





# FOR USE IN SELECTED CROPS

# **Active Ingredient:\***

pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine	38.7%
Other Ingredients:	61.3%
Total:	100.0%
*1 gallon contains 3.8 pounds of pendimethalin formulated as an agueous capsule suspension.	

EPA Reg. No. 241-418

EPA Est. No.

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

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

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

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

# **Net Contents:**

For use in alfalfa, bearing citrus fruit trees, bearing grape, bearing nut trees, bearing pome fruit trees, bearing stone fruit trees, carrots, corn (field, pop, field seed, pop seed, fresh sweet), cotton, edible beans, garlic, grain sorghum, lentils and peas, mint, nonbearing fruit tree and nut tree crops, nonbearing vineyards, onions and shallots (dry bulb), peanuts, potatoes, rice, soybeans, sugarcane, sunflowers, tobacco, and wheat.

FIRST AID			
<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center of DO NOT give anything by mouth to an unconscious person.</li> </ul>			
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
lf on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
	HOT LINE NUMBER		

#### **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 BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

# **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 an EPA chemical-resistance category selection chart.

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of waterproof material such as butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, or neoprene rubber ≥ 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 (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

# **User Safety Recommendations**

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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 aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters 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  $Prowl^{\circ} H_2O$  herbicide. The use of  $Prowl H_2O$  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. BASF 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. Prowl H\_2O** 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 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.

## STORAGE AND DISPOSAL (continued)

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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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 rinse 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.

(continued)

## STORAGE AND DISPOSAL (continued)

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. **DO NOT** reuse the container for any other purpose. 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 BASF Corporation 1-800-832-HELP (4357)

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

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

**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 material such as butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils
- Shoes plus socks

### **General Information**

**Prowl® H<sub>2</sub>O herbicide** is a selective herbicide for controlling most annual grasses and certain broadleaf weeds as they germinate. Refer to **Table 1** for a complete list of controlled weeds. **Prowl H<sub>2</sub>O** will not control established weeds.

**Table 1. Weeds Controlled** 

(see crop sections for additional weeds controlled)

Weeds controlled with Prowl H <sub>2</sub> O applied up to 4 pts/A			
Grasses			
Annual ryegrass* Italian ryegrass*			
Barnyardgrass	Japanese brome*,1		
Canarygrass*,2	Johnsongrass (seedling)		
Cheat*,2	Jointed goatgrass*,1		
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*,1	Witchgrass		
Itchgrass*	Woolly cupgrass*		
Broa	adleaves		
Amaranth, Palmer Mustard, black <sup>2</sup>			
Bugloss, small <sup>1</sup>	Pigweed species		
Carpetweed	Purslane		
Chickweed, common*	Pusley, Florida		
Henbit	Shepherdspurse*		
Kochia	Smartweed, Pennsylvania*		
Lady's thumb	Spurge, annual		
Lambsquarters, common	Velvetleaf*		
Lambsquarters, slimleaf <sup>2</sup>	Waterhemp species		
London rocket*			
	1110		

<sup>\*</sup>Suppression, but controlled when **Prowl H<sub>2</sub>O** use rate exceeds 4 pts/A. <sup>1</sup>Not suppressed or controlled in California.

# Weeds controlled with Prowl H<sub>2</sub>O applied at 4 pts/A or greater

greater			
Grasses			
Annual bluegrass	Lovegrass		
Browntop panicum	Sprangletop, Mexican		
Grass, Guinea <sup>2</sup>	Sprangletop, red		
Junglerice	Swollen fingergrass		
Broadleaves			
Dodder <sup>†</sup>	Prostrate, knotweed		
Fiddleneck Puncturevine			
Morningglory**			

 $<sup>^{\</sup>dagger}$  For optimum dodder control, use the highest labeled rate of  $Prowl\ H_2O$  specified in the specific crop.

### **Mode of Action**

**Prowl 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, **Prowl 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 **Prowl H\_2O** 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 2** for soil texture groupings used in this label.

**Table 2. Soil Texture Groups** 

<u> </u>				
Coarse	Medium	Fine		
sands	sandy clay loams*	silty clay loams*		
loamy sands	sandy clays	silty clays		
sandy loams	loams	clay loams		
	silt loams	clays		
	silts			

\*Sometimes considered transitional soils and may be classified as either medium- or fine-textured soils.

For **Peat** and **Muck** soils. **Prowl H<sub>2</sub>O** 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**

**Prowl H<sub>2</sub>O** will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into soil by rainfall, sprinkler irrigation, or mechanical tillage prior to weed seedling emergence from soil. **Prowl H<sub>2</sub>O** can also be applied through chemigation, including flooded basin irrigation systems. **Prowl H<sub>2</sub>O** 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 and restrictions by crop.

**Preplant Surface Applications.** For use in minimum tillage or no-tillage production systems, apply **Prowl H<sub>2</sub>O** alone or in tank mixes up to 45 days before planting. When making early preplant surface applications (15 to 45 days prior to planting), **Prowl H<sub>2</sub>O** should be tank

<sup>&</sup>lt;sup>2</sup>Not controlled in California.

<sup>\*\*</sup>Suppression

<sup>&</sup>lt;sup>2</sup>Not controlled in California.

mixed or followed by a postemergence herbicide application. Rainfall or sprinkler irrigation after application is required to move this product into the upper soil surface where weed seeds germinate.

**Preplant Incorporated Applications.** Apply **Prowl® H<sub>2</sub>O herbicide** and incorporate into the upper (1 inch to 2 inches) soil surface up to 60 days before planting. Use an implement capable of giving uniform incorporation; two-pass incorporation usually results in a more consistent result.

**Surface Incorporated Applications.** Uniformly apply **Prowl H<sub>2</sub>O** 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 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 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. Prowl  $H_2O$  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 postemergence 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 1 inch of soil over the base of the crop plants. This will prevent direct contact of **Prowl H<sub>2</sub>O** and the zone of brace root formation. **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** 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**
- With adequate overhead irrigation water or rainfall. See Crop-specific Information (Corn and Grain Sorghum) for more details on (CULTI-SPRAY) application.

**Layby Application.** Apply **Prowl H\_2O** 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. Prowl H<sub>2</sub>O** may be applied preplant 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 **Prowl H<sub>2</sub>O** 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. Prowl H<sub>2</sub>O may be used in fall application programs in certain crops. See Crop-specific Information for details on fall application timing.

# **Spraying Instructions**

**Prowl H<sub>2</sub>O** 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, **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** during periods of gusty winds may result in uneven applications. **DO NOT** apply **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** alone or with other herbicides based on the following compatibility "**jar test**":

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

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

 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 **Prowl® H<sub>2</sub>O herbicide** to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes; 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 the 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 1/2 teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, **DO NOT** use **Prowl H<sub>2</sub>O** with that specific liquid fertilizer.

### **Ground Applications (Band)**

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

#### **Ground Applications (Dry Bulk Fertilizer)**

Apply **Prowl H<sub>2</sub>O**/dry bulk fertilizer mixtures only with ground equipment. **DO NOT** impregnate **Prowl H<sub>2</sub>O** onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with **Prowl H<sub>2</sub>O**. A minimum of 200 pounds of impregnated dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

Use the following formula to determine the amount of **Prowl H\_2O** to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

2000		Prowl H <sub>2</sub> O	Prowl H <sub>2</sub> O per
pounds of dry fertilizer per acre	Х	(recommended rate per acre)	ton of fertilizer

To impregnate  $Prowl\ H_2O$  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  $Prowl\ H_2O$  onto the fertilizer during mixing.

Apply the **Prowl H<sub>2</sub>O**/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The **Prowl H<sub>2</sub>O**/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

# Chemigation Applications via Sprinkler Irrigation and Drip Irrigation Systems

**Prowl H<sub>2</sub>O** may be applied as a chemigation treatment through sprinkler irrigation and drip irrigation systems. Refer to **Crop-specific Information** sections for individual crops. **DO NOT** apply **Prowl H<sub>2</sub>O** via chemigation to crops unless specified in **Crop-specific Information** section.

Apply this product **ONLY** through a sprinkler irrigation system of the following type: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move.

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

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

Uniform distribution of **Prowl H<sub>2</sub>O**-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 **Prowl H<sub>2</sub>O** applied corresponds to the recommended rate. Apply **Prowl H<sub>2</sub>O** in 1/2 to 3/4 inch of water during the first sprinkler set (use at least 1 inch of water in the states of **New Mexico**, **Oklahoma** and **Texas**). BASF recommends that **Prowl H<sub>2</sub>O** 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 Instructions (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 **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O**-treated water. Add **Prowl H<sub>2</sub>O** to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in **Prowl H<sub>2</sub>O** injection tank. **Prowl H<sub>2</sub>O** should be mixed in clean water and injected down-line from filters. Following **Prowl H<sub>2</sub>O** injection, system should be flushed for a period of time sufficient to clear the line of **Prowl H<sub>2</sub>O**. (If **Prowl H<sub>2</sub>O** 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 **Prowl® H<sub>2</sub>O herbicide**, use the following formula:

- Treated area per each emitter = A
   A = 3.14 x (radius x radius)
- 2. The area in square feet wet in each acre = B

$$B = \frac{A \times emitters/acre}{144}$$

- 3. The total area (in square feet) wet by your system = C C = B x acres covered by system.
- 4. Rate per treated acre of  $Prowl\ H_2O$  (based on length of control desired) = R

Amount of **Prowl H<sub>2</sub>O** to inject = S

$$S = \frac{C}{43,560} \times R = qts \text{ of } Prowl H_2O$$

### Example:

If the average distance from emitter to perimeter of wetted area measured 1 inch below soil surface is 13 inches, then

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

If there are 300 emitters per acre, then

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

If the system covers 20 acres, then

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

If the desired application rate per treated acre is 2.0 qts of **Prowl H<sub>2</sub>O**, then

$$S = \frac{22,112}{43,560} \times 2.0 \text{ and } S = 1.0 \text{ qt} = \text{amount of } \textbf{Prowl H}_2\textbf{O}$$
 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.
- 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 Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O 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, when 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**

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 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 top 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

**Prowl H<sub>2</sub>O** may be applied via flood, flooded basin, or gravity flow irrigation systems, but only to the following crops: bearing and nonbearing fruit and nut trees, bearing and nonbearing vineyards, and alfalfa.

# Use Instructions and Precautions for Flood, Flooded Basin, and Gravity Flow Irrigation

 Prowl H<sub>2</sub>O may be applied through flood, flooded basin, or gravity flow irrigation systems designed to uniformly distribute irrigation water along the soil

- surface. Solid set systems utilizing tall riser for overhead application are excluded.
- Follow all label recommendations for Prowl® H<sub>2</sub>O herbicide regarding rates per acre, timing of application, and crop-specific restrictions and limitations.
- 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. BASF recommends that **Prowl H<sub>2</sub>O** 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 or gravity flow irrigation that contains **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** 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 toward the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - The system must contain 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 materi-

- als 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 **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** can vary with water temperature and speed of water flow across the field.
- Uniform distribution of **Prowl H<sub>2</sub>O**-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.
- 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 and the grower. The interaction of many equipment- and weather-related factors determine 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 airstream and never be pointed downward more than 45 degrees.

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

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

#### **Information On Droplet Size**

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

Wind; Temperature and Humidity; and Temperature Inversions).

## **Controlling Droplet Size**

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

**Pressure. DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

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

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

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

### **Application Height**

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

# Swath Adjustment

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

### Wind

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

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

# **Temperature and Humidity**

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

## **Temperature Inversions**

Applications shall 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 to 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  $Prowl^{\circ}H_{2}O$  herbicide when applications are made prior to weed emergence. However, several tank mixes with  $Prowl\ H_{2}O$  require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30%, or 32% UAN [urea ammonium nitrate] or AMS [ammonium sulfate]), or crop oil concentrate may be used with  $Prowl\ H_{2}O$  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**

**Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** alone.

When using tank mixtures or sequential applications with **Prowl H<sub>2</sub>O**, 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  $Prowl\ H_2O$  with all potential tank mix partners.

# **Mixing Instructions**

 Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Prior to mixing **Prowl H<sub>2</sub>O** or **Prowl H<sub>2</sub>O** tank mixtures in liquid fertilizer, refer to appropriate label sections for recommended uses in liquid fertilizer, application instructions, and compatibility determinations.

**NOTE:** Prowl®  $H_2O$  herbicide will **NOT** mix in high salt formulation fertilizers, such as 10-34-0. When utilizing high salt formulation fertilizers as the spray carrier, use **one** of the following:

- a. Pre-slurry **Prowl H<sub>2</sub>O** in water prior to adding to tank; use 1:1 ratio of water to **Prowl H<sub>2</sub>O**.
- b. Add water to fertilizer solution prior to adding Prowl H<sub>2</sub>O. The amount of water should be equal to or greater than the amount of Prowl H<sub>2</sub>O to be used.

## 2. Prowl H<sub>2</sub>O Alone

When using **Prowl H<sub>2</sub>O** alone, add **Prowl H<sub>2</sub>O** to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

# 3. Prowl H<sub>2</sub>O Tank Mixes

Add the tank mixture ingredients in the order listed below prior to adding **Prowl H<sub>2</sub>O**:

- 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 Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O. 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.

## **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.
- Prowl H<sub>2</sub>O will not control established weeds. Destroy emerged weeds prior to application.
- Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O, 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 Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O include: coarse soils, compaction, high salinity, eroded knolls/hill-tops, cold and/or wet soils, drought, and heavy rainfall soon after application.
- When Prowl H<sub>2</sub>O is used in tank mix or sequential combinations, refer to label of other herbicides for additional rotational crop restrictions.
- Restrictions for rotational cropping after the use of Prowl H<sub>2</sub>O are dependent on the application use rate of Prowl H<sub>2</sub>O in the primary crop. The user should thoroughly read the following restrictions to determine the rotational crops for their specific situation, according to application use rate.

Rotational Crop Restrictions Following Applications of Prowl H<sub>2</sub>O to Field and Row Crops

- 1. Application Rate less than or equal to 4 pts/A (2.0 lbs ai/A)
  - a. Crops which are labeled for preplant incorporated application may be planted the same season in which **Prowl H<sub>2</sub>O** 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 Prowl H<sub>2</sub>O or 14 months following a fall application of Prowl H<sub>2</sub>O.

These crops should not be planted for 18 months following a spring application of **Prowl H<sub>2</sub>O** or 20 months following a fall application of **Prowl H<sub>2</sub>O** 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 **Prowl® H<sub>2</sub>O herbicide** or 12 months after a fall application of **Prowl H<sub>2</sub>O**, 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 **Prowl H<sub>2</sub>O** or 21 months following a fall application of **Prowl H<sub>2</sub>O**.

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 **Prowl H<sub>2</sub>O** or 20 months following a fall application of **Prowl H<sub>2</sub>O** if rainfall or irrigation was not sufficient to produce a field or row crop.

### d. Wheat and Barley

Wheat and barley may be planted 4 months after an application of **Prowl H<sub>2</sub>O**, 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 **Prowl H<sub>2</sub>O** or 14 months after a fall application of **Prowl H<sub>2</sub>O**.

In dryland areas and/or areas where irrigation is necessary to produce the crop treated with  $Prowl\ H_2O$ ,  $DO\ NOT$  plant winter wheat or barley as a follow crop if crop failure/destruction occurs and land is fallowed during the summer.

# e. All Other Rotational Crops Not Specifically Addressed Above

Crops, other than those to which **Prowl H<sub>2</sub>O** may be applied as a preplant incorporated treatment, may be planted the year following application of **Prowl H<sub>2</sub>O**, 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 **Prowl H\_2O** or 20 months following a fall application of **Prowl H\_2O**.

2. Application Rate greater than 4 pts/A (2.0 lbs ai/A) In the growing season following application of Prowl H<sub>2</sub>O to field and row crops at greater than 4 pts/A, plant only those crops for which Prowl H<sub>2</sub>O is labeled for preplant incorporated treatment or crop injury may occur. DO NOT plant other crops for 24 months.

# Rotational Crop Restrictions Following Applications of Prowl H<sub>2</sub>O to Orchard, Grove, and Vineyard Crops

In the growing season following application of **Prowl H<sub>2</sub>O** to bearing fruit and nut trees, or grapes, plant only those crops for which **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** application to bearing fruit or nut trees or grapes.

#### **Use Area**



# **Crop-specific Information**

Crop Injury Disclaimer. Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O 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. BASF 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 Prowl H<sub>2</sub>O to determine its suitability. A grower should use Prowl H<sub>2</sub>O only to the extent that, in his sole opinion, the benefit of Prowl H<sub>2</sub>O 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 **Prowl H<sub>2</sub>O** 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. **Prowl H<sub>2</sub>O** may also cause injury to sensitive rotational crops.

# ALFALFA (Grown for Forage, Hay, or Seed)

**Prowl H<sub>2</sub>O** 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 which has gone through a first cutting/mowing.) Uniformly apply **Prowl® H<sub>2</sub>O herbicide** at a broadcast rate of 1.0 to 4.0 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 which has gone through a summer season of cutting/mowing.) Uniformly apply **Prowl H\_2O** at a broadcast rate of 1.0 to 4.0 quarts per acre prior to weed emergence in **one** of the following ways:

- Apply to dormant established alfalfa.
- Apply before alfalfa exceeds 10 inches in height after first mowing/beating.
- When the alfalfa reaches 10 inches in height or if the alfalfa has been mowed/beaten 2 or more times,
   Prowl H<sub>2</sub>O must be applied with drop nozzles

Prowl H<sub>2</sub>O 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 **Prowl H\_2O** at a broadcast rate of 1.0 to 2.0 pints per acre prior to weed emergence. Applications can be made when the seedling alfalfa has reached the 2nd trifoliate stage of growth. Applications should be made prior to the alfalfa reaching 6 inches in growth.

# **Chemigation Applications**

**Prowl H<sub>2</sub>O** may be applied through sprinkler irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label.

# Flood, Flooded Basin and Gravity Flow Irrigation Systems

**Prowl H<sub>2</sub>O** 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 exceed 4.0 quarts of Prowl H<sub>2</sub>O per acre in any one crop season.
- Follow all precautions and restrictions on the labels of all products applied in combination with **Prowl H<sub>2</sub>O**.
   Always follow the most restrictive label.
- DO NOT apply Prowl H<sub>2</sub>O less than 50 days prior to alfalfa harvest for forage or hay.
- DO NOT apply Prowl H<sub>2</sub>O 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.

# BEARING AND NONBEARING FRUIT AND NUT TREES

**Prowl H<sub>2</sub>O** may be applied in the following individual crops within the fruit tree and tree nut crop groupings:

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

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

Pome Fruits Crop Grouping	Stone Fruits Crop Grouping	
apple crabapple pear pear, oriental	apricot aprium cherry, sweet cherry, tart nectarine peach plum plum, chicksaw plum, Damson plum, Japanese plumcot pluot prune	
Other Fruit Trees		
pomegranate		

### **Use Methods, Timings and Rates**

**Prowl H<sub>2</sub>O** may only be applied by ground, chemigation, or flood, flooded basin and gravity flow irrigation systems.

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

# Prowl® H<sub>2</sub>O herbicide Use Rate per Acre

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

### **Ground Applications (Bearing)**

Prowl H<sub>2</sub>O may be applied surface incorporated or (surface) preemergence.

Apply **Prowl H\_2O** 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)**

**Prowl H<sub>2</sub>O** may be applied for preplant incorporated, preplant surface, surface incorporated or preemergence weed control in several nonbearing fruit and nut tree crops. **Prowl H<sub>2</sub>O** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Uniformly apply **Prowl H<sub>2</sub>O** prior to transplanting but before weeds emerge. Incorporate **Prowl H<sub>2</sub>O** 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.

## **Chemigation Applications**

**Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O**-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

**Prowl H<sub>2</sub>O** 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 more than 4.2 quarts of Prowl H<sub>2</sub>O per acre per year in pome, stone and other fruit trees.
- DO NOT apply more than 6.3 quarts of Prowl H<sub>2</sub>O 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**

**Prowl H<sub>2</sub>O** may be only applied by ground, chemigation, or flood, flooded basin and gravity flow irrigation systems.

# **Use Methods, Timings and Rates**

With a single application, uniformly apply **Prowl H\_2O** in bearing grape vineyards up to 6.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy (see chart following).

# Prowl H<sub>2</sub>O Use Rate per Acre

Low Use Rate	3.2 quarts
High Use Rate	6.3 quarts

Prowl H<sub>2</sub>O may be applied anytime after fall harvest, during winter dormancy, and in the spring.

### **Ground Applications (Bearing)**

**Prowl H<sub>2</sub>O** may be applied surface incorporated or (surface) preemergence.

Apply **Prowl H\_2O** 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)**

**Prowl H<sub>2</sub>O** may be applied for preplant incorporated, preplant surface, surface incorporated or preemergence weed control in nonbearing vineyards. **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** prior to transplanting but before weeds emerge. Incorporate **Prowl H<sub>2</sub>O** 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**

**Prowl® H<sub>2</sub>O herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section of this label. **DO NOT** apply **Prowl H<sub>2</sub>O**-treated irrigation water over the top of grape vines with leaves, or buds, or fruit.

# Flood, Flooded Basin and Gravity Flow Irrigation Systems

**Prowl H<sub>2</sub>O** 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 vinevards.

#### **CARROTS**

**Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** 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. Prowl H<sub>2</sub>O** 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.

**Prowl H<sub>2</sub>O** 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**

**Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O**-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**

**Prowl H<sub>2</sub>O** may be applied only by layby with ground equipment.

### **Use Methods, Timings and Rates**

Last Cultivation (Layby). Apply Prowl H<sub>2</sub>O 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, should 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)

**Prowl®** H<sub>2</sub>O herbicide may be applied by ground, air or chemigation. **Prowl** H<sub>2</sub>O may be applied in conventional, minimum, or no-till as a preemergence, postemergence, or postemergence incorporated (CULTI-SPRAY) application in field corn.

**Prowl H<sub>2</sub>O** may be applied in conventional tillage as a preemergence or postemergence application in fresh sweet corn, seed corn, or popcorn.

# 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  $Prowl\ H_2O$  contacts the germinating corn seed. Check equipment to ensure good seed coverage.

**Prowl H<sub>2</sub>O** or **Prowl H<sub>2</sub>O** 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 1**, **Prowl H<sub>2</sub>O** 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.

**CULTI-SPRAY.** Apply **Prowl H<sub>2</sub>O** alone or **Prowl H<sub>2</sub>O** plus atrazine when field corn is at least 4-inches tall until last cultivation (layby). **Prowl H<sub>2</sub>O** 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  $Prowl\ H_2O$ , the depth of cut should be no deeper than the depth of cut used to incorporate.

# **Chemigation Applications**

**Prowl H<sub>2</sub>O** 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

0 11				
	Organic Matter			
Soil Texture	<1.5% (pts/A)	1.5% to 3.0% (pts/A)	>3.0% (pts/A)	
Coarse	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 States¹ (pts/A)	Northern States¹ (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 **Prowl H<sub>2</sub>O** in reduced, minimum or notill fresh sweet corn, seed corn or popcorn.
- DO NOT apply Prowl H<sub>2</sub>O 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.
- Prowl H<sub>2</sub>O 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

**Prowl® H<sub>2</sub>O herbicide** may be applied by ground, air, or chemigation in conventional, minimum, stale seedbed, or no-till as a preplant surface, preplant incorporated, preemergence, or layby 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 1**, **Prowl H<sub>2</sub>O** will suppress Russian thistle in the state of Arizona.

# **Use Methods and Timings**

- **1. Preplant Surface.** Apply **Prowl H<sub>2</sub>O** up to 15 days prior to planting. Apply **Prowl H<sub>2</sub>O** tank mixes and sequential programs as specified under the tank mix section.
- **2. Preplant Incorporated.** Apply **Prowl H<sub>2</sub>O** up to 60 days prior to planting and incorporate. Apply **Prowl H<sub>2</sub>O** tank mixes and sequential programs as specified under the tank mix section.
- **3. Preemergence.** Apply **Prowl H<sub>2</sub>O** at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply **Prowl H<sub>2</sub>O** tank mixes and sequential programs as specified under the tank mix section.
- **4. Preplant Incorporated followed by Preemergence.** Apply **Prowl H<sub>2</sub>O** up to 60 days prior to planting and incorporate. Apply overlay application of **Prowl H<sub>2</sub>O** at planting or up to 2 days after planting. Total amount of **Prowl H<sub>2</sub>O** applied per acre cannot exceed the highest labeled rate for a given soil type. Preplant incorporated and preemergence applications of **Prowl H<sub>2</sub>O** may be applied with the labeled tank mix herbicide(s).
- **5. Layby Application (at last cultivation).** Apply **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** applied per acre per season cannot exceed the highest labeled rate for a given soil type. Glyphosate-containing products may be applied with **Prowl H<sub>2</sub>O** at layby in cotton with the

Roundup Ready® gene. DO NOT apply glyphosate-containing products at layby on non-Roundup Ready cotton.

# **Chemigation Applications**

**Prowl H<sub>2</sub>O** 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. Prowl H\_2O** 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 **Prowl H\_2O** 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 for Preplant, Preemergence and Layby Applications**

Soil Texture	Conventional or Minimal Tillage (pts/A)	No-till <sup>2</sup> (pts/A)
Coarse	1.0 to 2.0 <sup>1</sup>	2.0
Medium	2.0	3.0
Fine	3.0	4.0

<sup>1</sup>DO NOT exceed 1.6 pts/A on coarse-textured soils in California. <sup>2</sup>Not recommended for soils with more than 3% organic matter.

#### **Restrictions and Limitations**

- DO NOT apply Prowl H<sub>2</sub>O in no-till in California.
- DO NOT exceed the highest seasonal rate per acre for any given soil type.
- Preharvest Interval (PHI) is 60 days between the last
   Prowl H<sub>2</sub>O application and harvest.
- In treated cotton fields, forage may be fed to or grazed by livestock.

#### **EDIBLE BEANS**

Dry, Lima, Snap, Chickpeas (Garbanzo Beans), Southern Peas (Cowpeas), and Sweet Lupines

**Prowl H<sub>2</sub>O** may be applied by ground or air.

**Prowl H<sub>2</sub>O** may only be applied (fall) preplant surface or preplant incorporated in chickpeas (garbanzo beans), dry beans, lima beans, snap beans, and Southern peas (cowpeas). **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** 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

**Prowl® H<sub>2</sub>O herbicide** in the late fall when soil temperatures are 45° F or below but before the ground freezes.

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

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 for Preplant Surface and Preplant Incorporated (fall) Application<sup>1</sup>

#### Use Rate per Acre of Prowl H<sub>2</sub>O

Soil Texture	Broadcast Rate < 3% Organic Matter (pints)	Broadcast Rate > 3% Organic Matter (pints)
Coarse	2.0	2.0
Medium	2.5	3.0
Fine	3.0	3.0

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

# Use Rates for Preplant Incorporated and Preemergence

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern < 3% Organic (pts	: Matter > 3%
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0
<sup>1</sup> See <b>Restrictions and Limitations</b> for map of specific states.			

#### **Restrictions and Limitations**

- **DO NOT** feed lupine hay and forage or graze livestock in treated lupine fields.
- DO NOT apply Prowl H<sub>2</sub>O more than once per cropping season.
- **DO NOT** apply in any type of irrigation system.

# **GARLIC**

**Prowl H<sub>2</sub>O** 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**

**Prowl H<sub>2</sub>O** 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 3.2 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**

**Prowl H<sub>2</sub>O** may be applied by ground or air.

**Prowl H<sub>2</sub>O** may be applied as a postemergence incorporated (CULTI-SPRAY) application in grain sorghum grown in all states.

In addition,  $Prowl\ H_2O$  may be applied early postemergence in grain sorghum grown in states east of the Mississippi River and in Arizona, Arkansas, eastern Texas, Louisiana, and the Missouri "bootheel."

**Additional Weeds Controlled.** In addition to the weeds listed in **Table 1**, **Prowl H<sub>2</sub>O** as a CULTI-SPRAY application will control the following weeds in grain sorghum: wild proso millet and shattercane.

# **Use Methods and Timings**

**CULTI-SPRAY. Prowl H<sub>2</sub>O** treatments can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of grain sorghum. See specific directions for (CULTI-SPRAY) application under **Application Instructions**.

**Early Postemergence.** For use only in states east of the Mississippi River plus Arizona, Arkansas, eastern Texas, Louisiana, and the "bootheel" of Missouri.

The seedbed should be firm and free of clods and trash. Use only where adequate tillage is practiced to provide good seed coverage. Plant grain sorghum at least 1-1/2 inches deep to ensure good seed coverage.

#### **Use Rates**

# **CULTI-SPRAY Application**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States¹ (pts/A)
Coarse	1.5	2.0
Medium	2.0	3.0
Fine	3.0	3.0

<sup>1</sup>See **Restrictions and Limitations** for map of specific states.

# **Early Postemergence Application**

Soil Texture	Prowl® H <sub>2</sub> O herbicide
Coarse	DO NOT USE
Medium, Fine	2.0 pts/A

#### **Restrictions and Limitations**

- **DO NOT** apply **Prowl H<sub>2</sub>O** in grain sorghum preplant incorporated or preemergence because serious crop injury can result.
- DO NOT apply Prowl H<sub>2</sub>O in grain sorghum more than once per crop season.
- DO NOT apply Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>Otreated grain sorghum fields after 21 days following application.

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

Prowl H<sub>2</sub>O may be applied by ground or air.

**Prowl H<sub>2</sub>O** may be applied (fall) preplant surface or preplant incorporated for weed control in lentils and peas.

### **Use Methods and Timings**

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

Apply **Prowl H\_2O** and incorporate (rainfall, irrigation or mechanically) in late fall prior to planting lentils or peas the following spring. Apply **Prowl H\_2O** 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. Prowl H<sub>2</sub>O** 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 for Preplant Surface and Preplant Incorporated (fall) Application<sup>1</sup>

### Use Rate per Acre of Prowl H<sub>2</sub>O

Broadcast Rate (pints)
1.5
2.0
3.0

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

#### Use Rates for Preplant Incorporated

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

#### **Restrictions and Limitations**

- DO NOT use in California.
- **DO NOT** apply **Prowl H<sub>2</sub>O** preemergence in peas unless otherwise noted in state-specific instructions.
- DO NOT apply Prowl H<sub>2</sub>O 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 **Prowl H<sub>2</sub>O** can be double cropped after peas.

# MINT (Peppermint and Spearmint)

**Prowl H<sub>2</sub>O** may be applied by ground or air.

# **Use Methods and Timings**

Make a single broadcast preemergence application of **Prowl H<sub>2</sub>O** to mint at 1.5 pints to 4.0 pints per acre, depending on soil texture (see chart following), to dormant established mint before weed emergence. After a **Prowl H<sub>2</sub>O** application, some temporary crop injury may be observed early in the growing season as mint breaks dormancy and begins to grow.

**Prowl H<sub>2</sub>O** will not cause crop injury when applied according to the label under normal growing conditions. Nonuniform 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 Prowl® H<sub>2</sub>O herbicide to "baby" mint in the first year of growth and establishment.
- DO NOT apply to mint that has broken dormancy or crop injury may result. Application to mint that is near dormancy break can result in crop injury. Risk of crop injury increases the closer application is to mint dormancy break.
- DO NOT apply to mint stands that have been weakened by age, disease, cold weather, excessive moisture, or other factors that reduce crop vigor. Mint growing under stress is more susceptible to herbicidal damage.
- **DO NOT** apply more than 4.0 pints per acre per season.
- **DO NOT** apply within 90 days of harvest.
- **DO NOT** allow livestock to graze on treated spent hay or feed treated spent hay to livestock.
- **DO NOT** apply this product on mint through any type of irrigation system.
- DO NOT use in California except as directed in supplemental labeling.

# ONIONS (Direct-seeded and Transplanted Dry Bulb) and SHALLOTS (Dry Bulb)

Prowl H<sub>2</sub>O may be applied by ground, air or chemigation.

#### **Chemigation Applications**

**Prowl H<sub>2</sub>O** 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 1/2 inch of water. Follow all recommendations, special instructions and precautions about chemigation in the **Spraying Instructions** section 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 **Prowl H\_2O** as a broadcast treatment when onions or shallots have 2 to 9 true leaves.

Additional Use in Colorado, Kansas, and Nebraska Prowl  $H_2O$  may be applied sequentially in seeded onions. Apply first application of Prowl  $H_2O$  at loop stage. Apply sequential application of Prowl  $H_2O$  early postemergence (2nd to 9th true-leaf stage). DO NOT exceed the maximum labeled rate for a given soil texture. DO NOT apply Prowl  $H_2O$  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 onions only, apply and shallow incorporate (less than 2 inches deep) **Prowl H<sub>2</sub>O** into preformed beds prior to transplanting.

Additional Use in Idaho, Oregon, and Washington Apply Prowl H<sub>2</sub>O as a broadcast treatment when onions or shallots are between the flag leaf to 9th true-leaf stage.

**Prowl H<sub>2</sub>O** may be used at 3.0 to 4.0 pints per acre for dodder control on medium- and fine-textured soils.

**DO NOT** apply **Prowl H<sub>2</sub>O** using chemigation at the dodder control rate.

**Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** as a banded application at rates based on appropriate soil texture. Band width should be approximately 1/2 the width of the row spacing. Keep **Prowl H<sub>2</sub>O** away from the area where onion seed will be planted.

Harrow off tops of beds following **Prowl H<sub>2</sub>O** furrow applications prior to planting onions.

For selective weed control in the onion row, apply  $Prowl\ H_2O$  as a banded postemergence application to flag leaf onions at the labeled rates based on soil texture. Apply  $Prowl\ H_2O$  only once to the furrow area and once to the onion row as a postemergence application.

#### Additional Use in Michigan

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

## In California

**Prowl H<sub>2</sub>O** may only be applied as a single application when onions or 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 Prowl® H<sub>2</sub>O herbicide preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after Prowl H<sub>2</sub>O application at the preemergence through loop stage, DO NOT irrigate in excess of 1/2 inch of water.

#### **Muck Soils**

### **Use Rates, Methods and Timings**

**Prowl H<sub>2</sub>O** 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 (2nd to 6th true-leaf stage)	4.0
Late Postemergence (6th to 9th true-leaf stage)	4.0

# **Restrictions and Limitations (Muck Soils)**

- DO NOT apply to muck soils in California.
- DO NOT apply within 45 days of 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 Prowl H<sub>2</sub>O preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after Prowl H<sub>2</sub>O application at the preemergence through loop stage, DO NOT irrigate in excess of 1/2 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 Prowl H<sub>2</sub>O 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**

Prowl H<sub>2</sub>O may be applied by ground, air, or chemigation.

**Prowl H<sub>2</sub>O** may be applied preplant incorporated in peanuts.

**Prowl H<sub>2</sub>O** may also be applied preemergence to peanuts grown under overhead irrigation.

DO NOT use in California.

### **Use Methods and Timings**

**Preplant Incorporated.** Apply **Prowl H<sub>2</sub>O** up to 60 days prior to planting and incorporate.

**Preemergence.** Apply **Prowl H<sub>2</sub>O** 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 application.

### **Chemigation Applications**

**Prowl H<sub>2</sub>O** 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 3.2 pts/A of <b>Prowl H<sub>2</sub>O</b> can be used in Alabama, Florida or Georgia.	

#### **POTATOES**

**Prowl H<sub>2</sub>O** may be applied by ground, air, or chemigation.

**Prowl H<sub>2</sub>O** may be applied preemergence, preemergence incorporated, or early postemergence in potatoes.

**Additional Weeds Controlled.** In addition to the weeds listed in **Table 1**, **Prowl H<sub>2</sub>O** will control stinging nettle in potatoes.

### **Use Methods and Timings**

**Preemergence.** Apply **Prowl H<sub>2</sub>O** after planting, but before potatoes and weeds emerge, or after dragoff.

**Preemergence Incorporated.** Apply **Prowl H\_2O** and incorporate after planting but before potatoes and weeds emerge. Where dragoff is practiced, apply **Prowl H\_2O** 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 **Prowl H<sub>2</sub>O** from crop emergence to the 6-inch stage of growth. **DO NOT** apply **Prowl H<sub>2</sub>O** postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

#### **Chemigation Applications**

**Prowl H<sub>2</sub>O** may be applied through sprinkler irrigation systems. Apply **Prowl H<sub>2</sub>O** 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% Organic Matter >3% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	3.0
Fine	3.0	3.0

### **Restrictions and Limitations**

- DO NOT apply to sweet potatoes or yams.
- DO NOT apply preplant.
- DO NOT make more than one application of Prowl® H<sub>2</sub>O herbicide per season.
- Application of Prowl H<sub>2</sub>O on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

#### **RICE**

**Prowl H<sub>2</sub>O** may be applied by ground or air.

**Prowl H<sub>2</sub>O** may be applied as a delayed 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 **Prowl H<sub>2</sub>O** contacts germinating rice seed.

**Additional Weeds Controlled.** In addition to the weeds listed in **Table 1**, **Prowl H<sub>2</sub>O** will control the following weeds in rice: junglerice and sprangletop.

# **Use Methods and Timings**

**Delayed Preemergence.** Apply **Prowl H<sub>2</sub>O** alone or with tank mix partner for delayed preemergence weed control in grain-drilled, dry-seeded rice. Apply **Prowl H<sub>2</sub>O** alone or in tank mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with **Prowl H<sub>2</sub>O** 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 California.** 

Uniformly apply the recommended rate of **Prowl H<sub>2</sub>O** 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 of 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 1/2-inch long. If there is insufficient moisture, flushing is recommended before **Prowl H<sub>2</sub>O** 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 of 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 **Prowl H<sub>2</sub>O**, 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 **Prowl H<sub>2</sub>O**.

**Early Postemergence.** Apply **Prowl 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 **Prowl 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 **Prowl H2O**.

#### **Use Rates**

# **Delayed Preemergence Applications**

Soil Texture	Rate (pts/A)
Sands, 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, clays	2.0

# **Early Postemergence Application**

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

# **Restrictions and Limitations**

- DO NOT apply Prowl H<sub>2</sub>O through any type of irrigation system.
- **DO NOT** apply in liquid fertilizer.
- DO NOT use on water-seeded rice except as specified in other BASF labeling.
- DO NOT apply to rice fields if fields are used for fish production, especially catfish farming.
- Prowl H<sub>2</sub>O may be applied to rice fields used for crayfish production.
- DO NOT use water containing Prowl H<sub>2</sub>O residues from rice cultivation to irrigate food or feed crops that are not registered for use with Prowl H<sub>2</sub>O.
- In case of a crop failure due to weather conditions or disease following treatment with Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O contacts germinating rice seed. DO NOT replant with gibberellic acid-treated seed. DO NOT reapply Prowl H<sub>2</sub>O alone or in a tank mixture.

- DO NOT apply Prowl® H<sub>2</sub>O herbicide and then flush for germination.
- DO NOT apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage, or deep water after application.
- DO NOT apply early preemergence nor preplant incorporated as severe rice injury is possible.

## **SOYBEANS**

Prowl H<sub>2</sub>O may be applied by ground or air.

**Prowl H<sub>2</sub>O** 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 1**, **Prowl H\_2O** 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. Prowl H<sub>2</sub>O** may be surface applied or incorporated in the fall, after fall harvest and prior to ground freeze in states north of I-80 and the entire states of Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma, and Texas. Fall applications of **Prowl H<sub>2</sub>O** will not provide season-long weed control.

**Preplant Surface.** Apply **Prowl H<sub>2</sub>O** up to 15 days prior to planting. **Prowl H<sub>2</sub>O** 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 **Prowl H<sub>2</sub>O** tank mixes and sequential programs as specified under the tank mix section.

**Preplant Incorporated.** Apply **Prowl H<sub>2</sub>O** up to 60 days prior to planting and incorporate.

**Preemergence.** Apply **Prowl H\_2O** at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. **DO NOT** make applications of **Prowl H\_2O** preemergence north of Interstate 80, except in the states of Indiana, Michigan and Ohio, or as specified in BASF supplemental labeling.

#### **Use Rates**

# Fall Surface, Fall Incorporated, Preplant Surface, or Preplant Incorporated

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	2.0
Medium	2.5¹	3.0
Fine <sup>2</sup>	3.0	3.0

**DO NOT** exceed 2.1 pts for Southern states; see **Restrictions and Limitations** for map of specific states.

 $^2 \text{For}$  heavy clay soils, apply  $\textbf{Prowl}~\textbf{H}_{\textbf{2}}\textbf{O}$  at the broadcast rate of 3.2 pints per acre.

# **Preemergence Applications**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.5	1.5
Medium	2.0	2.0
Fine	2.0	2.5

# Preplant Incorporated Applications for Red Rice Control and Itchgrass Suppression

Soil Texture	Up to 3% Organic Matter¹ (pts/A)
Coarse	3.0
Medium	3.0
Fine	4.0

<sup>1</sup>This use is not recommended for soils with more than 3% organic matter.

#### **Restrictions and Limitations**

- DO NOT use Prowl H<sub>2</sub>O 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.

# **SUGARCANE**

**Prowl H<sub>2</sub>O** may be applied by ground or air.

### **Use Methods and Timings**

**Prowl H<sub>2</sub>O** 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 in order to obtain effective weed control.

### **Use Rates**

Use Area	Broadcast Rate¹ (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

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

#### **Restrictions and Limitations**

- DO NOT exceed 12.5 pints of Prowl H<sub>2</sub>O per acre in one growing season.
- DO NOT use less than 11 gallons of water as a carrier when applying Prowl H<sub>2</sub>O 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**

Prowl® H<sub>2</sub>O herbicide may be applied by ground or air.

**Prowl H<sub>2</sub>O** may be applied preplant incorporated in all states. Fall preplant incorporated applications may be made in Minnesota, North Dakota, and South Dakota only. **Prowl H<sub>2</sub>O** 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 Prowl H<sub>2</sub>O and immediately incorporate in late fall prior to planting sunflowers the following spring. Apply Prowl H<sub>2</sub>O 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 **Prowl H<sub>2</sub>O** should receive at least one shallow additional incorporation. Spring incorporation should be at an angle to the last tillage operation.

Preemergence. Apply Prowl H<sub>2</sub>O at planting or up to 2 days after planting. Preemergence applications of Prowl H<sub>2</sub>O 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 Prowl H<sub>2</sub>O prior to planting and mechanically incorporate with tillage.

#### **Use Rates**

# Preplant Incorporated (Spring) or Preemergence (Conventional Tillage)

			0 ,
	Southern	Norther	n States
Soil Texture	States¹ (pts/A)	< 3% Organic	
Coarse	1.5	2.0	2.0
Medium	2.0	2.5	3.0
Fine	3.0	3.0	3.0

<sup>1</sup>See **Restrictions and Limitations** for map of specific states.

## Preplant Incorporated (Fall) Application<sup>1</sup>

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	2.5	2.5
Medium	3.0	3.5
Fine	3.5 3.5	
<sup>1</sup> For use in Minnesota, North Dakota and South Dakota only.		

#### **NO-TILL SUNFLOWERS**

**Prowl H<sub>2</sub>O** may be applied by ground or air.

**Prowl H<sub>2</sub>O** may be applied at 3.0 pts per acre up to 30 days before planting (preplant) to immediately after planting (preemergence).

**Prowl H<sub>2</sub>O** is most effective in controlling weeds when adequate rainfall or overhead irrigation is received shortly after application.

# Restrictions and Limitations (All Tillage Types)

- DO NOT apply Prowl H<sub>2</sub>O postemergence.
- DO NOT feed forage or graze livestock in treated sunflower fields.
- DO NOT use in California.

#### **TOBACCO**

**Prowl H<sub>2</sub>O** may be applied with ground equipment only preplant incorporated or as a layby application in transplanted tobacco.

# **Use Methods and Timings**

**Preplant Incorporated.** Apply **Prowl H<sub>2</sub>O** with ground sprayer and incorporate up to 60 days prior to transplanting tobacco.

Applied according to directions and under normal growing conditions, **Prowl H<sub>2</sub>O** will not harm transplanted tobacco. Under stress conditions for plant growth, such as cold/wet or hot/dry weather, **Prowl H<sub>2</sub>O** can produce a temporary retardation of tobacco development.

**Layby. Prowl® H<sub>2</sub>O herbicide** may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply **Prowl H<sub>2</sub>O** in a 16-inch to 24-inch band between the crop rows. The spray should not contact tobacco plants.

# Use Rates Preplant Incorporated Application

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

# **Layby Application**

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

#### **Restrictions and Limitations**

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

#### **WHEAT**

**Prowl H<sub>2</sub>O** may be applied by ground, air or chemigation.

**Prowl H<sub>2</sub>O** may be applied postemergence to wheat for weed control in fall-, winter-, or spring-seeded wheat.

# **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 **Prowl H\_2O** are intended to be made postemergence, plant seed at least 1/2 inch to 1-inch deep to avoid crop injury.

Uniformly apply **Prowl H<sub>2</sub>O** as a postemergence treatment from the 1st-leaf stage of wheat until before the flag leaf is visible/emerged for weed control. **Prowl H<sub>2</sub>O** should be applied prior to weed emergence. **EMERGED WEEDS WILL NOT BE CONTROLLED BY THIS TREATMENT.** 

For control of established weeds, **Prowl H<sub>2</sub>O** may be tank mixed with any postemergence herbicide registered for use in wheat. **Prowl H<sub>2</sub>O** will provide residual control of the weeds listed in this label. Always perform a mixing test

to check the compatibility of  $Prowl\ H_2O$  with all potential tank mix partners.

#### **Use Rates**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup> (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
<sup>1</sup> See <b>Use Area</b> map in <b>Restrictions and Limitations</b> .		

In wheat stubble, **Prowl 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. **Prowl 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 **Prowl H2O** fallow application and the rotational planting of any fall-seeded cereal crop. Apply up to, but **DO NOT** exceed, 3 pints/acre of **Prowl H2O** in any fallow application. **DO NOT** make more than one application of **Prowl 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 **Prowl H2O**.

#### **Restrictions and Limitations**

- **DO NOT** apply more than 3.0 pints per season.
- DO NOT apply Prowl H<sub>2</sub>O within 60 days of harvest of wheat grain or straw.
- DO NOT apply Prowl H<sub>2</sub>O within 28 days of harvest of wheat hay.
- DO NOT apply Prowl H<sub>2</sub>O within 11 days of harvest of wheat forage.

**NOTE:** If loss of grain crop occurs, any crop registered for **Prowl H<sub>2</sub>O** preplant incorporated use may be replanted the same year without adverse effects. **DO NOT** replant wheat.

### **Conditions of Sale and Warranty**

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

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