	2.0	2.5

**Preplant Incorporated Applications
for Red Rice Control and Itchgrass Suppression**

Soil Texture	Up to 3% Organic Matter ¹ pts/A
Coarse	3.0
Medium	3.0
Fine	4.0

¹This use is not recommended for soils with more than 3% organic matter

Restrictions and Limitations

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

STRAWBERRY

PENDING H₂O 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 PENDING H₂O as a broadcast spray to the soil surface at pre-transplant 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 PENDING H₂O should be applied just before the end of the watering regime to maximize the weed control benefits of PENDING H₂O. Extended periods of irrigation may reduce the residual control provided by PENDING H₂O.

- [Alternate Text A] DO NOT apply PENDING H₂O to strawberry bed if bed is later to be covered with plastic.
- [Alternate Text B] PENDING H₂O 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 PENDING H₂O application if the strawberry beds were covered with plastic.

However, PENDING H₂O 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 PENDING H₂O 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.

PENDING H₂O herbicide may also be applied to strawberries in fall or winter dormancy. Uniformly apply 1.5 to 3.0 pints per acre of PENDING H₂O 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.

PENDING H₂O may also be applied to perennial strawberries after renovation. Uniformly apply 1.5 to 3.0 pints per acre of PENDING H₂O 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

PENDING 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. DO NOT allow PENDING H₂O-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 of harvest.
- DO NOT feed forage or graze livestock in treated fields.

SUGARCANE

PENDING H₂O may be applied by ground or air.

Use Methods and Timings

PENDIM H₂O 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

¹Use the high rate if: clay soils; no mechanical incorporation is planned; heavy weed populations are anticipated; itchgrass infestation is anticipated; shaving is planned.

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

After cultivation and forming the beds in the spring, apply **PENDIM H₂O** 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™** cultivator set to cut 2 or 3 inches deep. A minimum interval of 60 days between **PENDIM H₂O** application and planting of sugarcane is required or crop injury may occur. After planting, apply **PENDIM H₂O** to sugarcane preemergence through layby, but **DO NOT** exceed 12.5 pts/A of **PENDIM H₂O** during one growing season.

Non-cropped Water Drainage Areas Application only in Louisiana. Apply **PENDIM H₂O** 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** with postemergence herbicides and/or mechanical cultivation.

Apply **PENDIM H₂O** at 2.6 to 3.5 qts/A using ground equipment. **DO NOT** apply **PENDIM H₂O** 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** during one growing season.

Restrictions and Limitations

- **DO NOT** exceed 14.4 pints of **PENDIM H₂O** per acre in one growing season.
- **DO NOT** use less than 11 gallons of water as a carrier when applying **PENDIM H₂O** 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 of 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 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 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** and immediately incorporate in late fall prior to planting sunflowers the following spring. Apply **PENDIM H₂O** 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 H₂O** should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

Preemergence. Apply **PENDIM H₂O** at planting or up to 2 days after planting. Preemergence applications of **PENDIM H₂O** 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** prior to planting and mechanically incorporate with tillage.

No-till Sunflowers. **PENDIM H₂O** 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)

Soil Texture	Southern States ¹ pts/A	Northern States <3.0% Organic Matter >3.0 pts/A	
		2.0	2.0
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0

¹See Restrictions and Limitations for map of specific states

Preplant Incorporated (Fall) Application¹

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

¹For use in Minnesota, North Dakota, and South Dakota only.

Restrictions and Limitations (All Tillage Types)

- **DO NOT** apply PENDING H₂O postemergence.
- **DO NOT** feed forage or graze livestock in treated sunflower fields.
- **DO NOT** use in California

TOBACCO

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

Use Methods and Timings

Preplant Incorporated. Apply PENDING H₂O with ground sprayer up to 60 days prior to transplanting tobacco.

Applied according to directions and under normal growing conditions, PENDING H₂O will not harm transplanted tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, PENDING H₂O can produce a temporary retardation of tobacco development.

Layby. PENDING H₂O may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply PENDING H₂O 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
	Medium	
Georgia		
Maryland	sandy clay	2.0
North Carolina	loams, loam	
South Carolina		
Virginia	silt loams, silts	2.5
	Fine	2.5
Other states	Coarse	2.0
	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.

WHEAT

PENDING H₂O herbicide may be applied by ground, air, or chemigation.

PENDING H₂O 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 clods 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 PENDING H₂O 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 PENDING H₂O are intended to be made postemergence, plant seed at least 1/2 inch to 1.0 inch to avoid crop injury.

Uniformly apply PENDING H₂O 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 PENDING H₂O prior to weed emergence. **EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT.**

For control of established weeds, PENDING H₂O may be tank mixed with any postemergence herbicide registered for use in wheat or tricale. PENDING H₂O will provide residual control of the weeds listed in this label. Always perform a mixing test to check the compatibility of PENDING H₂O with all potential tank mix partners.

Use Rates

Soil Texture	Southern States 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

¹See Use Area map in Restrictions and Limitations

In wheat stubble, PENDING H₂O 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. PENDING

H₂O 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** 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** in any fallow application. **DO NOT** make more than one application of **PENDIM H₂O** 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**.

Restrictions and Limitations

- **DO NOT** apply more than 3.0 pints **PENDIM H₂O** per season.
- **DO NOT** apply **PENDIM H₂O** within 60 days of harvest of wheat or tricale grain or straw.
- **DO NOT** apply **PENDIM H₂O** within 28 days of harvest of wheat or tricale hay.
- **DO NOT** apply **PENDIM H₂O** within 11 days of harvest of wheat or tricale forage.

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

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 may be applied in fields of Bermudagrass grown for hay production and/or grown in pastures for livestock grazing. **Apply Prowl H₂O 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** prior to target weed germination. Uniformly apply at a broadcast rate of 1.1 to 4.2 quarts of **PENDIM H₂O** per acre in a single application. **PENDIM H₂O** 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** per acre in any one crop season.

Use the higher application rate of **PENDIM H₂O** 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 may be applied in a sequential use program or as a tank mix with other registered herbicides that control emerged weeds.

PENDIM H₂O may cause temporary injury to Bermudagrass stands. Disease, 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 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** container label. Uniform distribution of **PENDIM H₂O** 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 may be tank mixed with other herbicides labeled for use in Bermudagrass fields. REPAR recommends testing **PENDIM H₂O** 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 H₂O 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** 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**. Always follow the most restrictive label.

Restrictions and Limitations

- **DO NOT** apply **PENDIM H₂O** if surface water is present in the field.
- **DO NOT** exceed a cumulative total of 4.2 quarts of **PENDIM H₂O** per acre per year.
- **DO NOT** harvest Bermudagrass hay until **60 days** after treatment with **PENDIM H₂O**.
- **DO NOT** harvest for forage or allow livestock to graze Bermudagrass until 45 days after treatment with **PENDIM H₂O**.
- 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**.
- Use of **PENDIM H₂O** on rangeland is prohibited.

Weeds Controlled

PENDIM H₂O applied according to this label, prior to weed germination, will control sandbur in addition to the weeds listed on the Prowl H₂O container label (see

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Table 2. Weeds Controlled). If weeds have germinated prior to the application of **PENDIM H₂O**, 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

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