

# SATELLITE®

## HERBICIDE



**ACTIVE INGREDIENT:**

Pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine ..... 37.9%

**OTHER INGREDIENTS:** ..... 62.1%

**TOTAL:** ..... 100.0%

(1 gallon contains 3.3 lbs. of pendimethalin)

\*Contains aromatic naphtha

EPA Reg. No. 70506-318

**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.)

**FIRST AID**

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• DO NOT give any liquid to person.</li> <li>• DO NOT give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <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 eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**NOTE TO PHYSICIAN**

Contains petroleum distillates. Vomiting may cause aspiration pneumonia. Because of increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

**HOTLINE 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 the Rocky Mountain Poison Control Center at 1-866-673-6671 for emergency medical treatment information.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.**



NET CONTENTS: \_\_\_\_\_ GALLONS



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

**CAUTION**

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, or viton ≥ 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.

**PHYSICAL AND CHEMICAL HAZARDS**

Do not mix with or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

**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 website <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 precautions and restrictions in this label and the labels of products used in combination with **Satellite 3.3 herbicide**. The use of **Satellite 3.3 herbicide** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

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

**DO NOT** allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

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

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

**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 barrier laminate, or viton ≥ 14 mils
- Shoes plus socks

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE: DO NOT STORE BELOW 40° F.** Extended storage at temperatures below 40° F can result in the formation of crystals on the bottom of the container. If crystallization does occur, store the container on its side at room temperature (70° F) and rock occasionally until crystals redissolve.

**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.

*(continued)*

## STORAGE AND DISPOSAL *(continued)*

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

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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.

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.

## PRODUCT INFORMATION

**Satellite 3.3 herbicide** is an emulsifiable concentrate formulation that provides selective control of most annual grasses and certain broadleaf weeds as they germinate. Refer to **Table 1** for a complete list of controlled weeds. **Satellite 3.3 herbicide** will not control established weeds.

Unusually cold, excessively wet, or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

Over application can result in crop-stand loss, crop injury, or soil residues.

Uneven application or improper soil incorporation can decrease weed control or cause crop injury. Soil incorporation deeper than specified can reduce weed control.

Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration, or drought can weaken

seedlings and plants and increase the possibility of crop damage from **Satellite 3.3 herbicide**. Under these conditions, crop yields can be reduced.

**Table 1. Weeds Controlled**

(See crop sections for additional weeds controlled)

Weeds controlled with Satellite 3.3 herbicide APPLIED UP TO 4.8 PTS/A	
<b>Grasses</b>	
Barnyardgrass	Japanese brome <sup>*.a</sup>
Canarygrass <sup>*.b</sup>	Johnsongrass (seedling)
Cheat <sup>*.b</sup>	Jointed goatgrass <sup>*.a</sup>
Crabgrass	Oat, wild <sup>*</sup>
Crowfootgrass	Panicum, fall
Downy brome <sup>*</sup> (Cheatgrass)	Panicum, Texas
Foxtail, giant	Sandbur, field
Foxtail, green	Shattercane <sup>*</sup>
Foxtail, yellow	Signalgrass <sup>*</sup>
Goosegrass	Wild proso millet <sup>*</sup>
Hairy chess <sup>*.a</sup>	Witchgrass
Itchgrass <sup>*</sup>	Woolly cupgrass <sup>*</sup>
Italian ryegrass <sup>*</sup>	
<b>Broadleaves</b>	
Amaranth, Palmer	Mustard, black <sup>b</sup>
Bugloss, small <sup>a</sup>	Pigweed species
Carpetweed	Purslane
Chickweed, common <sup>*</sup>	Pusley, Florida
Henbit	Shepherdspurse <sup>*</sup>
Kochia	Smartweed, Pennsylvania <sup>*</sup>
Lady's thumb	Spurge, annual
Lambsquarters, common	Velvetleaf <sup>*</sup>
Lambsquarters, slimleaf	Waterhemp species
London rocket <sup>*</sup>	
* Suppression, but controlled when <b>Satellite 3.3 herbicide</b> use rate exceeds 4.8 pts/A.	
<sup>a</sup> Neither suppressed nor controlled in California.	
<sup>b</sup> Not controlled in California.	

Additional weeds controlled with Satellite 3.3 herbicide APPLIED UP TO 4.8 PTS/A OR GREATER	
<b>Grasses</b>	
Annual bluegrass	Lovegrass
Browntop panicum	Sprangletop, Mexican
Grass, Guinea <sup>b</sup>	Sprangletop, red
Junglerice	Swollen fingergrass
<b>Broadleaves</b>	
Dodder <sup>†</sup>	Prostrate, knotweed
Fiddleneck	Puncturevine
Morningglory <sup>**</sup>	
<sup>†</sup> For optimum dodder control, use the highest labeled rate of <b>Satellite 3.3 herbicide</b> specified in the specific crop.	
<sup>**</sup> Suppression	
<sup>b</sup> Not controlled in California.	

## MODE OF ACTION

**Satellite 3.3 herbicide** is a meristematic inhibitor that interferes with the plant's cellular division or mitosis. This and/or other products with the meristematic inhibiting mode of action may not effectively control naturally occurring biotypes of some of the weeds listed on this label. A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants. Other herbicides with the meristematic inhibiting mode of action include other dinitroaniline herbicides, such as trifluralin. If naturally occurring meristematic inhibiting resistant biotypes are present in a field, **Satellite 3.3 herbicide** and/or any other meristematic inhibiting mode of action herbicide should be tank mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

## SOIL TEXTURE GROUPINGS

Use rates for **Satellite 3.3 herbicide** when used alone, in a 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 below** for soil texture groupings used in this label.

**Table 2. Soil Texture Groups**

<b>Coarse</b>	sands loamy sands sandy loams
<b>Medium</b>	sandy clay loams* sandy clays loams silt loams silts
<b>Fine</b>	silty clay loams* silty clays clay loams clays
* These soils are sometimes considered transitional soils and may be classified as either medium-textured or fine-textured soils.	
If <b>Satellite 3.3 herbicide</b> is used on <b>peat and muck soils</b> , weed control may be inconsistent and/or reduced. Use the maximum labeled use rate allowed in the specific crop.	

## APPLICATION TIMINGS

**Satellite 3.3 herbicide** will provide most effective weed control when applied by ground or aerial equipment and subsequently incorporated into soil within 7 days after application by rainfall, sprinkler irrigation, or mechanical tillage prior to weed seedling emergence from soil. **Satellite 3.3 herbicide** can also be applied through chemigation, including flooded basin irrigation systems. Use **Satellite 3.3 herbicide** for preplant surface, preplant incorporated, surface incorporated, preemergence, early postemergence, postemergence incorporated (CULTI-SPRAY) or layby treatment. See **CROP-SPECIFIC INFORMATION** for specific application directions by crop.

**Preplant Surface Applications:** For use in minimum tillage or no-tillage production systems, apply **Satellite 3.3 herbicide** alone or in tank mixes up to 45 days before planting. When making early preplant surface applications (15 to 45 days prior to planting), tank mix **Satellite 3.3 herbicide** or follow with a postemergence herbicide application. Rainfall or sprinkler irrigation within 7 days after application is required to move this product into the upper soil surface where weed seeds germinate.

**Preplant Incorporated Applications:** Apply **Satellite 3.3 herbicide** and incorporate into the upper 1 to 2 inches of 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 **Satellite 3.3 herbicide** as broadcast or banded treatment to soil surface underneath established trees and/or in ground areas between trees rows. Within 7 days after application, incorporate into upper 1 to 2 inches of soil surface using either rainfall, sprinkler irrigation, or shallow mechanical incorporation using an implement

capable of giving uniform incorporation; two-pass mechanical incorporation usually results in a more consistent result.

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

**Early Postemergence Applications:** **Satellite 3.3 herbicide** must be applied prior to weed seedling emergence or in a tank mix with products that control the emerged weeds. Refer to **CROP-SPECIFIC INFORMATION** for specific postemergence application instructions by crop.

**Postemergence Incorporated Applications:** (CULTI-SPRAY): Prior to application, crop must be cultivated in such a manner as to throw at least one inch of soil over the base of the crop plants. This will prevent direct contact of **Satellite 3.3 herbicide** and the zone of brace root formation. **Satellite 3.3 herbicide** must be applied broadcast with a ground sprayer when crop is at least 4 inches tall up to layby. Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows. Thoroughly and uniformly incorporate **Satellite 3.3 herbicide** treatments into the soil with:

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

**Layby Applications:** Apply **Satellite 3.3 herbicide** directly to the soil between rows as a directed spray following the last normal cultivation (layby). See **CROP-SPECIFIC INFORMATION** for more details on layby application.

**Split Applications:** **Satellite 3.3 herbicide** 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 **Satellite 3.3 herbicide** 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:** **Satellite 3.3 herbicide** may be used in fall application programs in certain crops. See **CROP-SPECIFIC INFORMATION** for details on fall application timing.

## SPRAYING INSTRUCTIONS

**Satellite 3.3 herbicide** may be applied using either water or sprayable fluid fertilizer (such as straight 32-0-0 or 28-0-0) as the spray carrier. Additionally, **Satellite 3.3 herbicide** may be impregnated on dry bulk fertilizer. Sprayable fluid fertilizer as a carrier is not recommended for use after crop emergence unless the typical fertilizer burn symptoms on the crop are acceptable.

### Aerial Application

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. Use a flagging system or an automatic mechanical flagging unit on the aircraft to avoid overlapping and possible crop injury.

### Ground Application (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 **Satellite 3.3 herbicide** during periods of gusty winds may result in uneven applications or unintended drift to sensitive areas (see spray drift management section). **DO NOT** apply **Satellite 3.3 herbicide** postemergence in liquid fertilizers.

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result.



## Compatibility Jar Test

Always predetermine the compatibility of **Satellite 3.3 herbicide** alone or with other herbicides based on the following compatibility "jar test":

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

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

3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials, add appropriate number of teaspoons of **Satellite 3.3 herbicide** to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation: an oily layer or globules, sludge, flakes or other precipitates.
5. Evaluate compatibility.
  - a. If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
  - b. If the mixture separates but mixes readily with shaking, the mixture can be used provided that good agitation is maintained in the spray tank.
  - c. If separation of 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 **Satellite 3.3 herbicide** with that specific liquid fertilizer.

## Ground Applications (Band)

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

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

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

## Ground Applications (Dry Bulk Fertilizer)

Apply **Satellite 3.3 herbicide**/dry bulk fertilizer mixtures only with ground equipment. Do not impregnate **Satellite 3.3 herbicide** 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 **Satellite 3.3 herbicide**. 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 (in pints) of **Satellite 3.3 herbicide** to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer to be applied per acre:

$$\frac{2000 \text{ Pounds of Dry Fertilizer per Acre}}{\text{Pounds of Dry Fertilizer per Acre}} \times \text{Pints of Satellite 3.3 herbicide (Rate per Acre)} = \text{Pints of Satellite 3.3 herbicide per Ton of Fertilizer}$$

To impregnate **Satellite 3.3 herbicide** on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of **Satellite 3.3 herbicide** onto the fertilizer during mixing.

Apply the **Satellite 3.3 herbicide**/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The **Satellite 3.3 herbicide**/dry bulk fertilizer mixture must be spread uniformly on the soil surface.

## Chemigation Application via Sprinkler Irrigation Systems

**Satellite 3.3 herbicide** may be applied as a chemigation treatment through sprinkler irrigation systems. Refer to **CROP-SPECIFIC INFORMATION** sections for individual crops. **DO NOT** apply **Satellite 3.3 herbicide** 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.

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

Uniform distribution of **Satellite 3.3 herbicide**-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have any questions about calibration, contact your state extension service specialists, equipment manufacturers, or other experts.

The system must be properly calibrated (with water only) to ensure that the amount of **Satellite 3.3 herbicide** applied corresponds to the specified rate. Apply **Satellite 3.3 herbicide** in 1/2 to 3/4 inches of water during the first sprinkler set (use at least 1 inch of water in the states of Texas, New Mexico and Oklahoma). 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 **Satellite 3.3 herbicide** injection to have all emitters functioning properly. After system is operating properly, length of injection should be such that at one period of time during the injection, the first and last emitters in the system contain **Satellite 3.3 herbicide**-treated water. Add **Satellite 3.3 herbicide** to the supply tank already filled with the volume of water required for the injection period. Maintain proper agitation in **Satellite 3.3 herbicide** injection tank. Mix **Satellite 3.3 herbicide** in clean water and inject down-line from filters. Following **Satellite 3.3 herbicide** injection, system should be flushed for a period of time sufficient to clear the line of **Satellite 3.3 herbicide**. (If **Satellite 3.3 herbicide** application is made during a normal irrigation cycle, make injection 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 **Satellite 3.3 herbicide**, use the following formula:

1. Treated area per each emitter = A

$$A = 3.14 \times (\text{radius} \times \text{radius})$$

2. The area in square feet wet in each acre = B

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

3. The total area (in square feet) wet by your system = C

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

4. Rate per treated acre of **Satellite 3.3 herbicide**

(based on length of control desired) = R

Amount of **Satellite 3.3 herbicide** to inject = S

$$S = \frac{C}{43,560} \times R = \text{qts of Satellite 3.3 herbicide}$$

**Example:**

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

$A = 3.14 \times (13 \text{ inches} \times 13 \text{ inches})$  and  $A = 530.7$  square inches

If there are 300 emitters per acre, then

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

If the system covers 20 acres, then

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

$C = 22,112$  square feet wetted by system

If the desired application rate per treated acre is 2.4 qts of **Satellite 3.3 herbicide**, then

$S = \frac{22,112 \times 2.4}{43,560}$  and  $S = 1.2$  qts = amount of **Satellite 3.3 herbicide** to inject into the system

**Special Precautions for Chemigation**

1. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
2. Should the need arise, 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.
3. 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.
4. 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.
5. 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.
6. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

**Chemigation Systems Connected to Public Water Systems**

1. Public water system means a system for the provision to the public 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 precautions listed in the preceding section titled **Special Precautions for Chemigation**.

**Applications via Flooded Basin Irrigation Systems**

**Satellite 3.3 herbicide** may be applied via flooded basin irrigation systems, but only to the following crops: nonbearing fruit and nut trees, nonbearing vineyards, and alfalfa grown for seed production.

**Use Instructions and Precautions for Flooded Basin Irrigation**

1. **Satellite 3.3 herbicide** may be applied through flooded basin irrigation systems designed to uniformly distribute irrigation water along the soil surface. Solid set systems utilizing tall riser for overhead application are excluded.
2. Follow all label directions for **Satellite 3.3 herbicide** regarding rates per acre, timing of application, and crop-specific restrictions and precautions.
3. **DO NOT** connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
4. Should the need arise, 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.
5. For best results, mix **Satellite 3.3 herbicide** with water at a 1:1 ratio in the injection nurse tank to assist with product flowability. Maintain agitation in the injection nurse tank to keep a uniform herbicide suspension during application. When application is complete, flush the system with water.
6. Tail water (runoff water) from flood irrigation that contains **Satellite 3.3 herbicide** should be re-circulated and contained in the field of initial application or used only on adjacent tree or vine crops or alfalfa for which **Satellite 3.3 herbicide** is registered for this type of application.
7. 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.
8. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - The system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located in the irrigation pipe to prevent water source contamination from backflow.
  - The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent flow of fluids back towards the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump stops.
  - The irrigation pipe or water pump must include a functional pressure switch, which will stop the pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump), of effective design and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
  - Any alternative to the above safety devices must conform to the list of EPA-approved alternative devices.
9. Be sure to regularly measure the flow in the field to ensure the correct amount of **Satellite 3.3 herbicide** is being metered into the irrigation water and also regularly monitor to ensure that treated water is being uniformly distributed across the field. Flow rates through metering devices and distribution of **Satellite 3.3 herbicide** can vary with water temperature and speed of water flow across the field.

10. Uniform distribution of **Satellite 3.3 herbicide**-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness, or illegal pesticide residues in the crop.
11. If you have questions about calibration, contact your state extension service specialists, equipment manufacturers or other experts.

## MANAGING OFF-TARGET MOVEMENT

### SPRAY DRIFT

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

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

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

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

The applicator should be familiar with and take into account the information covered in the [Spray Drift Reduction Advisory Information](#) presented below.

### 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.

#### Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### Application Height

Make applications at a height not greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft

upwind. Increase the swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

#### Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid application below 2 mph due to variable wind direction and high inversion potential. Avoid application above 10 mph to manage the potential for spray drift to surrounding sensitive areas.

**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

Do not apply 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

Apply this pesticide only 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).

## SPRAY ADDITIVES

Spray adjuvants have little or no influence on performance of **Satellite 3.3 herbicide** when applications are made prior to weed emergence. However, several tank mixes with **Satellite 3.3 herbicide** require adjuvants to improve burndown of emerged weeds. Therefore, surfactants, liquid fertilizer (28%, 30%, or 32% UAN (urea ammonium nitrate) or ammonium sulfate), or crop oil concentrate may be used with **Satellite 3.3 herbicide** tank mixes applied preplant, preemergence, or early postemergence to the crop. Follow the adjuvant directions on the tank mix partner's label.

When an adjuvant (or a specific adjuvant product, such as a drift control agent) is to be used with this product, the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant is recommended. The adjuvants must contain ingredients accepted by the EPA.

## TANK MIXES

**Satellite 3.3 herbicide** may be applied in a tank mix or a sequential application with other herbicides registered for use in a given crop. Refer to the companion label for weeds controlled in addition to **Satellite 3.3 herbicide** alone.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. When using tank mixtures or sequential applications with **Satellite 3.3 herbicide**, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Always perform a jar mixing test to check the compatibility of **Satellite 3.3 herbicide** with all potential tank mix partners.



## Mixing Instructions

1. Fill tank 1/2 to 3/4 full with clean water or liquid fertilizer and agitate. Prior to mixing **Satellite 3.3 herbicide** or **Satellite 3.3 herbicide** tank mixtures in liquid fertilizer, refer to appropriate label sections for uses in liquid fertilizer, application instructions, and compatibility determinations.

**NOTE: Satellite 3.3 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 **Satellite 3.3 herbicide** in water prior to adding to tank; use 1:1 ratio of water to **Satellite 3.3 herbicide**.
- b. Add water to fertilizer solution prior to adding **Satellite 3.3 herbicide**. The amount of water should be equal to or greater than the amount of **Satellite 3.3 herbicide** to be used.

### 2. Satellite 3.3 herbicide Alone

When using **Satellite 3.3 herbicide** alone, add **Satellite 3.3 herbicide** to the partially filled tank while agitating and then fill the remainder of the tank with water or liquid fertilizer.

### 3. Satellite 3.3 herbicide Tank Mixes

Add the tank mixture ingredients in the order listed below prior to adding **Satellite 3.3 herbicide**. (for tank mixtures with 2,4-DB, paraquat, or glyphosate, see mixing instructions at the end of this section):

- 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. **Water Soluble Concentrate (WSC) formulations** - Add the WSC formulation to the partially filled tank while agitating.
- e. **Emulsifiable Concentrate (EC) formulations** - Add the EC formulation to the partially filled tank while agitating.

After complete mixing, add **Satellite 3.3 herbicide** to the tank.

- f. **NOTE: For tank mixes including 2,4-DB, paraquat, or glyphosate:** After complete mixing of **Satellite 3.3 herbicide**, continue filling the sprayer with water and add 2,4-DB, paraquat, or glyphosate near the end of the filling process.

If paraquat is included in the tank mixture, add 8 oz of non-ionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.

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 **Satellite 3.3 herbicide**. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

## Cleaning Spray Equipment

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 PRECAUTIONS

### Restrictions

DO NOT exceed the maximum labeled rate for any soil type.

It is the pesticide user's responsibility to ensure that all products in tank mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

### Precautions

**Satellite 3.3 herbicide** will not control established weeds. Destroy emerged weeds prior to application.

When using tank mixtures with **Satellite 3.3 herbicide**, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label.

**Satellite 3.3 herbicide** is most effective in controlling weeds when mechanically incorporated or when incorporated into the weed germination zone by adequate rainfall or overhead irrigation after application.

- In the event of a crop loss due to adverse weather conditions or other reasons, any crop registered for a preplant incorporated application of **Satellite 3.3 herbicide** can be replanted without adverse effects the same year (see **CROP-SPECIFIC INFORMATION** for exceptions). If replanting is necessary, **DO NOT** work the soil deeper than the treated zone.
- Refer to **CROP-SPECIFIC INFORMATION** for crop-specific preharvest intervals and feeding and grazing restrictions.

### Crop Rotation

Use of **Satellite 3.3 herbicide** in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors, such as arid conditions, make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Soil characteristics and environmental conditions which may contribute to crop stress that may be accentuated by the use of **Satellite 3.3 herbicide** include: coarse soils, compaction, high salinity, eroded knolls/hilltops, cold and/or wet soils, drought, and heavy rainfall soon after application.

When **Satellite 3.3 herbicide** is used in tank mix or sequential combinations, refer to labels of other herbicides for additional rotational crop restrictions.

**Restrictions for rotational cropping after the use of Satellite 3.3 herbicide are dependent on the application use rate of Satellite 3.3 herbicide in the primary crop. The user must thoroughly read the following restrictions to determine the rotational crops for their specific situation, according to application use rate.**



## Rotational Crop Restrictions

### 1. Rotational Crop Restrictions Following Applications of Satellite 3.3 herbicide applied to Field and Row Crops where the application rate was LESS THAN or EQUAL TO 4.8 pts/A (2.0 lbs ai/A)

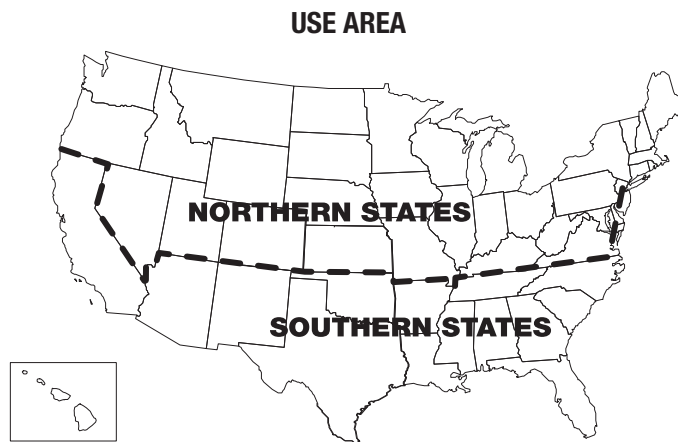
Rotational Crop	Plantback Restriction
Any labeled crop for preplant incorporation application	Can be planted the same season in which <b>Satellite 3.3 herbicide</b> was applied.
Red beets Sugar beets Spinach	12 months following a spring application of <b>Satellite 3.3 herbicide</b> , or 14 months following a fall application of <b>Satellite 3.3 herbicide</b> .  If rainfall or irrigation was not sufficient enough to produce a field or row crop, wait 18 months following a spring application of <b>Satellite 3.3 herbicide</b> and 20 months following a fall application of <b>Satellite 3.3 herbicide</b> .
<b>Comments:</b> To ensure thorough mixing of soil prior to planting, plow the land using a moldboard plow to a depth of 12 inches.	
Proso Millet Sorghum (Milo) Annual or Perennial Grass Crops or Mixtures	10 months following a spring application of <b>Satellite 3.3 herbicide</b> , or 12 months following a fall application of <b>Satellite 3.3 herbicide</b> except under the following conditions. In the states of Minnesota, North Dakota and South Dakota plantback restrictions are 18 months following a spring application of <b>Satellite 3.3 herbicide</b> , or 21 months following a fall application of <b>Satellite 3.3 herbicide</b> .  To avoid possible crop injury in areas that receive less than 20-inches of rainfall or irrigation to produce a crop, these crops may not be planted for 18 months following a spring application of <b>Satellite 3.3 herbicide</b> , or 20 months following a fall application of <b>Satellite 3.3 herbicide</b> if rainfall or irrigation was not sufficient to produce a field or row crop.
Barley Wheat	4 months except under the following conditions. If less than 12 inches of rainfall or overhead irrigation was received between application of <b>Satellite 3.3 herbicide</b> and rotational crop planting, wheat may not be planted before 12 months after a spring application of <b>Satellite 3.3 herbicide</b> , or 14 months after a fall application of <b>Satellite 3.3 herbicide</b> .  In dryland areas and/or areas where irrigation is necessary to produce the crop treated with <b>Satellite 3.3 herbicide</b> , do not plant winter wheat or barley as a follow crop if crop failure/destruction occurs and the land is fallowed during the summer.
All other rotational crops not identified above	Rotational crops may be planted the year following a <b>Satellite 3.3 herbicide</b> application except under the following conditions.  If rainfall or irrigation was not sufficient to produce a field or row crop, delay planting of the rotational crop for 18 months following a spring application of <b>Satellite 3.3 herbicide</b> , or 20 months following a fall application of <b>Satellite 3.3 herbicide</b> .

### 2. Rotational Crop Restrictions Following Applications of Satellite 3.3 herbicide applied to Field and Row Crops where the application rate was GREATER THAN 4.8 pts/A

In the growing season following application of **Satellite 3.3 herbicide** to field and row crops at greater than 4.8 pts/A, plant only those crops for which **Satellite 3.3 herbicide** is labeled for preplant incorporated treatment or crop injury may occur. Do not plant other crops for 24 months.

### 3. Rotational Crop Restrictions Following Applications of Satellite 3.3 herbicide to Nut Crops, Fruit Trees, Vineyard Crops

In the growing season following application of **Satellite 3.3 herbicide** to fruit and nut trees, plant only those crops for which **Satellite 3.3 herbicide** 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 **Satellite 3.3 herbicide** application to fruit or nut trees.



**Satellite 3.3 herbicide** use may result in crop injury, loss or damage to certain crops under a number of conditions, including but not limited to agronomic, cultural, mechanical, and environmental. Numerous risks of loss or damage to certain crops may be associated with the use of **Satellite 3.3 herbicide** even when directions for use are followed completely. The user or grower must take all such risks into consideration before deciding to apply the product. **UPI 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 **Satellite 3.3 herbicide** in order to determine its suitability. A grower should use **Satellite 3.3 herbicide** only to the extent that in his sole opinion the benefit of **Satellite 3.3 herbicide** use outweighs the potential injury to the grower's crop.

In addition, many factors can affect crop growth and/or yield, including but not limited to, insects, diseases, weed competition, poor seed quality, improper planting depth, mechanical cultivation, poor weather (such as freezing or excessive wind, rain, heat, or cold), lack of or excessive moisture, crusting, fertility, or hardpans. Risk of loss or damage to crops may be associated with the use of **Satellite 3.3 herbicide** 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. **Satellite 3.3 herbicide** may also cause injury to sensitive rotational crops.

## ALFALFA

Grown for Forage, Hay, or Seed

**Application Methods:** Apply by ground, air, chemigation, flooded basin irrigation systems, or on dry bulk fertilizer.

### Use Methods, Timings and Use Rates

**Established Alfalfa for Forage/Hay.** Apply to established alfalfa grown for forage or hay (defined as alfalfa planted in the fall or spring which has gone through a first cutting/mowing). Apply at a broadcast rate of **1.2 to 4.8 quarts** per acre prior to weed emergence. Applications can be made in the fall after the last mowing/cutting, during winter dormancy, in the spring, or between cuttings. Make applications prior to the alfalfa reaching 6 inches in regrowth.

**Established Alfalfa Grown for Seed Production.** Apply to established alfalfa grown for seed production (defined as alfalfa planted in the fall or spring that has gone through a summer season of cutting/mowing). Uniformly apply **Satellite 3.3 herbicide** at a broadcast rate of **1.2 to 4.8 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/beatings.
- When the alfalfa reaches 10 inches in height or if the alfalfa has been mowed/beaten 2 or more times, **Satellite 3.3 herbicide** must be applied with drop nozzles directing the spray so that there is little to no contact with the foliage.

**Seedling Alfalfa.** Seedling alfalfa is defined as alfalfa planted in the fall or spring which has **not** gone through a cutting/mowing.

Uniformly apply **Satellite 3.3 herbicide** at a broadcast rate of 1.2 to 2.4 pints per acre prior to weed emergence. Applications can be made once the seedling alfalfa has reached the 2<sup>nd</sup> trifoliate stage of growth. Apply prior to the alfalfa reaching 6-inches in growth.

**Alfalfa Stand Establishment:** Apply at a broadcast rate of 1.2 to 1.8 pints per acre as a preplant incorporated or preemergence treatment in direct-seeded alfalfa. Use the lower rates on coarse-texture soil or in lower rainfall areas (receiving less than 20 inches of rainfall and irrigation a year). Some crop stand reduction and stunting may occur with this use of **Satellite 3.3 herbicide**; however, reduced weed competition will allow establishment of a quality stand.

- Preplant Incorporated - Incorporate uniformly into the top 2 to 3 inches of the final seedbed prior to planting.
- Preemergence - Apply directly after drill seeding alfalfa. Plant alfalfa into a seedbed that is firm and free of clods.

### Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation systems. Follow all special instructions and precautions in the section covering **Chemigation** in **SPRAYING INSTRUCTIONS**.

### Flooded Basin Irrigation Systems

**Satellite 3.3 herbicide** may be applied in flooded basin irrigation systems. Follow all special instructions and precautions in the section covering **Flooded Basin Irrigation** in **SPRAYING INSTRUCTIONS**.

### Precautions

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.

### Restrictions

- **DO NOT** apply more than 4.8 quarts of **Satellite 3.3 herbicide** per acre in any one crop season.
- For multiple applications, **DO NOT** exceed a cumulative total of 4.8 quarts per acre in any one crop season.
- **DO NOT** harvest alfalfa forage or hay less than 28 days after applying 2.4 quarts or less of **Satellite 3.3 herbicide**.
- **DO NOT** harvest alfalfa forage or hay less than 50 days after applying more than 2.4 quarts of **Satellite 3.3 herbicide**.

- **DO NOT** utilize the 28-day preharvest interval for alfalfa hay more than once per cropping season.
- **DO NOT** apply **Satellite 3.3 herbicide** less than 90 days prior to alfalfa harvest for seed.

Follow all precautions and restrictions on the labels of all products applied in combination with **Satellite 3.3 herbicide**. Always follow the most restrictive label.

## CITRUS FRUIT CROP GROUP 10-10 (NONBEARING)

Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, Calamondin, Citron, Citrus hybrids, Grapefruit, Japanese summer grapefruit, Kumquat, Lemon, Lime, Mediterranean mandarin, Mount White lime, New Guinea wild lime, Orange (sour, sweet), Pummelo, Russell River lime, Satsuma mandarin, Sweet lime, Tachibana orange, Tahiti lime, Tangelo, Tangerine (mandarin), Tangor, Trifoliate orange, Uniq fruit; cultivars and/or hybrids of these

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

### Use Methods, Timings and Use Rates

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** between 2.4 and 7.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired residual control (see chart below) per application, not exceeding a total of 7.3 quarts/A per year.

Short-term control	2.4 quarts
Long-term control	4.8 to 7.3 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing citrus tree crops. **Satellite 3.3 herbicide** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply in a band or broadcast.

### Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the product label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of trees with leaves or buds or fruit. Contact with these plant parts by spray mixture may cause injury.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **SPRAYING INSTRUCTIONS** section of the product label.

Preharvest Interval (PHI): 1 day.

### Restrictions

- **DO NOT** apply more than 7.3 quarts of **Satellite 3.3 herbicide** per acre per year in citrus trees.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated groves or orchards.
- **DO NOT** apply to newly seeded nursery stock.

**CORN**  
Field, Pop, Seed, Sweet

**Application Methods:** Apply by ground, air or chemigation.

**Use Methods, Timings and Use Rates**

Apply **Satellite 3.3 herbicide** in conventional, minimum, or no-till as a pre-emergence, postemergence, or postemergence incorporated (CULTI-SPRAY) application in field corn.

Apply **Satellite 3.3 herbicide** in conventional tillage as a preemergence or postemergence application in 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 **Satellite 3.3 herbicide** contacts the germinating corn seed. Check equipment to ensure good seed coverage.

**Satellite 3.3 herbicide** alone or in tank mix combination treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days 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**, **Satellite 3.3 herbicide** will control the following weeds in corn with CULTI-SPRAY application: wild proso millet and shattercane.

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

**Postemergence** - Apply postemergence until field corn is 30 inches tall (20 to 24 inches tall for pop, seed and 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 **Satellite 3.3 herbicide** alone or with atrazine when field corn is at least 4 inches tall until last cultivation (layby). **Satellite 3.3 herbicide** 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 **Satellite 3.3 herbicide**, the depth of cut should be no deeper than the depth of cut used to incorporate.

**Chemigation Applications**

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation systems. Follow all directions, special instructions and precautions in the section covering **Chemigation** in **SPRAYING INSTRUCTIONS**.

**Use Rates Preemergence or Postemergence Applications**

Soil Texture	Organic Matter		
	< 1.5% (pts/A)	1.5% to 3.0% (pts/A)	> 3.0% (pts/A)
Coarse	1.8 to 2.4	2.4 to 3.6	3.6
Medium	2.4 to 3.6	3.6	3.6 to 4.8
Fine	2.4 to 3.6	3.6 to 4.8	3.6 to 4.8

**Use Rates CULTI-SPRAY Applications - Field Corn ONLY**

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup> (pts/A)
Coarse	1.2 to 1.8	1.8 to 2.4
Medium	1.8 to 2.4	2.4 to 3.6
Fine	1.8 to 3.6	2.4 to 3.6

<sup>1</sup>See **USE AREA** for map of specific states.

Livestock may graze or be fed forage from treated corn after 21 days following application.

**Restrictions**

- **DO NOT** apply in reduced, minimum or no-till sweet corn, seed corn or popcorn.
- **DO NOT** apply in no-till in California.
- **DO NOT** apply preplant incorporated.
- **DO NOT** apply postemergence in liquid fertilizer.
- **DO NOT** exceed one application per crop season at the highest rate per acre for any given soil type and application method.

**COTTON**

**Application Methods:** Apply 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.

**Use Methods, Timings and Use Rates**

Preplant surface, preemergence, and layby treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is best if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days 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**, **Satellite 3.3 herbicide** will suppress Russian thistle in the state of Arizona.

**Preplant Surface** - Apply **Satellite 3.3 herbicide** up to 15 days prior to planting. Apply **Satellite 3.3 herbicide** tank mixes and sequential programs as specified under the tank mix section.

**Preplant Incorporated** - Apply **Satellite 3.3 herbicide** up to 60 days prior to planting and incorporate within 7 days of application. Apply **Satellite 3.3 herbicide** tank mixes and sequential programs as specified under the tank mix section.

**Preemergence** - Apply **Satellite 3.3 herbicide** at planting or up to 2 days after planting. Apply to a seedbed that is firm and free of clods. Apply **Satellite 3.3 herbicide** tank mixes and sequential programs as specified under the tank mix section.

**Preplant Incorporated followed by Preemergence** - Apply **Satellite 3.3 herbicide** up to 60 days prior to planting and incorporate within 7 days of application. Apply overlay application of **Satellite 3.3 herbicide** at planting or up to 2 days after planting. Total amount of **Satellite 3.3 herbicide** applied per acre cannot exceed the highest labeled rate for a given soil type. Preplant incorporated and preemergence applications of **Satellite 3.3 herbicide** may be applied with the labeled tank mix herbicide(s).

**Layby Application (at last cultivation)** - Apply **Satellite 3.3 herbicide** directly to the soil between rows as a directed spray following the last normal cultivation (layby). Layby applications can be applied in cotton previously treated with **Satellite 3.3 herbicide** or any herbicide(s) registered for use in cotton. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in cotton, and for follow-crop restrictions. The total amount of **Satellite 3.3 herbicide** applied per acre per season cannot exceed the highest labeled rate for a given soil type.



**DO NOT** apply as a broadcast spray over the top of the cotton or **SERIOUS CROP INJURY CAN RESULT. AVOID CONTACT OF THE SPRAY** to the non-woody portion of cotton stems and to cotton foliage or **SERIOUS CROP INJURY CAN RESULT.** To reduce the potential for crop injury caused by herbicide contact with cotton foliage and stems, use protective shields when conditions favoring spray drift occur.

Glyphosate-containing products may be applied with **Satellite 3.3 herbicide** at layby in cotton that has the **Roundup Ready®** or **Glyphosate-tolerant** gene. **DO NOT apply glyphosate-containing products at layby on non-Roundup Ready or non-glyphosate tolerant cotton. DO NOT apply Satellite 3.3 herbicide and glyphosate tank mix as a broadcast spray over the top of cotton or CROP INJURY MAY RESULT.**

### Chemigation Applications

Apply **Satellite 3.3 herbicide** through sprinkler irrigation systems. Follow all special instructions and precautions in the section covering **Chemigation in SPRAYING INSTRUCTIONS.**

**Fall Application** - Apply **Satellite 3.3 herbicide** for weed control in cotton in the fall after October 15 (up to 140 days prior to planting cotton) in Arizona, California, Louisiana, New Mexico, Mississippi, Oklahoma and Texas. Apply **Satellite 3.3 herbicide** at the broadcast rate of 2.4 pints per acre on coarse or medium soils and 3.6 pints per acre on fine soils.

### Use Rates

Soil Texture	Conventional or Minimal Tillage <sup>1</sup> (pts/A)	No-Till <sup>2</sup> (pts/A)
Coarse	1.2 to 2.4 <sup>1</sup>	1.8 to 2.4
Medium	1.8 to 2.4	2.4 to 3.6
Fine	2.4 to 3.6	3.6 to 4.8

<sup>1</sup> **DO NOT** exceed 1.8 pts/A on coarse-textured soils in California.  
<sup>2</sup> Not recommended for soils with more than 3% organic matter.

Preharvest Interval (PHI): 60 days.

### Restrictions

- **DO NOT** apply **Satellite 3.3 herbicide** in no-till in California.
- **DO NOT** feed forage or graze livestock in treated cotton fields.
- **DO NOT** exceed the highest seasonal rate per acre for any given soil type.

### EDIBLE BEANS

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

**Application Methods:** Apply by ground or air.

### Use Methods, Timings and Use Rates

**Satellite 3.3 herbicide** may be applied:

- (fall) preplant surface or preplant incorporated in dry beans, lima beans, snap beans, and Southern peas (cow-peas)
- (fall) preplant surface or preplant incorporate or (spring) preplant surface in chickpeas (garbanzo beans)
- (fall) preplant surface or preplant incorporated or preemergence in sweet lupines.

**Preplant Incorporated** - Apply up to 60 days prior to planting and incorporate within 7 days of application.

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

### Use Rates Preplant Incorporated and Preemergence

Soil Texture	Southern States <sup>1</sup> (pts/A)	Northern States <sup>1</sup>	
		< 3% Organic Matter	> 3% Organic Matter
Coarse	1.8	2.4	2.4
Medium	2.4	3.0	3.6
Fine	3.6	3.6	3.6

<sup>1</sup> See **USE AREA** for map of specific states.

**Fall Applications** - North Dakota, South Dakota, Minnesota, Oregon, Washington, Montana, Idaho, and Wyoming only fall preplant surface and preplant incorporated applications may be made. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply **Satellite 3.3 herbicide** and incorporate (rainfall, irrigation or mechanically) in late fall prior to planting edible beans [chickpeas (garbanzo beans)], dry beans (including navy, great northern, red kidney, black turtle, cranberry, and small white type), lima beans, snap beans, Southern peas (cowpeas), and sweet lupines the following spring. Apply **Satellite 3.3 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.

### Use Rates Preplant Surface and Preplant Incorporated (Fall Application<sup>1</sup>)

Soil Texture	Broadcast Rate < 3% Organic Matter (pts/A)	Broadcast Rate > 3% Organic Matter (pts/A)
Coarse	1.2 to 2.4	2.4
Medium	1.8 to 3.0	3.0 to 3.6
Fine	2.4 to 3.6	3.6

<sup>1</sup> For use in North Dakota, South Dakota, Minnesota, Oregon, Washington, Montana, Idaho, and Wyoming only.

### Restrictions

- **DO NOT** feed lupine hay and forage or graze livestock in treated lupine fields.
- **DO NOT** apply **Satellite 3.3 herbicide** more than once per cropping season.
- **DO NOT** apply through any type of irrigation system.

### FALLOW

**Application Methods:** Apply by ground, air, or chemigation.

### Use Methods, Timings and Use Rates

Apply **Satellite 3.3 herbicide** to fallow ground following crop harvest as a planned residual treatment to control labeled broadleaf and grass weeds as they germinate.

Apply as a broadcast spray at rates up to **3.6 pints per acre**. Emerged weeds will not be controlled by this treatment. To control emerged weeds, **Satellite 3.3 herbicide** must be applied with a labeled tank mix partner (i.e. glyphosate).

### Restrictions

**DO NOT** apply more than once during a single fallow period.

**DO NOT** apply to fallow ground after July 1 if treated fields are to be planted the following spring to crops not labeled for preplant or preplant incorporated applications of **Satellite 3.3 herbicide**.

There must be at least a 4-month interval between a **Satellite 3.3 herbicide** fallow application and the rotational planting of any fall-seeded cereal crop. Otherwise, observe the specific rotational crop intervals between a fallow application of **Satellite 3.3 herbicide** and the planting of the following crop (see **Crop Rotation** in the **Restrictions and Precautions** section of this label).



## State-specific Instructions

In **Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, and Wyoming**, apply as a broadcast spray at rates up to, but not to exceed, **3.7 pints per acre**.

### FARMSTEADS

For control of labeled broadleaf and grass weeds as they germinate on farmstead nonagricultural areas including barnyards, lanes, driveways, machinery or implement yards, windbreaks, and nonagricultural fencerows or ditchbanks, apply as a broadcast spray at **2.4 quarts per acre** for short-term or at **4.8 quarts per acre** for long-term preemergence control.

### FORAGE LEGUMES

**Application Methods:** Apply by ground or air.

**Satellite 3.3 herbicide** may be used in forage legumes used as a cover crop in federal set-aside or conservation reserve program areas.

Some stand reduction of the legume cover crop may occur with this use. Consult local county extension service or the local ASC committee for recommended cover crops.

If loss of cover crop occurs due to adverse weather conditions, any crop registered for **Satellite 3.3 herbicide** preplant incorporated use can be replanted the same year into **Satellite 3.3 herbicide**-treated soil without adverse effects. If replanting is necessary, **DO NOT** rework the soil deeper than the treated zone. **DO NOT** feed or graze legume cover crops established following **Satellite 3.3 herbicide** application.

The cover crop residue should ultimately be destroyed by tillage or left on the surface to retard erosion or as directed by the local ASC committee.

### Use Methods, Timings and Use Rates

Apply **Satellite 3.3 herbicide** preplant incorporated or preemergence.

#### Use Rates Preplant Incorporated or Preemergence

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.2 to 1.8
Medium	1.8 to 2.4
Fine	2.4 to 3.0

### GARLIC

**Application Methods:** Apply by ground, air, or chemigation.

### Use Methods, Timings and Use Rates

**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

Apply **Satellite 3.3 herbicide** 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 0.5 inch of water. Follow all special instructions and precautions in the section covering **Chemigation** in **SPRAYING INSTRUCTIONS**.

#### Use Rates

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.8
Medium	2.4
Fine	3.6

Preharvest Interval (PHI): 60 days in California; 45 days in all other states.

## Restrictions

- DO NOT** exceed 3.6 pints per acre per crop (except Idaho, Oregon, and Washington).
- DO NOT** feed or graze this crop.

### GRAIN SORGHUM

**Application Methods:** Apply by ground or air.

### Use Methods, Timings and Use Rates

May be applied as a postemergence incorporated (CULTI-SPRAY) application in grain sorghum grown in all states and as an early postemergence in grain sorghum grown in states east of the Mississippi River and in Arkansas, eastern Texas, Louisiana, and the Missouri "bootheel."

**DO NOT** apply **Satellite 3.3 herbicide** in grain sorghum preplant incorporated or preemergence as serious crop injury can result. **DO NOT** apply **Satellite 3.3 herbicide** in grain sorghum more than once per crop season.

**CULTI-SPRAY:** Apply 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 **Postemergence Incorporated Applications** in the **Application Timings** section of this label.

**Additional Weeds Controlled:** In addition to the weeds listed in **Table 1**, **Satellite 3.3 herbicide** as a CULTI-SPRAY application will control the following weeds in grain sorghum: wild proso millet and shattercane.

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

Ensure that the seedbed is 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 States <sup>1</sup> (pts/A)
Coarse	1.8	2.4
Medium	2.4	3.6
Fine	3.6	3.6

<sup>1</sup>See **USE AREA** for map of specific states.

#### Use Rates Early Postemergence Application

Soil Texture	Satellite 3.3 herbicide
Coarse	<b>DO NOT USE</b>
Medium, Fine	2.4 pts/A

Livestock can graze or be fed forage from **Satellite 3.3 herbicide**-treated grain sorghum fields after 21 days following application.

## Restrictions

- DO NOT** apply preplant incorporated or preemergence.
- DO NOT** apply 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.

### GRAPES (NONBEARING)

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

### Use Methods, Timings and Use Rates

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** between 2.4 and 7.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired residual control (see chart below) per application, not exceeding

a total of 7.3 quarts/A per year. Apply any time after fall harvest, during winter dormancy and in the spring.

Short-term control	2.4 quarts
Long-term control	4.8 to 7.3 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing vineyards. **Satellite 3.3 herbicide** may be used before or after transplanting.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply 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 vines until ground has settled and not cracks are present.

### Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **Spraying Instructions** section of this label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of grapevines with leaves or buds or fruit. Contact with these plant parts by spray mixture may cause injury or result in illegal pesticide residues on fruit.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **Spraying Instructions** section of the product label.

Preharvest Interval (PHI): 90 days.

### Restrictions

- **DO NOT** apply more than 7.3 quarts of **Satellite 3.3 herbicide** per acre per year.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated vineyards.
- **DO NOT** apply over the top of grapevines with leaves, buds or fruit.

## LENTILS AND PEAS

English, Dry, Garden, Dwarf, Green, Pigeon, and Edible Pod

**Application Methods:** Apply by ground or air.

### Use Methods, Timings and Use Rates

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

#### Use Rates Preplant Incorporated

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.8
Medium	2.4
Fine	3.6

**Fall Applications** - Fall preplant surface and preplant incorporated applications may be made in North Dakota, South Dakota, Minnesota, Oregon, Washington, Montana, Idaho, and Wyoming only. Rainfall or irrigation is required for incorporation and activation. Unpredictable weed control can be expected since factors such as length of time between application and planting as well as uncontrollable weather factors will determine herbicide activity and longevity.

Apply and incorporate (via rainfall, irrigation or mechanically) in late fall prior to planting lentils or peas (English, dry, garden, dwarf, green, pigeon, and edible pod) the following spring. Apply **Satellite 3.3 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.

#### Use Rates Preplant Surface and Preplant Incorporated (Fall Application<sup>1</sup>)

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.2 to 1.8
Medium	1.8 to 2.4
Fine	2.4 to 3.6

<sup>1</sup>For use in North Dakota, South Dakota, Minnesota, Oregon, Washington, Montana, Idaho, and Wyoming only.

Any crop registered for a preplant incorporated application of **Satellite 3.3 herbicide** can be double cropped after peas.

### Restrictions

- **DO NOT** use in California.
- **DO NOT** apply **Satellite 3.3 herbicide** preemergence in peas.
- **DO NOT** apply **Satellite 3.3 herbicide** more than once per cropping season.
- **DO NOT** apply to peas, lentils, pea or lentil forage, pea silage, pea hay, or pea straw grown for livestock feed.
- **DO NOT** apply through any type of irrigation system.

## OILSEEDS SUBGROUP 20B

Calendula, Castor oil plant, Chinese tallowtree, Euphorbia, Evening primrose, Jojoba, niger seed, Rose hip, Safflower, Stokes aster, Sunflower, Tallowwood, Tea oil plant, Vernonia, Cultivars, varieties, and/or hybrids of these

**Application Methods:** Apply by ground or air.

**Plant oilseeds 20B 1.5 inches to 2 inches deep and completely cover with soil.**

### Use Methods, Timings and Use Rates

**Preplant Incorporated (Spring)** - In all states, apply within 60 days of planting and incorporate.

**Preplant Incorporated (Fall applications only in North Dakota, South Dakota and Minnesota)** - Apply **Satellite 3.3 herbicide** and immediately incorporate in late fall prior to planting oilseeds 20B the following spring. Apply **Satellite 3.3 herbicide** in the late fall when soil temperatures are 45° F or below but before the ground freezes. **DO NOT** apply when the air temperature is below 45° F.

Prior to oilseeds 20B planting in the spring, make at least one shallow additional incorporation to fields treated with **Satellite 3.3 herbicide**. Make the spring incorporation at an angle to the last tillage operation.

**Preemergence** - Apply **Satellite 3.3 herbicide** at planting or up to 2 days after planting. Preemergence applications of **Satellite 3.3 herbicide** to oilseeds 20B may increase the likelihood of crop injury, especially when grown in stress situations, such as compacted soils. Decreased herbicide performance compared to preplant incorporated applications may also result from a pre-emergence application. If dry conditions with limited precipitation exist or unseasonably cool temperatures following planting are forecast, apply **Satellite 3.3 herbicide** before planting and mechanically incorporate with tillage. **Satellite 3.3 herbicide** may be applied preemergence in conventional tillage oilseeds 20B, **except in the state of California.**

**No-till Oilseeds 20B - Satellite 3.3 herbicide** may be applied at 3.6 pts/A up to 30 days before planting (preplant) to immediately after planting (pre-emergence). **Not for this use in California.**

**Use Rates**

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

Soil Texture	Southern States* (pts/A)	Northern States	
		< 3% Organic Matter > 3% (pts/A)	
Coarse	1.8	2.4	2.4
Medium	2.4	3.0	3.6
Fine	3.6	3.6	3.6

\*See USE AREA for map of specific states.

**Preplant Incorporated (Fall) Application**

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

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	3.0	3.0
Medium	3.6	4.2
Fine	4.2	4.2

**Restrictions (all tillage types)**

- **DO NOT** apply **Satellite 3.3 herbicide** postemergence.
- **DO NOT** feed forage or graze livestock in treated oilseeds 20B fields.

**DRY BULB ONIONS SUBGROUP 3-07 A**

Daylily (bulb), Fritillaria (bulb), Garlic (bulb), Garlic, great-headed (bulb), Garlic, serpent (bulb), Lily (bulb), Onion (bulb), Onion, Chinese (bulb), Onion, pearl, Onion, Potato (bulb), Shallot (bulb); Cultivars, varieties, and/or hybrids of these

**Application Methods:** Apply by ground, air or chemigation. Apply to direct-seeded and transplanted dry bulb onions and dry bulb shallots.

**Use Methods, Timings and Use Rates**

**Chemigation Applications**

Apply **Satellite 3.3 herbicide** through sprinkler irrigation systems. **DO NOT** irrigate in excess of 0.5 inch of water. Follow all directions, special instructions and precautions in the section covering **Chemigation** in **SPRAYING INSTRUCTIONS**.

**In All States Except California:** Apply **Satellite 3.3 herbicide** as a single postemergence broadcast spray when dry bulb onions have 2 to 9 true leaves.

**Additional Use in Colorado, Kansas, and Nebraska:** **Satellite 3.3 herbicide** may be applied sequentially in seeded onions. Apply first application of **Satellite 3.3 herbicide** at loop stage. Apply sequential application of **Satellite 3.3 herbicide** early postemergence (2nd to 9th true-leaf stage).

**DO NOT** exceed the maximum labeled rate for a given soil texture. **DO NOT** apply **Satellite 3.3 herbicide** 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) **Satellite 3.3 herbicide** into preformed beds prior to transplanting.

**Additional Use in Idaho, Oregon, and Washington:** Apply **Satellite 3.3 herbicide** as a broadcast treatment when onions or shallots are between the flag leaf to 9th true-leaf stage.

**Satellite 3.3 herbicide** may be used at 3.6 to 4.8 pints per acre for dodder control on medium- and fine-textured soils.

**DO NOT** apply **Satellite 3.3 herbicide** using chemigation at the dodder control rate.

**Satellite 3.3 herbicide** may be applied in the fall or spring to the furrow area of land bedded in the fall in preparation for planting seed of dry bulb onions the

following spring. Apply **Satellite 3.3 herbicide** 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 **Satellite 3.3 herbicide** away from the area where onion seed will be planted. Harrow-off tops of beds following **Satellite 3.3 herbicide** furrow applications prior to planting onions. For selective weed control in the onion row, apply **Satellite 3.3 herbicide** as a banded postemergence application to flag leaf onions at the labeled rates based on soil texture. Apply **Satellite 3.3 herbicide** 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: Satellite 3.3 herbicide may only be applied as a single application when dry bulb onions have 2 to 6 true leaves.**

**Mineral Soils**

**Use Rates**

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.8
Medium	2.4
Fine	3.6

Preharvest Interval (PHI): 60 days in California; 45 days in all other states.

**Restrictions (Mineral Soils)**

- **DO NOT** apply more than 3.6 pints per acre per growing season.
- **DO NOT** feed or graze these crops.
- **DO NOT** apply preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after application at the preemergence through loop stage, **DO NOT** irrigate in excess of 0.5 inches of water.
- **DO NOT** mechanically incorporate except as specified for use on dry bulb onions in Colorado and the Texas High Plains.

**Muck Soils**

**Use Rates**

Apply **Satellite 3.3 herbicide** sequentially on muck soils as follows:

Application Timing and Growth Stage	Rate (pts/A)
Preemergence through Loop Stage	4.8
Early Postemergence (2nd to 6th true-leaf stage)	4.8
Late Postemergence (6th to 9th true-leaf stage)	4.8

Preharvest Interval (PHI): 45 days.

**Restrictions (Muck Soils)**

- **DO NOT** apply to muck soils in California.
- **DO NOT** feed or graze these crops.
- **DO NOT** apply more than 14.4 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 **Satellite 3.3 herbicide** preemergence through the loop stage if heavy rains are expected or severe crop injury may result. If irrigating immediately after **Satellite 3.3 herbicide** application at the preemergence through loop stage, **DO NOT** irrigate in excess of 0.5 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 3.6 pints per acre of **Satellite 3.3 herbicide** is applied to the onion crop.
- **If loss** of onion crop occurs, **DO NOT** replant any crop other than onions in muck soil during the same cropping year and **DO NOT** work the soil deeper than 2 inches.

### GREEN ONION SUBGROUP 3-07B

Chive (fresh leaves), Chive, Chinese (fresh leaves), Elegans hosta, Fritillaria (leaves), Kurrat, Lady's leek, Leek, Leek (wild), Onion (Beltsville bunching, fresh, green, macrostem, tree (tops), Welsh (tops)), Shallot (fresh leaves); cultivars and/or hybrids of these

**Application Methods:** Apply by ground, air, or chemigation.

#### Use Methods, Timings and Use Rates

Apply **Satellite 3.3 herbicide** uniformly at a rate of 2.4 pints/A as a broadcast spray to the soil surface preemergence, or apply postemergence to the crop at the 2 to 3 true-leaf stage at least 30 days before harvest. If applied sequentially as both a preemergence and postemergence spray, the preemergence spray must be made 30 days before the postemergence spray.

#### Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation systems. Apply at the 2-3 true-leaf stage at least 30 days before harvest. Do not irrigate in excess of 1/2 inch of water. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the **Satellite 3.3 herbicide** label.

Preharvest Interval (PHI): 30 days.

Only apply preemergence to green onions grown on muck soils or on mineral soils with greater than 3% organic matter.

#### Restrictions

- **DO NOT** apply more than 2.4 pints of **Satellite 3.3 herbicide** per acre per application.
- **DO NOT** apply more than 4.8 pints product per acre per season.
- **DO NOT** feed forage or graze livestock in treated fields.

### OTHER FRUIT TREES (NONBEARING)

Pomegranate, Juneberry

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

#### Use Methods, Timings and Use Rates

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** at between 2.4 to 4.8 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy (see chart below) per application, not exceeding a total of 4.8 quarts/A per year in pomegranate and Juneberry fruit trees.

Short-term control	2.4 quarts
Long-term control	4.8 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in these non-bearing fruit tree crops. **Satellite 3.3 herbicide** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply in a band or broadcast.

### Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the product label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of trees with leaves or buds or fruit. Contact with these plant parts by spray mixture may cause injury.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **SPRAYING INSTRUCTIONS** section of the product label.

Preharvest Interval (PHI): 60 days.

#### Restrictions

- **DO NOT** apply more than 4.8 quarts of **Satellite 3.3 herbicide** per acre per year in pomegranate and Juneberry fruit trees.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated groves or orchards.
- **DO NOT** apply to newly seeded nursery stock.

### PEANUTS

**Application Methods:** Apply by ground, air, or chemigation.

#### Use Methods, Timings and Use Rates

May be applied preplant incorporated in peanuts and preemergence to peanuts grown under overhead irrigation.

**DO NOT** use on peanuts in California.

**Preplant Incorporated** - Apply **Satellite 3.3 herbicide** up to 60 days prior to planting and incorporate within 7 days after applications.

**Preemergence** - Apply **Satellite 3.3 herbicide** at planting or up to 2 days after planting and before crop emergence. To prevent decreased crop pegging, adequate incorporation must be achieved by applying a minimum of 0.75 inch of overhead irrigation or rainfall within 48 hours of application.

#### Chemigation Applications

Apply **Satellite 3.3 herbicide** through sprinkler irrigation systems. Follow all special instructions and precautions in the section covering **Chemigation** in **SPRAYING INSTRUCTIONS**.

#### Use Rates

Region	Rate (pts/A)
New Mexico, Oklahoma, and Texas	1.2 to 2.4
Other peanut growing states*	2.4

\* For heavy weed infestations, especially of Texas panicum, up to 3.6 pts/A of **Satellite 3.3 herbicide** can be used in Alabama, Georgia or Florida.

### POME FRUIT CROP GROUP 11-10 (NONBEARING)

Apple, Azarole, Crabapple, Loquat, Mayhaw, Medlar, Pear, Pear (Asian), Quince (including Chinese and Japanese), Tejocote; cultivars and/or hybrids of these

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

#### Use Methods, Timings and Use Rates

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** between 2.4 to 4.8 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy (see chart below) per application, not exceeding a total of 4.8 quarts/A per year in pome fruit trees.



Short-term control	2.4 quarts
Long-term control	4.8 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing pome fruit tree crops. **Satellite 3.3 herbicide** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply in a band or broadcast.

## Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the product label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of trees with leaves or buds or fruit. Contact with these plant parts by spray mixture may cause injury.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **SPRAYING INSTRUCTIONS** section of the product label.

Preharvest Interval (PHI): 60 days.

## Restrictions

- **DO NOT** apply more than 4.8 quarts of **Satellite 3.3 herbicide** per acre per year in pome fruit trees.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated groves or orchards.
- **DO NOT** apply to newly seeded nursery stock.

## POTATOES

**Application Methods:** Apply by ground, air, or chemigation.

## Use Methods, Timings and Use Rates

Apply preemergence, preemergence incorporated, or early postemergence in potatoes.

**Additional Weeds Controlled:** In addition to the weeds listed in **Table 1**, **Satellite 3.3 herbicide** will control stinging nettle in potatoes.

**Preemergence** - Apply **Satellite 3.3 herbicide** after planting, but before potatoes and weeds emerge, or after dragoff.

**Preemergence Incorporated** - Apply **Satellite 3.3 herbicide** and incorporate after planting but before potatoes and weeds emerge. Where dragoff is practiced, apply **Satellite 3.3 herbicide** and incorporate before, at, or after dragoff, but before potatoes and weeds emerge. Incorporate within 7 days of application by incorporating thoroughly and uniformly into the top 1 to 2 inches of soil. Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application. Care must be taken so that incorporation equipment does not damage seed pieces or elongating sprouts.

**Early Postemergence** - Apply **Satellite 3.3 herbicide** from crop emergence to the 6-inch stage of growth. **DO NOT** apply **Satellite 3.3 herbicide** postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.

## Chemigation Applications

Apply **Satellite 3.3 herbicide** through sprinkler irrigation systems. Apply **Satellite 3.3 herbicide** preemergence after planting, after dragoff, or early postemergence through sprinkler irrigation systems. Follow all directions, special instructions and precautions in the section covering **Chemigation in SPRAYING INSTRUCTIONS**.

## Use Rates

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
	Coarse	1.8
Medium	2.4	3.6
Fine	3.6	3.6

## Restrictions

- **DO NOT** apply to sweet potatoes or yams.
- **DO NOT** apply preplant.
- **DO NOT** make more than one application of **Satellite 3.3 herbicide** per season.

## Precautions

- Application of **Satellite 3.3 herbicide** on White Rose variety potatoes during or followed by cool and/or wet weather conditions may result in crop injury.

## RICE

Apply **Satellite 3.3 herbicide** 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. Ensure that the seedbed is firm and free of clods and 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 **Satellite 3.3 herbicide** contacts germinating rice seed.

**Additional Weeds Controlled:** In addition to the weeds listed in **Table 1**, **Satellite 3.3 herbicide** will control the following weeds in rice: junglerice and sprangletop.

## Use Methods, Timings and Use Rates

**Pre-Flood, Preemergence** - Apply **Satellite 3.3 herbicide** for preemergence weed control as a pre-flood, pre-rice germination herbicide in lightly incorporated dry-seeded rice or on drilled rice.

**SEEDING DIRECTIONS:** For all rice seed incorporation methods, seed must be incorporated shallowly or no more than 1 inch below the soil surface. Seed left on the surface may be injured or killed by **Satellite 3.3 herbicide**. However, it is recommended that 15 to 20% of seed total be visible at surface in order to ensure that seed is not covered too deeply. Increase seeding rates by a percentage corresponding to the amount of seed left on the surface. Adjust seeding ratios to meet individual practices, incorporation depths and field conditions.

**EXAMPLE:** Target seeding rate is 150 lbs per acre. If approximately 15% of seed is left on soil surface, seeding rate should then be increased 22.5 lbs per acre to 177.5 lbs per acre.

Seeding depths can be affected by soil textures, tillage practices, irrigation, and methods of mechanical incorporation. Seed that is incorporated either mechanically and/or by irrigation flush must remain at a shallow depth of no more than 1 inch below the soil surface. Fields where rice seed is incorporated too deeply will experience reduced crop stands.

Following are examples of typical implements that can be used for rice seed incorporation: rice roller/ridger, ring roller, light harrow, or flat roller. Regardless of the implement or method of incorporation used, seed incorporation must be less than 1 inch below the soil surface.

After rice seed is incorporated, uniformly apply to soil surface as broadcast spray the tank mixture of **Satellite 3.3 herbicide** at 2.4 pints per acre **plus FirstChoice SafeGuard** spray adjuvant at 1.6 pints per acre. Use of **Satellite 3.3 herbicide** without tank mixing with **FirstChoice SafeGuard** spray adjuvant can result in crop injury and loss of rice stand.

After herbicide application, flush field with irrigation water with method best employed to facilitate a thorough soaking of field and a rapid drain. Tail water (runoff water) from flood irrigation that contains **Satellite 3.3 herbicide** should be re-circulated and contained in the field of initial application or used only on adjacent crops for which **Satellite 3.3 herbicide** (or other pendimethalin-based products) is registered for use.

Rice seed covered with water for longer than 8 days may result in reduced stand and weed control.

**Delayed Preemergence** - Not for this use in California. Apply **Satellite 3.3 herbicide** alone or with tank mix partner for delayed preemergence weed control in grain-drilled, dry-seeded rice. Apply **Satellite 3.3 herbicide** alone or in tank mixture to levees after the levees are pulled and planted. Exposed seeds that come in contact with **Satellite 3.3 herbicide** may be injured. Apply only when growing conditions favor vigorous rice growth. The seedbed should have adequate moisture for seed germination.

Uniformly apply the specified rate of **Satellite 3.3 herbicide** after rice planting and before rice and weed emergence (spiking). Apply after the rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least 1 inch 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 **Satellite 3.3 herbicide** application to supply moisture for root (radicle) initiation and for vigorous rice and weed growth.

If applied to soil prior to these conditions or to cracked soil, stand reduction or stunting 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 **Satellite 3.3 herbicide**, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of **Satellite 3.3 herbicide**.

**Early Postemergence** - Apply **Satellite 3.3 herbicide** as a tank mix partner. Base applications on weed and crop size guidelines of the tank mix partner. **DO NOT** apply to fields with standing water. If necessary, fields may be flushed prior to treatment to produce vigorous rice and weed growth. Since 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 **Satellite 3.3 herbicide**, this treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of **Satellite 3.3 herbicide**. Since the residual activity of **Satellite 3.3 herbicide** is activated by moisture, **Satellite 3.3 herbicide** is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 7 days after application.

#### Use Rates Delayed Preemergence Applications

Soil Texture	Rate (pts/A)
Sands, loamy sands	<b>DO NOT USE</b>
Sandy loams	1.8
Loams, silt loams, silts, sandy clay loams	2.4
Silty clay loams, clay loams, sandy clays, silty clays, clays	2.4

#### Use Rates Early Postemergence Application

Soil Texture	Rate (pts/A)
Coarse	1.8
Medium	2.4
Fine	2.4

## Restrictions

- **DO NOT** apply **Satellite 3.3 herbicide** through any type of irrigation system.
- **DO NOT** apply in liquid fertilizer.
- **DO NOT** replant with gibberellic acid-treated seed.
- **DO NOT** reapply **Satellite 3.3 herbicide** alone or in a tank mixture.
- **DO NOT** use on water-seeded rice except as specified in other UPI labeling.
- **DO NOT** apply to rice fields if fields are used for fish production, especially catfish or crayfish farming.
- **DO NOT** use water containing **Satellite 3.3 herbicide** residues from rice cultivation to irrigate food or feed crops that are not registered for use with **Satellite 3.3 herbicide**.
- **DO NOT** apply **Satellite 3.3 herbicide** and then flush for germination.
- **DO NOT** feed forage or graze livestock in treated fields.

## Precautions

- In case of a crop failure due to weather conditions or disease following treatment with **Satellite 3.3 herbicide** 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 percent increase in seeding rate is recommended. Replant seed below the herbicide layer because reduced stand or stunting may occur if **Satellite 3.3 herbicide** contacts germinating rice seed.
- **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

**Application Methods:** Apply by ground or air.

**Additional Weeds Controlled:** In addition to the weeds listed in **Table 1**, **Satellite 3.3 herbicide** will control or reduce competition from the following weeds in soybeans: itchgrass and red rice. For specific rates for red rice and itchgrass management, see table at end of this section.

### Use Methods, Timings and Use Rates

**Fall Applied** - **Satellite 3.3 herbicide** 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 Iowa, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Ohio, Oklahoma, and Texas. Fall applications **Satellite 3.3 herbicide** will not provide season-long weed control.

**Preplant Surface** - Apply up to 15 days prior to planting. **Satellite 3.3 herbicide** may be applied up to 45 days prior to planting when used in a tank mix or applied sequentially with **Extreme**®, **Raptor**®, or **Pursuit**® herbicides. Apply **Satellite 3.3 herbicide** tank mixes and sequential programs as specified under the tank mix section.

**Preplant Incorporated** - Apply **Satellite 3.3 herbicide** up to 60 days prior to planting and incorporate within 7 days after application.

**Preemergence** - Apply **Satellite 3.3 herbicide** at planting or up to 2 days after planting. Apply to a firm seedbed free of clods. **DO NOT** make applications preemergence north of Interstate 80, except in the states of Indiana, Michigan and Ohio, or as specified in UPI supplemental labeling.

**Use Rates Fall Surface, Fall Incorporated, Preplant Surface, or Preplant Incorporated**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.8	2.4
Medium	3.0 <sup>1</sup>	3.6
Fine <sup>2</sup>	3.6	3.6

<sup>1</sup> **DO NOT** exceed 2.1 pts for southern states; see **USE AREA** for map of specific states.  
<sup>2</sup> For heavy clay soils, apply **Satellite 3.3 herbicide** at the broadcast rate of 3.6 pints per acre.

**Use Rates Preemergence Applications**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.8	1.8
Medium	2.4	2.4
Fine	2.4	3.0

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

Soil Texture	Up to 3% Organic Matter <sup>1</sup> (pts/A)
Coarse	3.6
Medium	3.6
Fine	4.8

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

Livestock can graze or be fed forage from treated soybean fields.  
 Preharvest Interval (PHI): 85 days.

**Restrictions**

- **DO NOT** use **Satellite 3.3 herbicide** in soybeans in California.
- **DO NOT** exceed one application per crop season at the highest rate per acre for any given soil type and application method.

**Precautions**

- **DO NOT APPLY POSTEMERGENCE** or serious crop injury can result.

**VEGETABLE SOYBEAN (EDAMAME)**

**Application Methods:** Apply only by ground.

**Use Methods, Timings and Use Rates**

Apply **Satellite 3.3 herbicide** to edamame grown under conventional, minimum; or no-till systems.

**Preplant Surface.** Apply within 15 days of planting. **Satellite 3.3 herbicide** may be applied within 45 days of planting when used in a tank mix or applied sequentially with postemergence-applied herbicides registered for use in edamame.

**Preplant Incorporated.** Apply within 60 days of planting and incorporate.

**Preemergence.** Apply at planting or up to 2 days after planting. Apply to a firm seedbed, free of clods. **DO NOT** make applications of **Satellite 3.3 herbicide** preemergence north of Interstate 80, except in states of Indiana, Michigan and Ohio.

**Use Rates**

**Preplant Surface or Preplant Incorporated**

Soil Texture	< 3% Organic Matter > 3% (pts/A)	
Coarse	1.8	2.4
Medium	3.0*	3.6
Fine**	3.6	3.6

\* **DO NOT** exceed 2.1 pts for southern states; see **USE AREA** for map of specific states.  
 \*\* For heavy clay soils, apply **Satellite 3.3 herbicide** at the broadcast rate of 3.8 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

Livestock can graze or be fed forage from treated vegetable soybean (edamame) fields.

Preharvest Interval (PHI): 85 days.

**Restrictions**

- **DO NOT** exceed one application per crop season at the highest rate per acre for any given soil type and application method.
- Not for this use in California.

**STONE FRUIT CROP GROUP 12-12 (NONBEARING)**

**Apricot (including Japanese), Capulin, Cherry (black, Nanking, sweet, tart), Jujube (Chinese), Nectarine, Peach, Plum (including American, beach, Canada, cherry, Chickasaw, Damson, Japanese, Klamath, prune), Plumcot, Sloe; cultivars and/or hybrids of these**

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

**Use Methods, Timings and Use Rates**

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** at between 2.4 to 4.8 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired use strategy (see chart below) per application, not exceeding a total of 4.8 quarts/A per year in stone fruit trees.

Short-term control	2.4 quarts
Long-term control	4.8 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing stone fruit tree crops. **Satellite 3.3 herbicide** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply in a band or broadcast.

## Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the product label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of trees with leaves or buds or fruit. Contact with these plant parts by spray mixture may cause injury.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **SPRAYING INSTRUCTIONS** section of the product label.

Preharvest Interval (PHI): 60 days.

## Restrictions

- **DO NOT** apply more than 4.8 quarts of **Satellite 3.3 herbicide** per acre per year in pome fruit trees.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated groves or orchards.
- **DO NOT** apply to newly seeded nursery stock.

## SUGARCANE

**Application Methods:** Apply by ground or air.

## Use Methods, Timings and Use Rates

Apply preemergence through layby to plant or ratoon sugarcane. Applications may be made band or broadcast. 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.

**Satellite 3.3 herbicide** must be thoroughly and uniformly incorporated into the soil with either (a) mechanical incorporation equipment as outlined below, or (b) with rainfall or irrigation, if rainfall or irrigation is adequate for good crop and weed emergence and received within 7 days after application. If rainfall or irrigation is not obtained, mechanically incorporated the product.

## Mechanical Incorporation

Apply **Satellite 3.3 herbicide** to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application.

## Use Rates

Use Area	Broadcast Rate <sup>1</sup> (pts/A)
All states, except Hawaii	4.8 to 7.2
Muck soils (Florida only)	4.8 to 9.7
Hawaii	4.8 to 9.7

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

Preharvest Interval (PHI): 90 days.

## Restrictions

- **DO NOT** exceed 14.4 pints of **Satellite 3.3 herbicide** per acre in one growing season.
- **DO NOT** use less than 11 gallons of water as a carrier when applying **Satellite 3.3 herbicide** for weed control.
- **DO NOT** apply through any type of irrigation system.
- **DO NOT** graze treated fields or feed treated forage or fodder to livestock.

## Precautions

- 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.

## TREE NUT CROP GROUP (NONBEARING)

Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut, Pecan, Pistachio, Walnut

**Application Methods:** Apply by ground, chemigation, or flood, flooded basin, and gravity flow irrigation systems.

## Use Methods, Timings and Use Rates

Apply either in a single application or sequentially with an interval of 30 days or more. Apply **Satellite 3.3 herbicide** between 2.4 and 7.3 quarts per acre depending on the grower's weed control program, level of weed infestation, and desired residual control (see chart below) per application, not exceeding a total of 7.3 quarts/A per year.

Short-term control	2.4 quarts
Long-term control	4.8 to 7.3 quarts

**Ground Applications (Nonbearing).** Apply for preplant incorporated, preplant surface, surface incorporated, or preemergence weed control in nonbearing tree crops. **Satellite 3.3 herbicide** may be used before or after transplanting the nonbearing crops.

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

**Preplant Incorporated.** Apply **Satellite 3.3 herbicide** uniformly before transplanting but before weeds germinate. Incorporate to a depth of 1 to 2 inches. In order to avoid mechanical injury to the crop, apply and incorporate before transplanting. Avoid allowing roots to contact treated soil when placing transplants into the hole, as injury may occur.

**Preemergence.** Apply in a band or broadcast.

## Chemigation Applications

**Satellite 3.3 herbicide** may be applied through sprinkler irrigation and drip irrigation systems. Follow all directions, special instructions, and precautions about chemigation in the **SPRAYING INSTRUCTIONS** section of the product label. Do not apply **Satellite 3.3 herbicide**-treated irrigation water over top of trees with leaves or buds. Contact with these plant parts by spray mixture may cause injury.

**Flood, Flooded Basin, and Gravity Flow Irrigation Systems - Satellite 3.3 herbicide** may be applied through these types of systems. Follow all directions, special instructions, and precautions about these systems in the **SPRAYING INSTRUCTIONS** section of the product label.

Preharvest Interval (PHI): 60 days

## Restrictions

- **DO NOT** apply more than 7.3 quarts of **Satellite 3.3 herbicide** per acre per year in nut trees.
- **DO NOT** apply by air.
- **DO NOT** feed forage or graze livestock in treated groves or orchards.
- **DO NOT** apply to newly seeded nursery stock.



## TOBACCO

**Application Methods:** Apply only by ground.

### Use Methods, Timings and Use Rates

Apply preplant incorporated or as a layby application in transplanted tobacco.

**Preplant Incorporated** - Apply **Satellite 3.3 herbicide** with ground sprayer up to 60 days prior to transplanting tobacco and incorporate within 7 days after application.

Applied according to directions and under normal growing conditions, **Satellite 3.3 herbicide** will not harm transplanted tobacco. Under stress conditions for plant growth such as cold/wet or hot/dry weather, **Satellite 3.3 herbicide** can produce a temporary retardation of tobacco development.

**Layby** - Apply as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply in a 16- to 24-inch band between the crop rows. Contact of the spray solution with tobacco plants may cause damage to the plant.

### Use Rates

#### Preplant Incorporated Application

Use Area	Soil Texture	Rate (pts/A)
Florida Georgia Maryland North Carolina South Carolina Virginia	Coarse	2.4
	Medium sandy clay loams, loams silt loams, silts	2.4
		3.0
	Fine	3.0
Other states	Coarse	2.4
	Medium	3.6
	Fine	3.6

#### Layby Application

Soil Texture	Broadcast Rate (pts/A)
Coarse	1.8
Medium	2.4
Fine	2.4

### Restrictions

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

### Tank Mixes with Other Products

If this product is used in combination with any other product except as specifically recommended in writing by UPI, then UPI shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. To the extent consistent with applicable law, if used in combination recommended by UPI, the liability of UPI shall in no manner extend to any damage, loss, or injury not directly caused by the inclusion of the UPI product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the product.

#### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

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

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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