

87290-22

09/15/2011

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

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

SEP 15 2011

Michael Kellogg, Agent
Willowood, LLC
c/o Pyxis Regulatory Consulting, Inc.
4110 136th Street, NW
Gig Harbor, WA 98332

Subject: Label Amendment (correct crop rotation table)
Willowood Pronamide 3.3SC
EPA Reg. No. 87290-22
Correspondence Dated September 14, 2011

Dear Mr. Kellogg:

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

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this letter must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

If you have any questions, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

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

2/26

RESTRICTED USE PESTICIDE

Because Pronamide has produced tumors in laboratory animals, this product is for retail sale to and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

Willowood Pronamide 3.3SC

For use on alfalfa, apple, apricot, artichoke (globe), birdsfoot trefoil, blackberry, boysenberry, blueberry, cherry, clover, crown vetch, endive, escarole, grape, head lettuce, nectarine, peach, pear, plum, prune, radicchio greens, raspberry, rhubarb, sainfoin, winter peas, woody ornamentals, nursery stock of ornamentals, Christmas trees and on turf grown for seed or sod or on nonresidential sites, golf course, industrial and office building sites, stadium fields or professional athletic fields.

ACTIVE INGREDIENT:

Pronamide: 3,5-dichloro-N-(1,1-dimethyl-2-propynyl) benzamide 35.6%

OTHER INGREDIENTS: 64.4%

TOTAL: 100.0%

Contains 3.3 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
If swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
In inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.	

EPA Reg. No. 87290-22

Manufactured for:
Willowood, LLC
1600 NW Garden Valley Blvd. #120
Roseburg, OR 97471

EPA Est. No.

Net Contents:

ACCEPTED

SEP 15 2011

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under
EPA Reg. No. 87290-22

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

Causes moderate eye irritation. Avoid contact with eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

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. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

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

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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

- Coveralls over short-sleeved shirt and short pants

- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

For all uses except those specified below, do not enter or allow others to enter until sprays have dried.

When applied to stadium or professional athletic fields, water-in immediately after application or, do not enter or allow others to enter treated area for 24-hours after application. If product is watered-in after treatment, do not enter or allow other persons to enter until area has dried.

PRODUCT INFORMATION

Willowood Pronamide 3.3SC is effective for the control of a wide range of grasses and certain broadleaf weeds. The product is a soil active herbicide with uptake by sensitive weeds occurring through the roots. Before using this herbicide for a specific crop use, study the following product use information that provides important instructions for the safe and effective application of the product.

Use Restrictions: Hand-spray applications of Willowood Pronamide 3.3SC may be made only to ornamentals and nursery stock of ornamentals.

Chemigation: Do not apply this product through any type of irrigation system except as specified on this label or in Willowood, LLC supplemental labeling.

SPRAY DRIFT MANAGEMENT (AERIAL APPLICATION)

Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is determined by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most 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 certain states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory Information** section.

Aerial Spray Drift Advisory Information

This section is advisory in nature and does not supersede mandatory label requirements.

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 Inversion section of this label).

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 specified pressures. Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher 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 backwards, parallel to the airstream will produce larger droplets than other orientations. 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 stream nozzles oriented straight back produce larger droplets and lower drift than other nozzle types.

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: Do not make applications at a height 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 cross-wind, 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 swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2-10 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. Note: Local terrain can influence wind patterns. Every applicator must 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. The 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. The presence of inversion conditions can be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversion conditions. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: Apply this pesticide when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

WEED SPECTRUM

Willowood Pronamide 3.3SC may be used for both preemergence and early post-emergence control of winter annual and perennial grasses and chickweed and for preemergence control only of certain other broadleaf weeds and certain other grasses listed.

Weeds Controlled Both Preemergence and Early Postemergence

barley, foxtail	<i>Hordeum jubatum</i>
barley, volunteer	<i>Hordeum vulgare</i>
bentgrass	<i>Agrostis species</i>
bluegrass, annual	<i>Poa annua</i>
bluegrass, bulbous	<i>Poa bulbosa</i>

bluegrass, Kentucky	<i>Poa pratensis</i>
brome, downy (cheatgrass)	<i>Bromus tectorum</i>
chickweed, common	<i>Stellaria media</i>
chickweed, mouse-ear	<i>Cerastium vulgatum</i>
fescue, tall	<i>Festuca arundinaceae</i>
goatgrass, jointed	<i>Aegilops cylindrical</i>
oat, volunteer	<i>Avena sativa</i>
oat, wild	<i>Avena fatua</i>
orchardgrass	<i>Dactylis glomerata</i>
quackgrass	<i>Agropyron repens</i>
rye, volunteer	<i>Secale cereal</i>
ryegrass, Italian	<i>Lolium mutiflorum</i>
ryegrass, perennial	<i>Lolium perenne</i>
velvetgrass	<i>Holcus lanatus</i>
wheat, volunteer	<i>Triticum aestivum</i>

Weeds Controlled Only Preemergence

barnyardgrass	<i>Echinochloa crus-galli</i>
canarygrass	<i>Phalaris canariensis</i>
carpetweed	<i>Mollugo verticillata</i>
crabgrass, large	<i>Digitaria sanguinalis</i>
dodder, field	<i>Cuscuta campestris</i>
foxtail, yellow	<i>Setaria lutescens</i>
goosefoot, nettleleaf	<i>Chenopodium murale</i>
goosegrass	<i>Eleusine indica</i>
henbit	<i>Lamium amplexicaule</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
lambsquarters, common	<i>Chenopodium album</i>
lovegrass	<i>Eragrostis diffusa</i>
mallow, little (cheeseweed)	<i>Malva parviflora</i>
morningglory, annual	<i>Ipomoea purpurea</i>
mustard, wild	<i>Brassica kaber</i>
nettle, burning	<i>Urtica urens</i>
nightshade, black	<i>Solanum, nigrum</i>
nightshade, hairy	<i>Solanum sarrachoides</i>
panicum, fall	<i>Panicum dichotomiflorum</i>
purslane, common	<i>Portulaca oleracea</i>
radish, wild	<i>Raphanus sativus</i>
rocket, London	<i>Sisymbrium irio</i>
shepherdspurse	<i>Capsella bursa-pastoris</i>
smartweed, pale	<i>Polygonum lapathifolium</i>
sorrel, red (from seed)	<i>Rumex acetosella</i>
tomato, volunteer	<i>Solanum esculentum</i>

Note: The weed species controlled by Willowood Pronamide 3.3SC are dependent on the rate used, specific crop culture involved, and the associated conditions of temperature, soil type and moisture availability. Refer to specific crop use directions for weed species controlled.

DOSAGE

The rate of Willowood Pronamide 3.3SC required will vary depending on the crop culture involved and weed species to be controlled. See specific crop use directions for all dosage instructions. All dosage instructions listed in this label are in terms of pints of product or pounds of active ingredient per broadcast acre. For banded application, reduce the amount of Willowood Pronamide 3.3SC used per square acre according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Acre Broadcast} = \text{Amount Needed per Acre for Band Application}$$

TIMING AND APPLICATION

Unless specific directions are given under the crop to be treated, apply Willowood Pronamide 3.3SC in the fall or early winter, when temperatures do not exceed 55°F, **but prior to freeze-up**. Best weed control results occur when Willowood Pronamide 3.3SC is applied preemergence to the weeds and when application is followed by rainfall or irrigation to move the product into the root zone of the germinating weeds.

Mix Willowood Pronamide 3.3SC thoroughly in clean water at the required concentration and apply uniformly as a spray. For ground application, use a conventional low-pressure herbicide sprayer equipped with flat fan nozzles spaced and calibrated to uniformly deliver 20 to 50 gallons of spray per acre. For aerial applications, apply in a coarse droplet spray at 5 to 10 gallons per acre. Accurately calibrate spray equipment prior to each use.

COMPATIBILITY WITH OTHER PESTICIDES

Willowood Pronamide 3.3SC is compatible with most commonly used agricultural pesticides, crop oil concentrate and adjuvants. When preparing tank mixes, consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use.

EFFECT OF SOIL TYPE, MOISTURE AND TEMPERATURE

Willowood Pronamide 3.3SC is most active in coarse to medium texture soils of low organic matter and relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils with higher organic matter may result in inconsistent or incomplete weed control.

The herbicidal activity of Willowood Pronamide 3.3SC is mainly through root absorption in sensitive weed species. Rain, melting snow or irrigation is **essential** following treatment to move Willowood Pronamide 3.3SC into the root zone of germinating weeds.

Under field conditions, Willowood Pronamide 3.3SC will remain relatively stable with little loss of herbicidal activity when soil temperatures are less than 55°F. As soil temperatures increase, degradation of the active ingredient takes place. Willowood Pronamide 3.3SC may degrade rather quickly if left exposed on the soil surface in warm weather. If Willowood Pronamide 3.3SC is applied when air temperature exceeds 85°F, the treatment must be soil incorporated to a shallow depth (top two to three inches) or watered into the soil as soon as possible.

CULTURAL CONSIDERATIONS

For best results, apply Willowood Pronamide 3.3SC to a trash-free soil surface. Clean cultivation before application is preferable, but not necessary. To obtain optimum weed control in areas not clean cultivated, the area to be treated must be free of surface litter (dead or decaying crop and weed debris, mowing clippings, etc.). Trash-free areas create ideal conditions for rapid movement of Willowood Pronamide 3.3SC into the weed root zone following rain or irrigation.

ROTATION CROP PLANTING INFORMATION

Follow the directions given below when rotation crops will be planted to areas previously treated with Willowood Pronamide 3.3SC.

Waiting Period in Days Before Planting the Crops Indicated (1):

Amount of Willowood Pronamide 3.3SC Applied (pint/Acre)	Root and Tuber Vegetables	Legume Vegetables and Cotton	Brassica Leafy Vegetables, Cucurbits, Fruiting Vegetables and Bulb Vegetables	Leafy Vegetables (except Brassica Vegetables), Crop Group 4 (2)	Cereal Grains
1.25	90	90	90	30	365
2.5	90	90	120	30	365
3.5	90	120	180	30	365
5.0	90	150	210	30	365

- (1) There are no plant back restrictions for Willowood Pronamide 3.3SC when rotating to artichokes, grapes, berry fruits, pome fruits or stone fruits.
- (2) Crop Group 4 as defined under 40CFR 180.41.

Whether Willowood Pronamide 3.3SC is bed-topped, banded, or broadcast, the beds must be knocked down and the field cross-disked before rotation crops other than artichokes, head lettuce, endive, radicchio or escarole are planted.

Where the Willowood Pronamide 3.3SC treatment is to be followed by a rotation crop within 180 days of application, bed-topped or banded applications are suggested.

ARTICHOKE (GLOBE)

California (Only)

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for the control of susceptible weeds in either established (ratoon) or transplanted globe artichokes.

Weeds Controlled

Willowood Pronamide 3.3SC is effective at 5.0 to 9.5 pints of product (2 to 4 lbs. active ingredient) per treated acre for the preemergence control of the following weeds:

- barley, volunteer
- bluegrass, annual
- chickweed, common
- chickweed, mouse-ear
- foxtail, yellow
- goosefoot, nettleleaf
- henbit
- knotweed, prostrate
- mallow, little (cheeseweed)
- mustard wild
- nettle, burning
- nightshade, hairy
- oat, volunteer
- oat, wild
- ryegrass, Italian
- wheat, volunteer

Willowood Pronamide 3.3SC Rate (Per Broadcast Acre) ¹				
Crop	Weeds	Dependable Rainfall or Overhead Irrigation (pt/Acre)	Less Dependable Rainfall or Furrow Irrigation	Comments
globe artichokes (established ratoon)	Susceptible annual grasses, volunteer grains and broadleaf weeds	5.0	Do not apply	sandy soils, sandy loams and silt loams
		9.5	Do not apply	silt, silty clay loams, clay loams and clay soils
globe artichokes (newly transplanted crowns)	Susceptible annual grasses, volunteer grains and broadleaf weeds	5.0	Do not apply	all soil types except peat and muck soils

¹ Dosage instructions listed on this label are in terms of pints Willowood Pronamide 3.3SC per acre broadcast application. For banded treatments down artichoke rows or between rows, reduce the amount of Willowood Pronamide 3.3SC used per acre according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Acre Broadcast} = \text{Amount Needed per Acre for Band Application}$$

DOSAGE AND TIMING

Established Ratoon Artichokes

Apply Willowood Pronamide 3.3SC in a single postemergence application to the crop after tillage operations are completed and shoot re-growth of the artichokes has occurred. Apply Willowood Pronamide 3.3SC preemergence to the weeds and before new artichoke leaves are greater than 14 to 16 inches long. Apply Willowood Pronamide 3.3SC in a banded treatment over the crop row at the rate of 5.0 to 9.5 pints of product per broadcast acre (see dosage rate for soil type in chart). A second application of Willowood Pronamide 3.3SC at the same rate may be applied 60 days or more prior to harvest in a banded treatment directed to the untreated soil surface between the artichoke rows after the ditching operation is completed later in the season.

Transplanted Artichoke Crowns

Apply Willowood Pronamide 3.3SC in a single application after transplanting the crowns but before new shoots have developed 3 to 4 new leaves. Apply Willowood Pronamide 3.3SC preemergence to the weeds and banded over the crop row at the rate of 5.0 pints of product per broadcast acre. Do not use higher rates of Willowood Pronamide 3.3SC than 5.0 pints per acre in one season. A second application of Willowood Pronamide 3.3SC at the same rate may be applied 60 days or more prior to harvest in a banded treatment directed to the untreated soil surface between the artichoke rows after the ditching operation is completed later in the season.

Application

Willowood Pronamide 3.3SC may be applied by aircraft or ground sprayer for preemergence control of susceptible grasses and broadleaf weeds in established ratoon artichokes or transplanted artichoke crowns.

Aerial: Mix the specified amount of Willowood Pronamide 3.3SC in a minimum of 10 gallons of water per acre for aerial application. Avoid drift to all other crops and non-target areas.

Ground: Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per acre. Reduce dosage and volume accordingly for

banded treatments. Use a standard low pressure herbicide sprayer equipped with flat fan nozzles that give uniform spray distribution.

Moisture and Irrigation Requirements

Moisture is necessary to activate Willowood Pronamide 3.3SC in the soil and move it into the root zone of germinating weeds. In artichoke culture natural rainfall or supplementary overhead irrigation within 1 to 3 days after the application of Willowood Pronamide 3.3SC is essential for effective weed control. For best results use overhead sprinkler irrigation equipment to irrigate the field with 1 to 2 inches of water after application of Willowood Pronamide 3.3SC.

Effect of Soil Type

Do not apply Willowood Pronamide 3.3SC to highly organic or muck soils because herbicidal activity is lowered significantly in these soils. Follow dosage rates suggested in the dosage instruction chart according to the soil type for established and transplanted artichokes.

Rotation crops

Artichokes are generally long-term perennial crops. In the event that artichokes are discontinued and a rotational crop will be planted within one year where Willowood Pronamide 3.3SC was applied at the rate of 5.0 pints of product per acre, follow the rotational crop requirements specified in the Product Information section of this label under Rotational Crop Planting Information.

Artichoke – Specific Use Restrictions

- Do not apply more than 4 lbs./acre active ingredient (9.5 pints/acre of Willowood Pronamide 3.3SC) to established artichokes or more than 2 lbs./acre active ingredient (5.0 pints/acre of Willowood Pronamide 3.3SC) to newly transplanted artichokes or make more than one “in-row” application per season.
- Do not harvest artichokes within 60 days of final application.
- Do not make more than one application to the artichoke row per season. Do not make more than one application to the untreated soil between the rows per season.

BLACKBERRY/BOYSENBERRY/RASPBERRY

(Oregon and Washington Only)

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for fall and winter applications to established blackberries, boysenberries and raspberries for both preemergence and postemergence control of certain winter annual and perennial grasses.

Dosage

Willowood Pronamide 3.3SC may be applied at the rate of 2.5 to 7.0 pints of product (1 to 3 lbs. active ingredient) per acre broadcast application. The rate will depend on the weed species present and the soil texture of the site being treated. Follow the weed control instructions listed in the chart below.

Pints of Willowood Pronamide 3.3SC Per Broadcast Acre ¹		
Weeds Controlled	Dependable Rainfall or Overhead Irrigation ²	Comments
bluegrass, annual	2.5-5.0	Use low rates on light to medium soils and high rates on heavy soils
quackgrass	5.0-7.0	
ryegrass, perennial	5.0-7.0	

¹ Dosage rates specified are in pints of Willowood Pronamide 3.3SC per acre broadcast application. Reduce rates accordingly for banded applications.

² For effective weed control, rainfall or overhead irrigation is essential following the application of Willowood Pronamide 3.3SC.

Crop Tolerance

Established cane fruit are tolerant to specified rates of Willowood Pronamide 3.3SC. Newly transplanted blackberries, boysenberries and raspberries must be well rooted and transplanted for at least 3 months prior to the application of Willowood Pronamide 3.3SC.

Timing and Application

Apply Willowood Pronamide 3.3SC only during the fall or winter months. For optimum results, apply Willowood Pronamide 3.3SC during November or December. Do not make applications when the ground is frozen. Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre.

Blackberry/Boysenberry/Raspberry – Specific Use Restrictions

- Do not apply more than 3 lbs./acre active ingredient (7.0 pints/acre of Willowood Pronamide 3.3SC) or make more than one application of Willowood Pronamide 3.3SC per season.

BLUEBERRY

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for fall and winter applications to established blueberries for both preemergence and postemergence control of winter annual and perennial grasses and chickweed and preemergence control of certain broadleaf weeds.

Dosage Instructions

Willowood Pronamide 3.3SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per acre broadcast application. The rate will depend on the weed species present. Follow the weed control rates specified in the chart below:

Weeds Controlled	Pints of Willowood Pronamide 3.3SC Per Acre¹ Dependable Rainfall or Overhead Irrigation²
bluegrass, annual brome, downy (cheatgrass) chickweed oat, wild sorrel, red (from seed)	2.5
bentgrass bluegrass, Kentucky fescue, tall orchardgrass quackgrass ryegrass, perennial velvetgrass	5.0

¹ Dosage rates specified are in pints of Willowood Pronamide 3.3SC per acre broadcast application. Reduce rates accordingly for banded applications.

² For effective weed control, rainfall or overhead irrigation is essential following application of Willowood Pronamide 3.3SC.

Crop Tolerance

Established blueberry plants are tolerant to specified rates of Willowood Pronamide 3.3SC. Do not apply Willowood Pronamide 3.3SC to newly transplanted blueberries until roots are well established.

Timing and Application

Apply Willowood Pronamide 3.3SC in a single application during the fall or early winter months, but prior to soil freeze-up and snow cover. Optimum herbicidal activity occurs when applications are made under cool temperature conditions (55°F or less) and are followed by rainfall or overhead irrigation.

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre.

Blueberry – Specific Use Restrictions

- Do not apply more than 2 lbs./acre active ingredient (5.0 pints/acre Willowood Pronamide 3.3SC) or make more than one application of Willowood Pronamide 3.3SC per year.

**ALFALFA, CLOVER, BIRDSFOOT TREFOIL, CROWN VETCH AND SAINFOIN
GROWN FOR FORAGE AND SEED**

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for fall or winter applications to alfalfa, clover, birdsfoot trefoil, crown vetch and sainfoin for both preemergence and postemergence control of susceptible winter annual and perennial grasses and for preemergence control of certain broadleaf weeds.

Dosage

Willowood Pronamide 3.3SC may be applied at the rate of 1.25 to 5 pints of product (0.5 to 2 lbs. active ingredient) per broadcast acre application. The required rate will depend on the weed species present as well as the type of irrigation used or the dependability of rainfall following application. The effective rate will be higher in low rainfall areas or where furrow irrigation is used than in areas of dependable rainfall or where overhead irrigation is practiced. Follow the weed control instructions given in the chart below for fall or winter applications of Willowood Pronamide 3.3SC:

Pints of Willowood Pronamide 3.3SC Per Broadcast Acre		
Weeds Controlled	Dependable Rainfall Or Overhead Irrigation	Low Rainfall Or Furrow Irrigation
Apply preemergence or postemergence to these weeds: barley, foxtail bluegrass, annual brome, downy (cheatgrass) chickweed grain, volunteer oat, wild ryegrass, Italian	1.25-2.0	2.0-2.5
bluegrass, Kentucky orchardgrass ryegrass, perennial	2.0-2.5	2.5-3.5
quackgrass	2.5-3.5	3.5-5.0
Apply preemergence only to these weeds: sorrel, red (from seed)	2.0-2.5	2.5-3.5
mustard, wild radish, wild rocket, London shepherdspurse	3.5	5.0

Note: For control of spring germinating cheatgrass and dodder, refer to specific instructions under Spring Use Directions for Established Alfalfa.

Timing and Application

Apply Willowood Pronamide 3.3SC during the fall or winter months. Optimum herbicidal activity occurs when applications are made under cool temperature conditions (55°F to 60°F) and are followed by rainfall or overhead irrigation. Applications must be made **before soil freeze-up**.

Applications may be made postemergence to established, actively growing or dormant forage legumes or to new plantings after the legume has reached the trifoliate leaf stage. In established forage legume stands, applications must be made after the last cutting when the weather and soil temperatures are cool. In fall seeded forage legumes, applications must be made after legumes have reached the trifoliate leaf stage. In spring-seeded forage legumes, applications of Willowood Pronamide 3.3SC must be made the following fall or early winter to control winter annual and perennial grasses. Do not use Willowood Pronamide 3.3SC as a preplant or preemergence treatment or before the trifoliate leaf stage of the legume has developed in new plantings as injury to the legume stand may result. Remove or disperse trash, crop residues and ashes before treatment.

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a ground sprayer at 20 to 50 gallons per acre. Use a conventional herbicide sprayer equipped with flat fan nozzles at 40 to 60 psi.

Rotation Crops

Where rotation crops are to follow within one year of the Willowood Pronamide 3.3SC treatment to alfalfa, clover, birdsfoot trefoil, crown vetch or sainfoin, follow the directions given in the Product Information section of this label under Rotation Crop Planting Information.

Specific Use Restrictions – Alfalfa, Clover, Birdsfoot Trefoil, Crown Vetch and Sainfoin

- Do not use more than 2 lbs./acre active ingredient (5 pints/acre of Willowood Pronamide 3.3SC) per year.
- Do not harvest alfalfa seed within 50 days after application.
- Do not graze or harvest for forage or dehydration within the following intervals after application:

Alfalfa – below 3 lbs./acre Willowood Pronamide 3.3SC (west of Mississippi River)	25 days
Alfalfa – 3 to 4 lbs./acre Willowood Pronamide 3.3SC (west of Mississippi River)	45 days
Clover, birdsfoot trefoil, crown vetch, sainfoin (entire U.S.) and alfalfa – Up to 4 lbs./acre Willowood Pronamide 3.3SC (East of Mississippi River)	120 days

SPRING USE DIRECTIONS FOR ESTABLISHED ALFALFA DODDER CONTROL IN ALFALFA SEED CROPS

Only in California, Idaho, Nevada, Oregon, Utah and Washington

Use Information

For effective control Willowood Pronamide 3.3SC must be moved into the soil either by rainfall or irrigation before the germination of dodder. Preferably, irrigation must be made within 1 to 3 days following the Willowood Pronamide 3.3SC application, but can be delayed up to 2 weeks if necessary provided that irrigations precede dodder germination. If irrigation of the field treated with Willowood Pronamide 3.3SC must be delayed, a light mechanical incorporation (maximum 1-inch depth) must follow the Willowood Pronamide 3.3SC application and the field irrigated within 2 weeks.

When using flood type or overhead sprinkler irrigation systems the amount of irrigation following the Willowood Pronamide 3.3SC application must not exceed one inch of water. Excess irrigation following the Willowood Pronamide 3.3SC application and prior to germination of dodder may decrease the effectiveness of Willowood Pronamide 3.3SC.

Dosage and Timing

For effective control, Willowood Pronamide 3.3SC must be applied before dodder germinates. Follow the directions given below depending on method of irrigation used.

Furrow Irrigation: Apply Willowood Pronamide 3.3SC at the rate of 3.5 to 5.0 pints of product (1.5 to 2 lbs. active ingredient) per acre. Incorporate lightly at time of application and irrigate within seven days.

Flood Irrigation: Apply Willowood Pronamide 3.3SC at the rate of 3.5 pints of product (1.5 lbs. active ingredient) per acre. Flood field with 0.5 to 1.0 inch of water within 1 to 3 days after application.

Overhead Sprinkler Irrigation: Use same directions as given above for flood irrigation. Excessive amounts of irrigation water following Willowood Pronamide 3.3SC application may adversely affect the herbicidal activity.

(SPRING APPLICATIONS)

Cheatgrass Control in Established Alfalfa (Spring Applications)

Dosage and Timing

Spring application of Willowood Pronamide 3.3SC will control cheatgrass if application is made when cheatgrass has recently germinated or is expected to germinate. Apply Willowood Pronamide 3.3SC as a broadcast application at the rate of 2.0 to 2.5 pints of product (0.8 to 1 lb. active ingredient) per acre.

HEAD LETTUCE/ENDIVE/ESCAROLE/RADICCHIO GREENS

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for the control of certain annual grasses and broadleaf weeds in direct seeded or transplanted head lettuce, endive, escarole and radicchio greens.

Weeds Controlled

Willowood Pronamide 3.3SC is effective at 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per treated acre for the preemergence control of the following weeds:

Grasses

- barley, foxtail
- barley, volunteer
- barnyardgrass
- bluegrass, annual
- brome, downy (cheatgrass)
- canarygrass
- crabgrass
- foxtail, yellow
- goosegrass
- lovegrass
- oats, volunteer
- panicum, fall
- ryegrass, Italian
- rye, volunteer
- wheat, volunteer

Broadleaf Weeds

- carpetweed
- chickweed, common
- goosefoot, nettleleaf
- henbit
- knotweed
- lambsquarters, common
- mornignglory, annual
- mustard, wild
- nettle, burning
- nightshade, black
- nightshade, hairy
- purslane, common
- rocket, London
- shepherdspurse
- smartweed, pale
- tomato, volunteer

Dosage

Willowood Pronamide 3.3SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per acre broadcast application. The dosage rate required is dependent on soil texture and method of irrigation. At rates specified on this label, Willowood Pronamide 3.3SC may not be applied for weed control on highly organic (peat and muck) soils.

For head lettuce, endive, escarole and radicchio greens, follow the dosage instructions listed in chart below:

Pints of Willowood Pronamide 3.3SC Per Broadcast Acre ¹			
Weeds	Dependable Rainfall Or Overhead Irrigation	Less Dependable Rainfall or Furrow Irrigation	Soil Texture Group ²
susceptible annual grasses	2.5-3.5 (surface application)	3.5-5.0 (soil incorporation)	Coarse and medium Textured soils
broadleaf weeds	3.5-5.0 (surface application)	5.0 (soil incorporation)	Fine textured soils

¹ Reduce dosage rate accordingly for banded applications.

² Soil Texture Group

Coarse: sand, loamy sand, sandy loam

Medium: loam, silt loam, silt, sandy clay loam

Fine: silty clay loam, clay loam, sandy clay, silty clay, clay

Crop Tolerance

Most varieties of head lettuce are highly tolerant of the specified rates of Willowood Pronamide 3.3SC. Do not use more than 3 lbs. of Willowood Pronamide 3.3SC on val temp, grande verde and prima verde varieties of crisp head lettuce, or on endive, escarole and radicchio greens.

Timing and Application

Willowood Pronamide 3.3SC can be applied either pre-plant, post-plant or postemergence to head lettuce, endive, escarole or radicchio greens in banded, bed-topped or broadcast applications. Most applications will be made preemergence to the crop just before or after planting and preemergence to the weeds. Applications can be made before or after thinning of head lettuce but must be made prior to weed emergence. Do not apply Willowood Pronamide 3.3SC to head lettuce within 55 days of harvest and do not make more than one application to each crop of head lettuce, endive, escarole or radicchio greens.

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per treated acre. Reduce dosage and volume accordingly for banded treatments. Use a standard low pressure sprayer equipped with flat fan nozzles that provide uniform spray distribution.

Application Moisture Requirements

Willowood Pronamide 3.3SC acts mainly through root absorption, therefore it is necessary to move Willowood Pronamide 3.3SC into the root zone of germinating weeds to provide effective control. This can be accomplished by overhead sprinkler irrigation, by rainfall or by shallow mechanical incorporation.

Sprinkler Irrigation

Willowood Pronamide 3.3SC can be applied to the soil surface without mechanical incorporation after planting or transplanting if overhead irrigation is used. An initial irrigation of 1 to 2 inches must promptly follow the application of Willowood Pronamide 3.3SC, especially in hot weather.

Applications Dependent on Natural Rainfall

In areas of dependable natural rainfall, Willowood Pronamide 3.3SC can be applied as a surface treatment preemergence to the weeds. Applications to direct seeded or transplanted head lettuce, endive, escarole or radicchio greens are most successful when followed by 1/2 to 1 inch of rainfall within two to three days after application.

Furrow Irrigation – Mechanical Incorporation

Where rainfall is not dependable or supplementary overhead irrigation is not used, shallow pre-plant incorporation is required. PTO-driven incorporators or rolling cultivators that thoroughly mix Willowood Pronamide 3.3SC into the top 2 inches of soil are suggested.

Incorporation must be simultaneous or immediately after application of Willowood Pronamide 3.3SC, especially in hot weather. Irrigation must be started as soon as possible.

Where furrow irrigation is used, spray application and mechanical incorporation must be made after beds have been formed. Willowood Pronamide 3.3SC will not be as effective if disced in prior to bed shaping. Hoeing, thinning or shallow cultivation of soil treated with Willowood Pronamide 3.3SC will not destroy its herbicidal activity.

Temperature

Willowood Pronamide 3.3SC is not highly volatile, but it may degrade rather quickly if left exposed on the soil surface in warm weather. If applied when air temperatures exceed 85°F it must be shallow incorporated or watered into the soil as soon as possible, preferably within 1 or 2 days.

Rotation Crops

Follow the directions given in the Product Information section of this label under Rotation Crop Planting Information.

Head Lettuce/Endive/Escarole/Radicchio Greens – Specific Use Restrictions

- Do not apply Willowood Pronamide 3.3SC to head lettuce, endive, escarole, radicchio varieties that will be harvested less than 55 days after treatment.
- Do not apply more than one application of Willowood Pronamide 3.3SC to each crop of head lettuce, endive, escarole or radicchio greens.
- Do not apply Willowood Pronamide 3.3SC to leaf lettuce.
- Do not apply more than 2 lbs./acre active ingredient (5.0 pints/acre Willowood Pronamide 3.3SC) per acre.

**For Grass and Weed Control in Head Lettuce – Aerial Application
(For Use in Arizona and California)**

Willowood Pronamide 3.3SC may be applied by aircraft for preemergence control of susceptible grasses and broadleaf weeds in head lettuce. Willowood Pronamide 3.3SC must be applied at the dosage rate of 2.5 to 5.0 pints of product (1.0 to 2.0 pounds active ingredient) per treated acre depending on soil type (refer to comments under Dosage chart in **HEAD LETTUCE/ENDIVE/ESCAROLE/RADICCHIO GREENS** section). Mix the specified amount of this product in 10 to 20 gallons of water per acre for aerial application. Avoid drift to all other crops and non-target areas.

**Chemigation Application on Head Lettuce, Endive, Escarole or Radicchio
(For Use in Arizona and California)**

Apply Willowood Pronamide 3.3SC by chemigation for weed control in direct seeded or transplanted head lettuce, endive, escarole or radicchio. Application must be made prior to weed emergence. Application may be made preemergence to head lettuce, endive, escarole, or radicchio greens or postemergence to head lettuce. **Do not apply postemergence to endive, escarole, or radicchio greens.**

Application Rate: Apply Willowood Pronamide 3.3SC at the rate of 1.25 to 2.5 pints per acre (0.5 to 1 lb. active ingredient per acre) depending upon soil type, weed species and level of infestation.

Weeds	Pints Willowood Pronamide 3.3SC Per Acre Broadcast Application¹	Soil Texture Group¹
Susceptible annual grasses and broadleaf weeds	1.25-2.5 (Surface application)	Coarse and medium textured soils
	1.25-2.5 (Surface application)	Fine textured soils

¹Soil Texture Group

- Coarse: sand, loamy sand, sandy loam
- Medium: loam, silt loam, silt, sandy clay loam
- Fine: silty clay loam, clay loam, sandy clay, silty clay, clay

Application Moisture Requirements: Willowood Pronamide 3.3SC acts mainly through root absorption; therefore, it is necessary to move Willowood Pronamide 3.3SC into the root zone of germinating weeds to provide effective control. This can be accomplished by applying a minimum of 0.75 inch of overhead sprinkler irrigation when applied by chemigation to fields that have been pre-irrigated.

Time of Treatment: Applying Willowood Pronamide 3.3SC following initial irrigation of the crop will limit movement of the herbicide below the root zone of germinating weeds and improve weed control. The optimal application timing following pre-irrigation will vary depending on season, weed species present and environmental conditions. The following information is provided as a general guideline:

Timing	Date	Application Timing (Days After Starting Sprinklers)
Early	Sept. 1 to Oct. 15	1-3
Mid	Oct. 15 to Dec. 15	3-6
Late	Dec. 15 to Jan.	5-6

Chemigation Equipment: Willowood Pronamide 3.3SC may be applied through center pivot, lateral move, solid set or hand move systems capable of uniform delivery of the herbicide. Solid set or hand move systems should be capable of delivering a uniform pressure of 60 to 70 psi at all nozzles. Pipes and nozzles must be positioned to provide uniform coverage of the treatment area. Placement of nozzles in a diamond shaped (♦) pattern will provide more uniform coverage. Do not apply when wind velocity is sufficient to distort uniformity of coverage or cause drift to susceptible non-target plants.

The injection-metering pump must be calibrated as specified by the manufacturer and checked periodically during application to ensure proper operation. Pesticide injection hoses, which connect chemigation-metering equipment to the sprinkler irrigation system, must be of braided reinforced construction with an internal tube made of nylon, cross-linked polyethylene, or high-density polyethylene.

Mixing: Mixing tanks should be large enough to contain the entire amount of herbicide mixture for the area to be treated. Use a minimum of 3 gallons of water per 1.25 pints of Willowood Pronamide 3.3SC. Agitation of the herbicide mixture is required at all times during mixing and application (injection).

Application: For hand move or solid set systems set up to deliver about 1/10 inch of water per hour, Willowood Pronamide 3.3SC should be injected over a period of 1 to 2 hours. Once the herbicide has been injected, continue irrigation for at least the time required to flush the system and deliver additional irrigation sufficient to incorporate the herbicide into the upper inch of soil.

Chemigation Use Restrictions for Head Lettuce, Endive, Escarole or Radicchio Greens

- Do not apply Willowood Pronamide 3.3SC to direct seeded varieties of head lettuce, endive, escarole and radicchio greens that will be harvested less than 55 days after treatment or transplanted head lettuce that will be harvested less than 35 days after application.
- Do not apply more than one application of Willowood Pronamide 3.3SC per season to head lettuce, endive, escarole, or radicchio greens.
- Do not apply Willowood Pronamide 3.3SC postemergence to endive, escarole, or radicchio greens.
- Do not apply more than 2.5 pints of Willowood Pronamide 3.3SC (1 lb. active ingredient) per acre.

Chemigation Instructions

Do not apply this product through any irrigation system unless the instructions for chemigation are followed. Apply this product only through continuously moving center pivot, lateral move end tow, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse system) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems on the pesticide container label are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Sprinkler Chemigation

1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.
2. The 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 back-flow.
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.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point that pesticide distribution is adversely affected.
7. 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.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

RHUBARB

(Oregon and Washington Only)

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for fall and winter applications to established rhubarb for both preemergence and postemergence control of winter annual and perennial grasses and chickweed and preemergence control of certain broadleaf weeds.

Dosage:

Willowood Pronamide 3.3SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per acre broadcast application. The rate will depend on the weed species present. Follow the weed control instructions listed in the chart below:

Weeds Controlled	Pints of Willowood Pronamide 3.3SC Per Acre¹ Dependable Rainfall or Overhead Irrigation²
bluegrass, annual brome, downy (cheatgrass) chickweed oat, wild sorrel, red (from seed)	2.5
bentgrass ³ bluegrass, Kentucky fescue, tall ³ orchardgrasses ³	5.0

quackgrass ryegrass, perennial velvetgrass ³	
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¹ Dosage rates specified are in pints of Willowood Pronamide 3.3SC per acre broadcast application. Reduce rates accordingly for banded applications.
² For effective weed control, rainfall or overhead irrigation is essential following the application of Willowood Pronamide 3.3SC.
³ Willowood Pronamide 3.3SC at the rate of 5.0 pints of product per acre may only provide partial control to these weeds.

Crop Tolerance

Established rhubarb plants, in a dormant growth condition, are tolerant to specified rates of Willowood Pronamide 3.3SC. Do not apply Willowood Pronamide 3.3SC to newly transplanted rhubarb or to rhubarb during the active growing stage.

Timing and Application

Apply Willowood Pronamide 3.3SC in a single application during the fall or winter months as a broadcast surface application to dormant rhubarb. Optimum herbicidal activity occurs when applications are made after soil temperatures drop to 55°F or less and are followed by rainfall or overhead irrigation. Applications must be made prior to soil freeze up and snow cover.

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a low-pressure ground sprayer in 20 to 50 gallons of water per acre.

Rhubarb – Specific Use Restrictions

- Do not apply Willowood Pronamide 3.3SC to rhubarb within 38 days of harvest.
- Use of Willowood Pronamide 3.3SC in rhubarb is restricted to Oregon and Washington only.
- Do not apply more than 2 lbs./acre active ingredient (5.0 pints/acre Willowood Pronamide 3.3SC) or make more than one application per year.

APPLE, APRICOT, CHERRY, NECTARINE, PEACH, PEAR, PLUM, PRUNE AND GRAPE PLANTINGS

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for use in directed spray applications for the control of winter annual and perennial grasses and certain broadleaf weeds in non-bearing and bearing apples, apricots, cherries, nectarines, peaches, pears, plums, prunes and grape plantings.

Weed Control

Willowood Pronamide 3.3SC is effective at 2.5 to 9.5 pints of product (1 to 4 lbs. active ingredient) per treated acre for the preemergence and postemergence control of susceptible winter annual and perennial grasses and chickweed and for preemergence control only of other broadleaf weeds listed on this label. Refer to chart in dosage rate section below for specific weeds controlled.

Dosage and Timing

Willowood Pronamide 3.3SC may be applied in a single, directed application to labeled fruit trees and grape plantings at dosage rates of 2.5 to 9.5 pints of product (1 to 4 lbs. active ingredient) per treated acre. Application of Willowood Pronamide 3.3SC must be in the fall, after the fruit is harvested, but prior to soil freeze-up.

The dosage rate required for effective weed control will depend on the weed species present and the soil texture of the area being treated. Follow the specific rate instructions given in the chart below for the use of Willowood Pronamide 3.3SC in labeled fruit trees and grapes.

Weeds Controlled	Pints of Willowood Pronamide 3.3SC Per Acre Dependable Rainfall or Overhead Irrigation		
	Soil Texture Group ¹		
	Coarse	Medium	Fine
bluegrass, annual brome, downy (cheatgrass) chickweed grain, volunteer oat, wild ryegrass, Italian sorrel, red (from seed)	2.5	3.5	5.0
bluegrass, Kentucky fescue, tall orchardgrass quackgrass ryegrass, perennial	3.5-5.0	5.0-7.0	7.0-9.5

¹ Soil Texture Group:

Coarse: sand, loamy sand, sandy loam

Medium: loam, silt loam, silt, sandy clay loam

Fine: silty clay loam, clay loam, sandy clay, silty clay, clay

Application

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly in 40 to 50 gallons of water per acre. Use a low pressure ground sprayer equipped with a breakaway boom and flat fan or off-center (OC) nozzles. Direct Willowood Pronamide 3.3SC to the soil and the base of trees and vines.

Note: Dosage instructions listed on this label are for surface broadcast application. For banded treatments, reduce the amount of Willowood Pronamide 3.3SC used per acre according to the following formula:

$$\frac{\text{Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Acre Broadcast} = \text{Amount Needed per Acre for Band Application}$$

Willowood Pronamide 3.3SC may not be soil incorporated.

Crop Tolerance

When used according to label directions, established non-bearing or bearing fruit trees and grapes listed on this label are very tolerant to Willowood Pronamide 3.3SC. Willowood Pronamide 3.3SC may not be applied to seedling trees or vines less than 1 year old or to fall transplanted stock transplanted less than 1 year or to spring transplanted stock transplanted less than 6 months.

Cultural Considerations

Willowood Pronamide 3.3SC acts mainly through root absorption in sensitive weed species. Dependable rainfall or overhead irrigation is essential following the application for effective weed control. Trash-free areas create ideal conditions for rapid movement of Willowood Pronamide 3.3SC into the weed root zone following rain or irrigation. Clean cultivation before application is preferable but not necessary.

To obtain optimum weed control in areas not clean cultivated, the area to be treated must be free of surface litter (dead or decaying weeds, leaves, mowing clippings, etc.) If area to be treated is under a mixed grass or weed sod, it must be mowed and the clippings removed.

Apple, Apricot, Cherry, Nectarine, Peach, Pear, Plum, Prune and Grape Plantings – Specific Use Restrictions

- Do not feed or allow livestock to graze areas treated with Willowood Pronamide 3.3SC.
- Do not apply more than 4 lbs./acre active ingredient (9.5 pints/acre of Willowood Pronamide 3.3SC) to labeled fruit trees or grapes or make more than one application per year.

WINTER PEAS

Winter Annual Weed Control in Winter Peas (Idaho, Oregon and Washington Only)

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for the control of certain winter annual grasses and broadleaf weeds in winter peas (*Pisum sativum* var. *arvense*).

Grasses

barley, volunteer
brome, downy
oat, volunteer
oat, wild
ryegrass, Italian
wheat, volunteer

Broadleaf Weeds

chickweed, common
chickweed, mouse-ear
henbit¹
¹Preemergence control only

Dosage

Apply Willowood Pronamide 3.3SC in a single, broadcast application at the rate of 2.0 to 3.5 pints of product (0.75 to 1.5 lbs. active ingredient) per treated acre. For grass weeds greater than three inches in height use the higher rate.

Timing

Apply Willowood Pronamide 3.3SC from mid-fall to early winter (November to January) early postemergence to the peas. Peas should be in the second node stage of growth (two to three inches in size) at time of application.

Application

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per treated acre. Use a conventional herbicide sprayer equipped with flat fan nozzles that provide uniform spray distribution.

Winter Peas – Specific Use Restrictions

- Do not feed treated vines to livestock or allow animals to graze on treated areas.
- Do not apply more than 1.5 lbs./acre active ingredient (3.5 pints/acre of Willowood Pronamide 3.3SC) or make more than one application per year.

TURF GROWN FOR TURF OR SEED

This product may only be used on turf grown for seed or sod or on nonresidential sites including but not limited to golf course, industrial and office building sites, stadium fields or professional athletic fields.

Product Information

Willowood Pronamide 3.3SC is a selective herbicide for the preemergence and postemergence control of annual bluegrass (*Poa annua*) from warm season grasses and the removal of perennial rye grass (*Lolium perenne*) from warm season during spring transition. Warm season grasses include ornamental bermudagrass (*Cynodon dactylon*), Zoysiagrass, St. Augustinegrass and Centipedegrass or bermudagrass grown for seed.

Annual Bluegrass (*Poa Annua*) Control

Willowood Pronamide 3.3SC will control annual bluegrass from pre-germination and seedling stages through tillering, heading and seed formation. Willowood Pronamide 3.3SC acts slowly on seedling to

mature annual bluegrass. Following application of Willowood Pronamide 3.3SC annual bluegrass may first become dark green and then gradually turn yellow and die over a 3- to 5-week period.

For effective control of annual bluegrass in turf or seed crops, moisture is necessary to move Willowood Pronamide 3.3SC in the weed root zone. Refer to the Moisture Requirements section of this label for details.

Dosage and Timing

For annual bluegrass control, Willowood Pronamide 3.3SC is applied at the rate of 1.25 to 3.5 pints of product (0.5 to 1.5 lb. active ingredient) per acre broadcast application. The dosage rate required is dependent on the growth stage of annual bluegrass at time of application. Follow the dosage rate and timing instructions given below:

Annual Bluegrass Growth Stage	Willowood Pronamide 3.3SC pints/Acre ¹ Broadcast Application
Preemergence or early postemergence	1.25 – 2.5 ²
Postemergence – early tillering to heading	2.0 – 2.5
Postemergence – seed forming stages	2.5 – 3.5

¹ One acre equals 43,560 sq. ft.

² Use the higher rate when longer preemergence residual control is desired.

Removal of Perennial Rye Grass from Warm Season Grasses

Willowood Pronamide 3.3SC will remove postemergent perennial rye grass from warm season grasses during the spring to control the transition from cool season overseed to warm season grasses. Willowood Pronamide 3.3SC works slowly to control mature perennial rye grass. After an application of Willowood Pronamide 3.3SC, perennial rye grass will gradually die over a 4- to 6-week period. The length of this transition is dependent upon environmental factors such as temperature, rainfall and mowing height of the turf.

Dosage and Timing

For removal of perennial rye grass from warm season grasses, Willowood Pronamide 3.3SC may be applied at a rate of 1.25 to 2.5 pints of product (0.5 to 1 lb. active ingredient) per broadcast acre. It is best to apply Willowood Pronamide 3.3SC to warm season grasses at 50% greenup. Application of Willowood Pronamide 3.3SC to dormant warm season grasses can slow greenup.

Application

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre or 0.5 to 1 gallon of water per 1000 sq ft. The sprayer should be equipped with flat fan nozzles, spaced to provide uniform distribution without skips or excessive overlapping of spray patterns.

Important Note: Avoid spraying on fairways, hillsides, or approaches that may drain onto bentgrass greens or to areas overseeded with sensitive cool season grasses. Do not make an application of a wetting agent for the purpose of frost protection or soil penetration to greens or tees 14 days prior to or after a Willowood Pronamide 3.3SC application as injury may result.

Moisture Requirements

Willowood Pronamide 3.3SC acts mainly through root absorption in sensitive weed species. If no rainfall occurs within a day or so of the application, a light overhead irrigation must be made to move the chemical into the weed root zone. Avoid heavy irrigations of more than 1 inch to reduce the possibility of excess washing or leaching of the chemical from the area of application.

Willowood Pronamide 3.3SC Deactivation for Overseeding

Where it is desirable to reseed sooner than 90 days following the application of Willowood Pronamide 3.3SC, an application of an activated charcoal such as Gro-Safe, is needed. Apply the activated charcoal at the rate of 10 lbs. per 1000 sq ft. Allow at least 14 days between the application of Willowood Pronamide 3.3SC and the application of charcoal for control of emerged annual bluegrass. Reseed no sooner than 7 days following charcoal application.

Grasses Turf or Seed Crop – Specific Use Restrictions

- This product may be used on non-residential seeded, sodded, or sprigged turf or turf grown for seed that is well established. Use of this product on turf that has been weakened by weather-, pest-, disease-, chemical-, or mechanical-related stress may increase the chances of turf injury.
- This product must only be applied to turf areas that are composed of the following turfgrass species:
 - Bermudagrass (*Cynodon dactylon*)
 - Centipedegrass (*Eremochloa ophiuroides*)
 - St. Augustinegrass (*Stenotaphrum secundatum*)
 - Zoysiagrass (*Zoysia japonica*)
- Avoid spraying on hill sides, fairways, or approaches that may drain onto bentgrass greens or to area overseeded with sensitive cool season grasses. Do not make an application of a wetting agent for the purpose of frost protection or soil penetration to greens or tees 14 days prior to or after a Willowood Pronamide 3.3SC application as injury may result.
- Do not apply Willowood Pronamide 3.3SC herbicide to areas that are to be overseeded with susceptible cool season grasses within 90 days of treatment unless deactivation is planned.
- Do not apply Willowood Pronamide 3.3SC to dichondra, perennial bluegrass, annual and perennial ryegrasses, fescues and bentgrasses.
- Do not graze treated areas and do not feed clippings to livestock.
- Do not apply more than 1.5 lbs./acre active ingredient (3.5 pints/acre of Willowood Pronamide 3.3SC) or make more than one application of Willowood Pronamide 3.3SC per season.

WOODY ORNAMENTALS, NURSERY STOCK OF ORNAMENTALS, CHRISTMAS TREES

Use Information

Willowood Pronamide 3.3SC is a selective herbicide for fall applications to established woody ornamentals, nursery stock of ornamentals and Christmas trees for the control of winter annual and perennial grasses and certain broadleaf weeds.

Crop Tolerance

At specified rates of Willowood Pronamide 3.3SC the following trees and shrubs are tolerant to topical applications made in the fall:

arborvitae	firethorn	mountain ash
ash	flowering cherry	mountain laurel
azalea	flowering crabapple	oak
barberry	flowering quince	Ohio buckeye
basswood	forsythia	pine
beech	ginkgo	poplar
birch	hawthorn	privet
boxwood	hemlock	rhododendron
bradford pear	holly	spirea
cedar	honey locust	spruce
cotoneaster	juniper	sweetgum
dogwood	lilac	sycamore
douglas fir	linden	tuliptree
eastern redbud	London plane	viburnum
elm	magnolia	walnut
euonymus	maple	willow
fir	mock orange	yew

Willowood Pronamide 3.3SC may be used on established trees and woody ornamentals. Willowood Pronamide 3.3SC may not be used on seedling trees or shrubs less than one year old or to fall

transplanted stock transplanted less than one year or to spring transplanted stock transplanted less than six months.

Weed Control

Willowood Pronamide 3.3SC may be applied in fall applications at the rate of 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per broadcast acre for the preemergence and postemergence control of susceptible winter annual and perennial grasses and chickweed and for preemergence control only of other broadleaf weeds listed on this label. Refer to chart in Dosage and Timing section below for specific weeds controlled.

Dosage and Timing

Willowood Pronamide 3.3SC may be applied in a single, fall application, either directed or topically applied, to woody ornamentals, nursery stock or ornamentals or Christmas trees at the rate of 2.5 to 5.0 pints of product (1 to 2 lbs. active ingredient) per broadcast acre. Apply Willowood Pronamide 3.3SC in the fall prior to leaf drop and soil freeze-up. For control of winter annual and perennial grasses or chickweed, applications can be made either preemergence or postemergence to the weeds. For control of other labeled broadleaf weeds, preemergence applications must be used to achieve control.

The dosage rate required will depend on the weed species present in the area to be treated. Follow the weed control instructions given in the chart below:

Weeds Controlled	Pints of Willowood Pronamide 3.3SC Per Acre (Broadcast Application)
barley, foxtail bluegrass, annual brome, downy (cheatgrass) chickweed grain, volunteer ryegrass, Italian sorrel, red (from seed)	2.5
mustard, wild rocket, London shepherdspurse	3.5
bluegrass, Kentucky orchardgrass quackgrass ryegrass, perennial	5.0

Application

Mix the specified amount of Willowood Pronamide 3.3SC in clean water and apply uniformly in 20 to 50 gallons per acre. Use a low pressure ground sprayer equipped with flat fan nozzles spaced to provide uniform distribution. Dosages listed on this label are for surface broadcast application. For banded treatments down the row reduce the amount of Willowood Pronamide 3.3SC used per acre according to the following formula:

$$\frac{\text{Band Width (in inches)}}{\text{Row Width (in inches)}} \times \text{Rate per Acre Broadcast} = \text{Amount Needed per Acre for Band Application}$$

Willowood Pronamide 3.3SC must not be soil incorporated.

Note: Most ornamental turf grass species and ground covers are sensitive to Willowood Pronamide 3.3SC. Avoid contact of Willowood Pronamide 3.3SC with these plants from either direct application, spray drift or from applications to areas that may drain into established ornamental turf and ground cover.

Soil and Moisture Requirements

Willowood Pronamide 3.3SC is most active in coarse to medium textured soils of low organic matter and is relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils of higher organic matter content may result in inconsistent or incomplete weed control.

Willowood Pronamide 3.3SC acts mainly through root absorption in sensitive weed species. Dependable rainfall or overhead irrigation is essential following application for effective weed control.

Woody Ornamentals, Nursery Stock of Ornamentals/Christmas Trees – Specific Use Restrictions

- Apply Willowood Pronamide 3.3SC in the fall prior to soil freeze-up.
- Do not soil incorporate Willowood Pronamide 3.3SC.
- Do not harvest plants for food or feed for at least one year after treatment.
- Do not apply more than 2 lbs./acre active ingredient (5.0 pints/acre Willowood Pronamide 3.3SC) or make more than one application per year.

ATTENTION: This product contains propyzamide (pronamide) a chemical known to the State of California to cause cancer.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place but not below 32°F (0°C).

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

(Nonrefillable container ≤ 5 gallons): Triple rinse 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Nonrefillable > 5 gallons): Triple rinse 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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 must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or 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 Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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[EPA approval date]