



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 9, 2014

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

Subject: Label Amendment – Correction of Rotational Crop Planting Table per Agency's
October 29, 2014 email
Product Name: Willowood Pronamide 50WSP
EPA Registration Number: 87290-3
Application Date: November 4, 2014
Decision Number: 497426

Dear Mr. Kellogg:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance. Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Sarah Meadows by phone at 703-347-0505, or via email at meadows.sarah@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Mindy Ondish".

Mindy Ondish
Acting Product Manager 25
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

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.

GROUP

3

HERBICIDE

Willowood Pronamide 50WSP

Selective Herbicide in Water-Soluble Pouches

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, woody ornamentals, nursery stock of ornamentals, and Christmas trees.

ACTIVE INGREDIENT:

Pronamide: 3,5-dichloro-N-(1,1-dimethyl-2-propynyl) benzamide 50.0%

OTHER INGREDIENTS: 50.0%

TOTAL: 100.0%

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.
If 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

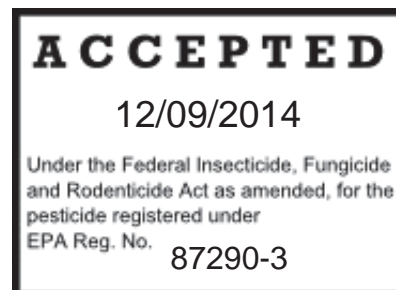
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.

EPA Reg. No. 87290-3

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

Net Weight: 1 lb.

EPA Est. No.



**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.

Keep unprotected persons out of treated area until sprays have dried.

PRODUCT INFORMATION

Willowood Pronamide 50WSP is formulated as a wettable powder containing 50% active ingredient packaged in a 1 lb. water-soluble pouch. Willowood Pronamide 50WSP 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 50WSP 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 in this label or Willowood, LLC supplemental labeling.

RESISTANCE MANAGEMENT

Willowood Pronamide 50WSP is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Willowood Pronamide 50WSP and other Group 3 herbicides. Weed species with acquired resistance to Group 3 herbicides may eventually dominate the weed population if Group 3 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Willowood Pronamide 50WSP or other Group 3 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of Willowood Pronamide 50WSP or other target site of action Group 3 herbicides that have a similar target site of action, on the same weed species.
- Using tank-mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisers, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

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 50WSP 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 50WSP 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 50WSP 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 pounds of product or active ingredient per broadcast acre. For banded application, reduce the amount of Willowood Pronamide 50WSP used per square acre according to the following formula:

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

Willowood Pronamide 50WSP is packaged in 1 lb. water-soluble bags. Do not open the water-soluble bags. The entire water-soluble bag must be used and not measured out or broken up. Prepare tank mixes using whole numbers of bags to treat the appropriate number of acres. Do not use this product if there is insufficient acreage to meet the labeled application rates.

TIMING AND APPLICATION

Unless specific directions are given under the crop to be treated, apply Willowood Pronamide 50WSP 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 50WSP 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 50WSP 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 50WSP 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.

Note: Willowood Pronamide 50WSP is compatible with boron and crop oil concentrate; however, the water-soluble pouches must be completely dissolved before adding spray oils or products containing boron to spray mixtures.

EFFECT OF SOIL TYPE, MOISTURE AND TEMPERATURE

Willowood Pronamide 50WSP 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 50WSP is mainly through root absorption in sensitive weed species. Rain, melting snow or irrigation is **essential** following treatment to move Willowood Pronamide 50WSP into the root zone of germinating weeds.

Under field conditions, Willowood Pronamide 50WSP 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 50WSP may degrade rather quickly if left exposed on the soil surface in warm weather. If Willowood Pronamide 50WSP 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 50WSP 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 50WSP 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 50WSP.

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

Amount of Willowood Pronamide 50WSP Applied per Planted 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
1.0 lb	90	90	90	30	365
2.0 lb	90	90	120	30	365
3.0 lb	90	120	180	30	365
4.0 lb	90	150	210	30	365

(1) There are no plant back restrictions for Willowood Pronamide 50WSP 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 50WSP 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 greens or escarole are planted.

Where the Willowood Pronamide 50WSP 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 50WSP is a selective herbicide for the control of susceptible weeds in either established (ratoon) or transplanted globe artichokes.

Weeds Controlled

Willowood Pronamide 50WSP is effective at 4 to 8 lb. of product (2 to 4 lb 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 50WSP Rate (Per Broadcast Acre)¹				
Crop	Weeds	Dependable Rainfall or Overhead Irrigation	Less Dependable Rainfall or Furrow Irrigation	Comments
globe artichokes (established ratoon)	Susceptible annual grasses, volunteer grains and broadleaf weeds	4 lb	Do not apply	sandy soils, sandy loams and silt loams
		8 lb	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	4 lb	Do not apply	all soil types except peat and muck soils

¹ Dosage instructions listed on this label are in terms of pounds Willowood Pronamide 50WSP per acre broadcast application. For banded treatments down artichoke rows or between rows, reduce the amount of Willowood Pronamide 50WSP 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 50WSP 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 50WSP preemergence to the weeds and before new artichoke leaves are greater than 14 to 16 inches long. Apply Willowood Pronamide 50WSP in a banded treatment over the crop row at the rate

of 4 to 8 lb of product per broadcast acre (see dosage rate for soil type in chart). A second application of Willowood Pronamide 50WSP 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 50WSP in a single application after transplanting the crowns but before new shoots have developed 3 to 4 new leaves. Apply Willowood Pronamide 50WSP preemergence to the weeds and banded over the crop row at the rate of 4 lb of product per broadcast acre. Do not use higher rates of Willowood Pronamide 50WSP than 4 lb per acre in one season. A second application of Willowood Pronamide 50WSP 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 50WSP 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 50WSP 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 50WSP 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 50WSP 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 50WSP 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 50WSP.

Effect of Soil Type

Do not apply Willowood Pronamide 50WSP 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 50WSP was applied at the rate of 4 lb 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 lb/acre active ingredient (8 lb/acre of Willowood Pronamide 50WSP) to established artichokes or more than 2 lb/acre active ingredient (4 lb/acre of Willowood Pronamide 50WSP) 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 50WSP 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 50WSP may be applied at the rate of 2 to 6 lb of product (1 to 3 lb 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.

Lbs. of Willowood Pronamide 50WSP Per Broadcast Acre¹		
Weeds Controlled	Dependable Rainfall or Overhead Irrigation²	Comments
bluegrass, annual	2 – 4	Use low rates on light to medium soils and high rates on heavy soils
quackgrass	4 – 6	
ryegrass, perennial	4 – 6	

¹ Dosage rates specified are in pounds of Willowood Pronamide 50WSP 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 50WSP.

Crop Tolerance

Established cane fruit are tolerant to specified rates of Willowood Pronamide 50WSP. Newly transplanted blackberries, boysenberries and raspberries must be well rooted and transplanted for at least 3 months prior to the application of Willowood Pronamide 50WSP.

Timing and Application

Apply Willowood Pronamide 50WSP only during the fall or winter months. For optimum results, apply Willowood Pronamide 50WSP during November or December. Do not make applications when the ground is frozen. Mix the specified amount of Willowood Pronamide 50WSP 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 lb/acre active ingredient (6 lb/acre of Willowood Pronamide 50WSP) or make more than one application of Willowood Pronamide 50WSP per season.

BLUEBERRY

Use Information

Willowood Pronamide 50WSP 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 50WSP may be applied at the rate of 2 to 4 lb of product (1 to 2 lb 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	Lbs. of Willowood Pronamide 50WSP Per Acre¹ Dependable Rainfall or Overhead Irrigation²
bluegrass, annual brome, downy (cheatgrass) chickweed oat, wild sorrel, red (from seed)	2
bentgrass bluegrass, Kentucky	4

Weeds Controlled	Lbs. of Willowood Pronamide 50WSP Per Acre¹ Dependable Rainfall or Overhead Irrigation²
fescue, tall orchardgrass quackgrass ryegrass, perennial velvetgrass	

¹ Dosage rates specified are in lb of Willowood Pronamide 50WSP 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 50WSP.

Crop Tolerance

Established blueberry plants are tolerant to specified rates of Willowood Pronamide 50WSP. Do not apply Willowood Pronamide 50WSP to newly transplanted blueberries until roots are well established.

Timing and Application

Apply Willowood Pronamide 50WSP 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 50WSP 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 lb/acre active ingredient (4 lb/acre Willowood Pronamide 50WSP) or make more than one application of Willowood Pronamide 50WSP per year.

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

Use Information

Willowood Pronamide 50WSP 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 50WSP may be applied at the rate of 1 to 4 lb of product (0.5 to 2 lb 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 50WSP:

Lbs. of Willowood Pronamide 50WSP 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	1 – 1.5	1.5 - 2

Lbs. of Willowood Pronamide 50WSP Per Broadcast Acre		
Weeds Controlled	Dependable Rainfall Or Overhead Irrigation	Low Rainfall Or Furrow Irrigation
grain, volunteer oat, wild ryegrass, Italian		
bluegrass, Kentucky orchardgrass ryegrass, perennial	1.5 – 2	2 - 3
quackgrass	2 -3	3 - 4
Apply preemergence only to these weeds: sorrel, red (from seed)	1.5 - 2	2 – 3
mustard, wild radish, wild rocket, London shepherdspurse	3	4

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 50WSP 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 50WSP must be made the following fall or early winter to control winter annual and perennial grasses. Do not use Willowood Pronamide 50WSP 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 50WSP 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.

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 50WSP 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 50WSP 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 50WSP must be delayed, a light mechanical incorporation (maximum 1-inch depth) must follow the Willowood Pronamide 50WSP 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 50WSP application must not exceed one inch of water. Excess irrigation following the Willowood Pronamide 50WSP application and prior to germination of dodder may decrease the effectiveness of Willowood Pronamide 50WSP.

Dosage and Timing

For effective control, Willowood Pronamide 50WSP must be applied before dodder germinates. Follow the directions given below depending on method of irrigation used.

Furrow Irrigation: Apply Willowood Pronamide 50WSP at the rate of 3 to 4 lb of product (1.5 to 2 lb active ingredient) per acre. Incorporate lightly at time of application and irrigate within seven days.

Flood Irrigation: Apply Willowood Pronamide 50WSP at the rate of 3 lb of product (1.5 lb 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 50WSP application may adversely affect the herbicidal activity.

(SPRING APPLICATIONS)

Cheatgrass Control in Established Alfalfa (Spring Applications)

Dosage and Timing

Spring application of Willowood Pronamide 50WSP will control cheatgrass if application is made when cheatgrass has recently germinated or is expected to germinate. Apply Willowood Pronamide 50WSP as a broadcast application at the rate of 1.5 to 2 lb of product (0.75 to 1 lb active ingredient) per acre.

Rotation Crops

Where rotations crops are to follow within one year of the Willowood Pronamide 50WSP 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.

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

- Do not use more than 2 lb/acre active ingredient (4 lb/acre Willowood Pronamide 50WSP) 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 lb/acre Willowood Pronamide 50WSP (west of Mississippi River)	25 days
Alfalfa – 3 to 4 lb/acre Willowood Pronamide 50WSP (west of Mississippi River)	45 days
Clover, birdsfoot trefoil, crown vetch, sainfoin (entire U.S.) and alfalfa – Up to 4 lb/acre Willowood Pronamide 50WSP (East of Mississippi River)	120 days

HEAD LETTUCE/ENDIVE/ESCAROLE/RADICCHIO GREENS

Use Information

Willowood Pronamide 50WSP 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 50WSP is effective at 2 to 4 lb of product (1 to 2 lb 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
 mornignnglory, annual
 mustard, wild
 nettle, burning
 nightshade, black
 nightshade, hairy
 purslane, common
 rocket, London
 shepherdspurse
 smartweed, pale
 tomato, volunteer

Dosage

Willowood Pronamide 50WSP may be applied at the rate of 2 to 4 lb of product (1 to 2 lb 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 50WSP 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:

Lbs. of Willowood Pronamide 50WSP Per Broadcast Acre¹			
Weeds	Dependable Rainfall Or Overhead Irrigation	Less Dependable Rainfall or Furrow Irrigation	Soil Texture Group²
susceptible annual Grasses	2 -3 (surface application)	3 – 4 (soil incorporation)	Coarse and medium Textured soils
broadleaf weeds	3 -4 (surface application)	4 (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 50WSP. Do not use more than 3 lbs. of Willowood Pronamide 50WSP 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 50WSP 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.

Split Application:

Willowood Pronamide 50WSP application can be split so that part of the maximum application rate of the product can be initially applied to head lettuce, endive, escarole or radicchio greens, and the balance of the maximum application rate can be applied up to 10 days later. Total amount of Willowood Pronamide 50WSP applied must not exceed the maximum rates indicated above, up to 4 lb of product (2 lb active ingredient) per acre per crop season. An example of this split application would be an application of 1 lb. product (½ lb active ingredient) per acre at planting and 3 lbs. product (1 ½ lb active ingredient) per acre 7 to 10 days post plant.

Do not apply Willowood Pronamide 50WSP to head lettuce within 55 days of harvest and do not make more than two applications to each crop of head lettuce, endive, escarole or radicchio greens.

Mix the specified amount of Willowood Pronamide 50WSP 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 50WSP acts mainly through root absorption, therefore it is necessary to move Willowood Pronamide 50WSP 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 50WSP 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 50WSP, especially in hot weather.

Applications Dependent on Natural Rainfall

In areas of dependable natural rainfall, Willowood Pronamide 50WSP 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 ½ 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 50WSP into the top 2 inches of soil are suggested.

Incorporation must be simultaneous or immediately after application of Willowood Pronamide 50WSP, 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 50WSP will not be as effective if disced in prior to bed shaping. Hoeing, thinning or shallow cultivation of soil treated with Willowood Pronamide 50WSP will not destroy its herbicidal activity.

Temperature

Willowood Pronamide 50WSP 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 50WSP to head lettuce, endive, escarole, radicchio greens varieties that will be harvested less than 55 days after treatment.
- Do not apply more than two applications of Willowood Pronamide 50WSP to each crop of head lettuce, endive, escarole or radicchio greens.
- Do not apply Willowood Pronamide 50WSP to leaf lettuce.
- Do not apply more than 4 lbs. of Willowood Pronamide 50WSP (2 lbs. active ingredient) per acre per crop season.

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

Willowood Pronamide 50WSP may be applied by aircraft for preemergence control of susceptible grasses and broadleaf weeds in head lettuce. Willowood Pronamide 50WSP must be applied at the dosage rate of 2.0 to 4.0 lbs. of product (1.0 to 2.0 lbs. active ingredient) per treated acre depending on soil type (refer to comments under Dosage above). Mix the specified amount of Willowood Pronamide 50WSP in 10 to 20 gallons of water per acre for aerial application. For aerial applications of Willowood Pronamide 50WSP on head lettuce, consult the section titled “Rotation Crop Planting Information” for plantback information. Avoid drift to all other crops and non-target areas.

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

Apply Willowood Pronamide 50WSP by chemigation for weed control in direct seeded or transplanted head lettuce, endive, escarole or radicchio greens. 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 50WSP at the rate of 1 to 2 lbs. per acre (0.5 to 1 lb. active ingredient per acre) depending upon soil type, weed species and level of infestation.

Split Application:

Willowood Pronamide 50WSP chemigation application can be split, so that part of the maximum application rate of the product can be initially applied to head lettuce, endive, escarole or radicchio greens, and the balance of the maximum application rate can be applied up to 10 days later. Total amount of Willowood Pronamide 50WSP applied must not exceed 2 lbs. product (1 lb. active ingredient) per acre per crop season. The Pre-harvest Interval (PHI) of 55 days must be observed. An example of this split application would be application of 1 lb. product (1/2 lb. active ingredient) per acre at planting and 1 lb. product (1/2 lb. active ingredient) per acre 7 to 10 days post plant.

Application Moisture Requirements: Willowood Pronamide 50WSP acts mainly through root absorption; therefore, it is necessary to move Willowood Pronamide 50WSP 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 50WSP following initial irrigation of the crop will avoid 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 50WSP 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 pound of Willowood Pronamide 50WSP. Add Willowood Pronamide 50WSP water-soluble packets slowly and allow packets to disperse completely before beginning injection. 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 50WSP should be injected over a period of 1 to 2 hours. Once the herbicide has been injected, continue irrigation for an additional 4 to 6 hours to flush the system and deliver additional irrigation sufficient to incorporate the herbicide into the upper inch of soil.

In pre-irrigated fields, center pivot or lateral move systems should be set up to deliver a minimum of 0.75 inch of irrigation water with the chemigation treatment. In center pivot or lateral move systems, the herbicide mixture should be injected continuously throughout the irrigation cycle.

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

- In Fresno County, use only in the months of August through September.
- **Preharvest Interval:** Do not apply within 55 days of harvest.
- Do not apply more than two applications of Willowood Pronamide 50WSP to each crop of head lettuce, endive, escarole, or radicchio greens.
- Do not apply Willowood Pronamide 50WSP postemergence to endive, escarole, or radicchio greens.
- Do not apply more than 2 lbs. of Willowood Pronamide 50WSP (1 lb. active ingredient) per acre.
- Do not apply to leaf lettuce.

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.

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 control 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 50WSP 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 50WSP may be applied at the rate of 2 to 4 lb of product (1 to 2 lb 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	Lbs. of Willowood Pronamide 50WSP Per Acre ¹ Dependable Rainfall or Overhead Irrigation ²
bluegrass, annual brome, downy (cheatgrass) chickweed oat, wild sorrel, red (from seed)	2
bentgrass ³ bluegrass, Kentucky fescue, tall ³ orchardgrasses ³ quackgrass ryegrass, perennial velvetgrass ³	4

¹ Dosage rates specified are in pounds of Willowood Pronamide 50WSP 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 50WSP.

³ Willowood Pronamide 50WSP at the rate of 4 lb 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 50WSP. Do not apply Willowood Pronamide 50WSP to newly transplanted rhubarb or to rhubarb during the active growing stage.

Timing and Application

Apply Willowood Pronamide 50WSP 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 50WSP 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 50WSP to rhubarb within 38 days of harvest.
- Use of Willowood Pronamide 50WSP in rhubarb is restricted to Oregon and Washington only.
- Do not apply more than 2 lb/acre active ingredient (4 lb/acre Willowood Pronamide 50WSP) or make more than one application per year.

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

Use Information

Willowood Pronamide 50WSP 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 50WSP is effective at 2 to 8 lb of product (1 to 4 lb 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 50WSP may be applied in a single, directed application to labeled fruit trees and grape plantings at dosage rates of 2 to 8 lb of product (1 to 4 lb active ingredient) per treated acre. Application of Willowood Pronamide 50WSP 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 50WSP in labeled fruit trees and grapes.

Weeds Controlled	Lbs. of Willowood Pronamide 50WSP 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	3	4
bluegrass, Kentucky fescue, tall	3 – 4	4 – 6	6 - 8

orchardgrass quackgrass ryegrass, perennial			
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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 50WSP 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 50WSP 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 50WSP 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 50WSP 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 50WSP. Willowood Pronamide 50WSP 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 50WSP 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 50WSP 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 50WSP.
- Do not apply more than 4 lb/acre active ingredient (8 lb/acre of Willowood Pronamide 50WSP) to labeled fruit trees or grapes or make more than one application per year.

WOODY ORNAMENTALS, NURSERY STOCK OF ORNAMENTALS, CHRISTMAS TREES

Use Information

Willowood Pronamide 50WSP 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 50WSP 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 50WSP may be used on established trees and woody ornamentals. Willowood Pronamide 50WSP 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 50WSP may be applied in fall applications at the rate of 2 to 4 lb of product (1 to 2 lb 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 50WSP may be applied in a single, fall application, either directed or topically applied, to woody ornamentals, nursery stock of ornamentals or Christmas trees at the rate of 2 to 4 lb of product (1 to 2 lb active ingredient) per broadcast acre. Apply Willowood Pronamide 50WSP 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	Lbs. of Willowood Pronamide 50WSP Per Broadcast Acre
barley, foxtail bluegrass, annual brome, downy (cheatgrass) chickweed grain, volunteer ryegrass, Italian sorrel, red (from seed)	2
mustard, wild rocket, London shepherdspurse	3
bluegrass, Kentucky orchardgrass quackgrass ryegrass, perennial	4

Application

Mix the specified amount of Willowood Pronamide 50WSP 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 50WSP 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 50WSP must not be soil incorporated.

Note: Most ornamental turf grass species and ground covers are sensitive to Willowood Pronamide 50WSP. Avoid contact of Willowood Pronamide 50WSP 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 50WSP 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 50WSP 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 50WSP in the fall prior to soil freeze-up.
- Do not soil incorporate Willowood Pronamide 50WSP.
- Do not harvest plants for food or feed for at least one year after treatment.
- Do not apply more than 2 lb/acre active ingredient (4 lb/acre Willowood Pronamide 50WSP) or make more than one application per year.

WEED CONTROL IN FALL, CARBON-SEEDED GRASSES (ORCHARDGRASS, TALL FESCUE, PERENNIAL RYEGRASS) GROWN FOR SEED (For use in Oregon only)

Willowood Pronamide 50WSP has been demonstrated to be effective for the control and/or suppression of undesirable seedling grasses.

NOTE: Due to the close proximity of native prairie remnants to agricultural areas and the potential for these areas to be adversely affected by herbicides through drift or possible runoff/soil movement, Do not apply Willowood Pronamide 50WSP directly to native prairie habitats. Maintain dosage rates at the lower end of the use rate range (if effective seedling control can be achieved) in a further effort to lessen potential impacts to endangered species.

Weeds Controlled (Suppression)

Willowood Pronamide 50WSP will provide preemergence and postemergence control/suppression of the following seedling weeds when used according to label directions:

Bromus Species	<i>Bromus species</i>
Wild Oat	<i>Avena species</i>
Annual Ryegrass	<i>Lolium multiflorum</i>
Volunteer Orchardgrass	<i>Dactylis glomerata</i>

Application Rate

Prior to application of Willowood Pronamide 50WSP, ensure that an adequate activated carbon band (one inch wide or greater) to absorb the herbicide applied is present on a well-prepared, firmly packed seedbed that is free of clods. After seeding/carbon banding operation, apply a single application of Willowood Pronamide 50 WSP at 0.25 to 0.5 lb (0.125 to 0.25 lb ai) per acre tank mixed with a reduced rate of diuron. Application must be made before the emergence of the seeded crop and before rainfall dissipates the carbon band applied. Consult your local Extension Service agent or crop consultant for specific application rate recommendations for Willowood Pronamide 50WSP, diuron, and the activated charcoal on a field by field basis. **The grower assumes all risks of crop injury or stand loss when unforeseen environmental conditions (such as heavy rain soon after application), poor seedbed preparation or application rates/positioning, result in crop damage.** The greatest risk of injury or stand loss occurs when applications are made to poorly drained soils and heavy rains occur soon after application.

Do not apply Willowood Pronamide 50WSP to sandy or gravelly areas or fields under stress due to drought, flooding, excessive fertilizer, soil salts, cold temperatures, hail, injury from previously applied pesticides or injury due to insects or diseases, as excessive injury may result.

Fall, Carbon-Seeded Grasses (orchardgrass, tall fescue, perennial ryegrass) Grown for Seed - Specific Use Restrictions

The following use restrictions must be observed when Willowood Pronamide 50WSP is used for weed control in Fall, carbon-seeded grasses (orchardgrass, tall fescue, perennial ryegrass) grown for seed:

- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not graze livestock in treated fields within 180 days of application.
- Do not apply Willowood Pronamide 50WSP within 180 days of harvesting grass hay.
- Willowood Pronamide 50WSP must only be applied using ground application equipment.
- Do not apply more than a single application of Willowood Pronamide 50WSP at 0.25 to 0.5 lb (0.125 to 0.25 lb ai) per acre tank mixed with a reduced rate of diuron. Application must be made before the emergence of the seeded crop and before rainfall dissipates the carbon band applied.

WEED CONTROL IN ESTABLISHED ORCHARDGRASS GROWN FOR SEED (For use in Oregon Only)

Willowood Pronamide 50WSP is effective for the control and/or suppression of undesirable seedling grasses.

NOTE: Due to the close proximity of native prairie remnants to agricultural areas and the potential for these areas to be adversely affected by herbicides through drift or possible runoff/soil movement, Do not apply Willowood Pronamide 50WSP to native prairie habitats. Maintain dosage rates at the lower end of the use rate range (if effective seedling control can be achieved) in a further effort to lessen potential impacts to endangered species.

Weeds Controlled (Suppression)

Willowood Pronamide 50WSP will provide preemergence and postemergence control/suppression of the following seedling weeds when used according to label directions:

Bromus Species	<i>Bromus species</i>
Wild Oat	<i>Avena species</i>
Annual Ryegrass	<i>Lolium multiflorum</i>
Volunteer Orchardgrass	<i>Dactylis glomerata</i>

Application Rate

Apply a single application of Willowood Pronamide 50WSP at a rate of 0.5 to 0.75 lb (0.25 to 0.375 lb ai) per acre for preemergence and postemergence control/suppression of undesirable seedling grasses in established orchardgrass fields that have produced at least one seed crop. Application should be made during the fall or early winter months (November through mid-January), once the fall rains have moistened the soil and the soil temperature is 55°F or less. Applications must be completed by mid-January.

Do not apply Willowood Pronamide 50WSP to sandy or gravelly areas or fields under stress due to drought, flooding, excessive fertilizer, soil salts, cold temperatures, hail, injury from previously applied pesticides or injury due to insects or diseases, as excessive injury may result.

Established Orchardgrass Grown for Seed - Specific Use Restrictions

The following use restrictions must be observed when Willowood Pronamide 50WSP is used for weed control in established orchardgrass grown for seed:

- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not graze livestock in treated fields within 180 days of application.
- Do not apply Willowood Pronamide 50WSP within 180 days of harvesting grass hay.
- Willowood Pronamide 50WSP must only be applied using ground application equipment.
- Do not apply more than 0.75 lb (0.375 lb ai) of Willowood Pronamide 50WSP per acre during any one season.

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). Do not remove package from container except for immediate use.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available or, dispose of the empty outer bag in the trash as long as WSP is unbroken.

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.**

To the extent consistent with applicable law, neither Willowood, LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR**

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[EPA approval date]