

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 25, 2017

Nicole O'Loughlin, Regulatory Consultant Willowood, LLC c/o Pyxis Regulatory Consulting, Inc. 4100 136th St CT NW Gig Harbor, WA 98332

Subject: Label Amendment: Revisions address copyright concerns; adds me-too Turfgrass and

Ornamental uses

Product Name: Willwood Pyrac 2SC EPA Registration Number: 87290-63 Application Date: September 13, 2016

Decision Number: 521513

Dear Ms. O'Loughlin:

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.

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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 with FIFRA section 6.

If you have any questions, please contact Tony Kish by phone at 703 308-9443, or via email at kish.tony@epa.gov; or Craig Reeves by phone at 703 347-0486, or via email at reeves.craig@epa.gov.

Sincerely,

Tony Kish, Product Manager 22 Fungicide Branch Registration Division (7505P)

Office of Pesticide Programs

**Enclosure: Stamped Label** 

**Master Label includes:** 

Sublabel A: Agricultural Uses

Sublabel B: Turf & Ornamental Uses

GROUP 11 FUNGICIDE

## **WILLOWOOD PYRAC 2SC**

**FUNGICIDE** 

ACCEPTED

EPA Reg. No. 87290-63

Manufactured for: Willowood, LLC 1600 NW Garden Valley Blvd. #120 Roseburg, OR 97471 Apr 25, 2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 87290-63

**EPA Est. No.** 

## **Sublabel A: Agricultural Uses**

[Note to reviewer: [Text] in brackets denotes optional text].

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

## **{BOOKLET FRONT PANEL LANGUAGE}**

GROUP 11 FUNGICIDE

## **WILLOWOOD PYRAC 2SC**

#### **FUNGICIDE**

For use in disease control and plant health in the following crops: alfalfa, barley, citrus fruits, corn (all types), cotton, dried shelled peas and beans, edible-podded legume vegetables, grass grown for seed, mint, oats, oilseed crops, peanut, pecan, rye, sorghum, soybean, succulent shelled peas and beans, sugar beet, sugarcane\*, tuberous and corm vegetables (includes potato), and wheat and triticale.

\*Not approved for this use in California.

#### **ACTIVE INGREDIENT\*\*:**

Pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1 <i>H</i> -pyrazol-3-yl]oxy]methyl]phenyl	
methoxy-, methyl ester)	23.3%
OTHER INGREDIENTS:	76.7%
TOTAL:	100.0%
**Equivalent to 2.09 pounds of pyraelectrobin per gallen	

<sup>\*\*</sup>Equivalent to 2.08 pounds of pyraclostrobin per gallon.

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

See label booklet for First Aid, Precautionary Statements and Directions for Use.

EPA Reg. No. 87290-63

EPA Est. No.

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

**Net Contents:** 

**{LANGUAGE INSIDE BOOKLET}** 

	FIRST AID				
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
HOT LINE NUMBER					

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For general information on product use, etc., call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Mon. - Fri. 8:00 am to 12:00 pm Pacific Time. For emergencies, call the poison control center at 1-800-222-1222.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** May be fatal if swallowed. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, waterproof gloves, and protective eyewear.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Protective eyewear
- Shoes plus socks
- Waterproof gloves

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

#### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. A hazardous chemical reaction may occur.

#### **ENGINEERING CONTROLS STATEMENTS**

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**

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

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

#### **Groundwater Advisory**

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. 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), notification to workers, 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 12 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

#### PRODUCT INFORMATION

Willowood Pyrac 2SC is a Group 11 fungicide which has pyraclostrobin as its active ingredient. It is a liquid suspension concentrate, and is effective against the fungal diseases listed on this label. Group 11 fungicides are respiration inhibitors specifically classified as 'quinone outside inhibitors' (QoI). More specifically, Willowood Pyrac 2SC is classified as a 'strobilurin' compound, and was derived from the fungus *Strobilurus tenacellus*, which has a suppressive effect on other fungi.

When applied prior to fungal outbreaks, Willowood Pyrac 2SC can control or prevent establishment of fungal diseases in listed crops, which can bring about healthier plants that exhibit better resistance to stress, enhanced crop growth and quality and improved crop yields.

When used routinely, alternating with other fungicides and within a prearranged fungicide spray program, Willowood Pyrac 2SC can boost control of and provide residual activity against listed fungal diseases.

#### Restrictions (all crops):

- For aerial application in New York State, do not apply within 100 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds)
- This product is not for use in transplant production or in greenhouses
- Follow crop specific label instructions carefully and do not exceed listed maximums (rate per year; rate per application; number of applications) or pre-harvest interval

#### RESISTANCE MANAGEMENT

Pyraclostrobin, the active ingredient in Willowood Pyrac 2SC is a QoI (Group 11) fungicide. It is efficacious against fungal diseases that have shown resistance to other (non Group-11) fungicides (including benzimidazoles, dicarboximides, phenylamides or sterol inhibitors). However, fungal populations can also contain fungal isolates resistant to Group 11 fungicides, and repeated and favored use of Group 11 fungicides (including azoxystrobin fluoxastrobin, kresoxim-methyl, pyraclostrobin or trifloxystrobin) as the primary means of control for successive years can allow these resistant isolates to flourish and build up in the general fungal population, and can lessen fungicidal activity by Group 11 fungicides such as Willowood Pyrac 2SC.

To help combat resistance management, exercise some or all of the following steps in your fungal control program

- Observe all use rates and restrictions for Willowood Pyrac 2SC as indicated in crop specific directions for use. Follow label instructions carefully and do not exceed listed maximum rates or applications.
- Follow label instructions listed in crop specific directions pertaining to consecutive applications of this product; do not exceed maximum listed consecutive applications for specific crops.
- When observing label instructions regarding specific consecutive applications, alternate use of this product (and other Group 11 fungicides) with a minimum of an equal number of applications of a non-group 11 fungicide before using a Group 11 fungicide again on a listed crop.
- When using a Group 11 fungicide alone, it should not comprise more than 1/3 of the total number of fungicide treatments per year to a certain crop or use site
- When using Group 11 fungicides with other tank mix partners, or in a fungicide spraying program with other solo products or mixtures, the Group 11 fungicide should not comprise more than 1/2 of the total number of fungicide treatments per year to a certain crop or use site.

To help slow the development of resistant fungal isolates, exercise some or all of the following:

- Apply Willowood Pyrac 2SC with fungicide tank mix partners having different modes of action
- Make certain that minimum labeled rates of Willowood Pyrac 2SC and other fungicides are used
- Develop and implement an IPM (Integrative Pest Management) program for overall disease control. IPM programs include use of fungicides, adherence to cultural practices known to

- diminish fungal occurrence, timing of fungicide applications based on environmental conditions favorable for occurrence of fungal diseases (check for agricultural extension advisory programs in your area to help determine application timing)
- Monitor and document the effectiveness of fungicides used against fungal diseases, along with any other environmental conditions or other influential factors. If efficacy of Willowood Pyrac 2SC or other Group 11 (or non-group 11) fungicide appears to be reduced, consult with and provide this information to a certified crop advisor, extension specialist, or Willowood LLC representative

#### **APPLICATION INSTRUCTIONS**

Willowood Pyrac 2SC is to be applied at rates indicated in crop specific instructions. Methods of application are:

- Aerial application (Fixed wing or Helicopter)
- Ground application (Ground Sprayer)
- Chemigation (Sprinkler Irrigation Equipment)

If fungal disease has been found or if environmental conditions are favorable for or contributing to the occurrence of fungal disease, use Willowood Pyrac 2SC at higher listed application rates, and at smaller listed application intervals, if making a repeat application. If making application early in the season and disease pressure is not yet elevated, apply Willowood Pyrac 2C at lower listed application rates and broader application intervals.

#### **Aerial Application**

Willowood Pyrac 2SC can be aerially applied (fixed wing or helicopter). Choose spray parameters (including sprayer height, pumping pressure, nozzle selection) to provide medium to fine spray droplets which will spread through the entire crop canopy. It is important to calibrate droplet size before spraying, and to monitor droplet size and canopy penetration during application, taking into account spray parameters and environmental conditions that can affect droplet size and canopy penetration. To eliminate the possibility of damage to crops from previously applied pesticides, and to ensure no cross contamination before or after application, fully clean spray equipment both before and after applying this product.

**Spray Volumes:** 

Crop or Parameter	Willowood Pyrac 2SC per Acre (finished spray solution)
Application to corn, soybean, wheat, triticale	1 or more gallons of finished spray solution
Application to alfalfa, barley, oats, rye	2 or more gallons of finished spray solution
Application to citrus orchards	10 or more gallons of finished spray solution
Application to all other crops	5 or more gallons of finished spray solution
Application under high disease pressure	4 or more gallons of finished spray solution

If desired, use Willowood Pyrac 2SC with adjuvants or a crop oil, to enhance coverage of spray and penetration throughout crop canopy. For best results, use these additives when finished spray volumes are at least 5 gallons per acre (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

- For aerial application in New York State, do not apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).
- If environmental conditions favor drift from target application area, do not apply
- Observe instructions and restrictions in Spray Drift Management section of product label

#### **Ground Application**

When applying Willowood Pyrac 2SC by ground, make application in such a way as to completely cover the plant's blooms, foliage or fruit, using rates listed on this label. If using additives such as adjuvants or crop oil, follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information. To eliminate the possibility of damage to crops from previously applied pesticides, and to ensure no cross contamination before or after application, fully clean spray equipment both before and after applying this product.

Application instructions for specific crops are for broadcast methods of application. Banded application Willowood Pyrac 2SC is also acceptable, but it is necessary to scale down the product rate in proportion to the area, or band that is being sprayed, to avoid application of use rates that are too high. Banded rates can be calculated with the following formula:

<u>Sprayed Bed Width in inches</u>
Total Row Width in inches

X

Broadcast Rate
Treated Acre

Band Rate
Field Acre

Note that: Sprayed Bed Width + Unsprayed Row Middle = Total Row Width

EXAMPLE: Banded application to a 40 inch plant bed with a 20 inch unsprayed row middle; broadcast rate of 9 fl oz. product per acre

40 Inch Sprayed Bed Width
60 Inch Total Row Width

Sprayed Bed Width
A Treated Acre

9 fl. oz. product
Treated Acre

6 fl. oz. Band Rate
Field Acre

40 inch sprayed bed width + 20 inch unsprayed row middle = 60 inch total row width

#### **Sprinkler Irrigation Application**

When applying Willowood Pyrac 2SC through sprinkler irrigation system, use the rates listed in this label. To eliminate the possibility of damage to crops from previously applied pesticides, and to ensure no cross contamination before or after application, fully clean sprinkler irrigation equipment (including chemical tank and injector system) both before and after applying this product.

This product can only be applied through sprinkler irrigation systems (center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move irrigation systems)

#### Restrictions:

Apply this product only through sprinkler irrigation systems – do not apply through any other type of irrigation system.

Observe instructions and restrictions in Chemigation section of this product label

#### ADDITIVES AND MIXING

Willowood Pyrac 2SC can be applied on its own or in combination with other pesticides (fungicides, insecticides, herbicides) or other additives (adjuvants, crop oils, liquid fertilizers, biological control products), to provide additional control or to support product performance. Refer to specific crop directions for more information on appropriate tank mix/additive partners. Make certain that any tank mix partners are registered for use on the same crops or use sites on this product label. Follow all label instructions, restrictions and precautions on any tank mix or additive partner label, as well as those on the Willowood Pyrac 2SC label. Consult specific crop use directions for additional information regarding rates and restrictions.

Willowood Pyrac 2SC and all tank mix or additive combinations have not been tested with all varieties and cultivars of the crops listed on this label. Before mixing Willowood Pyrac 2SC with any pesticide or

other additive, it is advised that the user test a sample of the tank mixture combination on a portion of the crop before general application to the crop, to make certain that the combination does not result in an adverse effect (crop injury, phytotoxicity, reduced disease control, physical incompatibility).

Take care when mixing a crop oil or adjuvant with Willowood Pyrac 2SC for use on corn. If applying to corn after it has reached the V8 growth stage or before the VT stage (tassel fully emerged), crop damage can occur. Grower and user should contact adjuvant manufacturer or supplier to determine if a particular adjuvant is safe to use on corn during that growth period.

### **Tank Mixtures - Compatibility**

When using Willowood Pyrac 2SC with a tank mix partner, it is recommended that compatibility be tested before mixing in application equipment.

Compatibility test: In a lidded jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily film or layers, this indicates incompatibility. Let the mixture stand for 15 minutes before determining compatibility.

#### Mixing

To eliminate the possibility of damage to crops from previously applied pesticides, and to ensure no cross contamination before or after application, fully clean spray equipment both before and after applying this product. Check application equipment for calibration throughout use.

Mix Willowood Pyrac 2SC using the following procedure:

- Fill a clean spray tank with ¾ of water required for treatment
- Begin and maintain agitation throughout the mixing and application procedure
- If using an inductor, make certain that after each ingredient is added, the inductor is rinsed completely
- Ingredient mixing order (make sure each is thoroughly mixed before adding next component)
  - 1. Products in water soluble bags (allow bags to fully dissolve and contents to fully mix before adding next ingredient)
  - 2. Water dispersible products (including dry flowables, wettable powders, suspo-emulsions, suspension concentrates such as Willowood Pyrac 2SC) NOTE- Shake 5 Gal or smaller water dispersible containers well, or recirculate containers larger than 5 gallons before adding to mix tank
  - 3. Water soluble products
  - 4. Emulsifiable or oil concentrates
  - 5. Water soluble additives
  - 6. Water (enough to achieve finished volume)

#### **CROP ROTATION**

Any crop can be planted right away following the latest application of Willowood Pyrac 2SC if the crop is listed on the label (or on the label of other fungicide products containing the active ingredient pyraclostrobin).

For crops not listed on this or other products containing pyraclostrobin, wait at least 14 days from latest application before planting.

#### SPRAY DRIFT MANAGEMENT

Do not spray when conditions favor drift beyond area intended for application. Conditions that may contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All aerial and ground application equipment must be properly maintained and

calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

#### **Aerial Application Methods and Equipment**

The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

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 outermost nozzles on the boom must not exceed ¾ the length of the fixed wingspan or 90% of the rotor blade diameter.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

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

The applicator must be familiar with and take into account the aerial drift reduction advisory information.

#### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

#### **Controlling Droplet Size:**

- **Volume** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When 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 parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle
  types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solidstream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### Wind

Do not apply at wind speeds greater than 15 mph. Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid applications below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

## **Temperature and Humidity**

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high

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

#### **Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions.

Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., bodies of water or non-target crops) is minimal and when wind is blowing away from the sensitive areas.

#### **CHEMIGATION**

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Add this product to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product/water mixture continuously, applying the labeled rate per acre for that crop. Do not exceed ½ inch (13,577 gallons) per acre. In stationary or non-continuous moving systems, inject the product/water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. Do not apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Thorough coverage of foliage is required for good control. Maintain agitation during the entire application period. Contact state extension service specialists, equipment manufacturers, or other experts for calibration questions.

#### **System Requirements:**

- 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 backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticideinjection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

- 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.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off
  irrigation water. A person knowledgeable of the chemigation system and responsible for its
  operation, or under supervision of the responsible person, shall shut the system down and make
  necessary adjustments should the need arise.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application
  to a public water system unless the pesticide label-prescribed safety devices for public water
  systems are in place.

#### **Specific Instructions for Public Water**

- 1. Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. 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 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, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. 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.

#### **CROP-SPECIFIC USE DIRECTIONS – CEREAL GRAINS**

#### **ALFALFA**

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application.

For control of Anthracnose (*Colletotrichum trifolii*); Black stem and leaf spot, Spring (*Phoma medicaginis*); Black stem and leaf spot, Summer (*Cercospora medicaginis*); Downy mildew (*Peronospora trifoliorum*); Leaf Spot (*Leptosphaerulina briosiani*); Leaf spot, common (*Pseudopeziza medicaginis*); Powdery mildew (*Erysiphe pisi*); Rhizoctonia blight / black patch (*Rhizoctonia spp.*); Rust (*Uromyces spp.*); Stagnospora leaf spot (*Stagnospora melilot*); Stemphyllium leaf spot (*Stemphyllium spp.*); Yellow leaf blotch (*Leptotrichila medicaganis*)

#### **Restrictions:**

- Apply Willowood Pyrac 2SC a maximum of 2 times per alfalfa cutting and 3 times per year
- Application interval for Willowood Pyrac 2SC is 14 to 21 days
- Do not apply more than 27 fl. oz. Willowood Pyrac 2SC (0.45 lb. pyraclostrobin) per acre per year
- Pre-Harvest Interval (PHI) is 14 days

#### **BARLEY**

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results in barley (and other cereal crops) the plant's flag leaf should be protected from fungal diseases. Begin treatment before fungal diseases appear, directly after appearance of flag leaf.

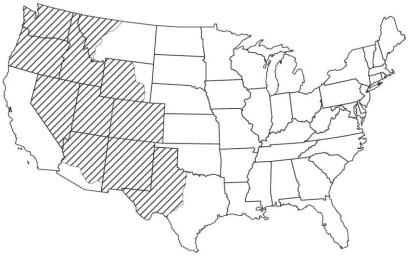
For control of Black point, Kernal blight or Head mold (*Cochliobolus sativus, Alternaria* spp.); Net blotch (*Pyrenophora teres*); Powdery mildew (*Erisyphe graminis* f. sp., *hordei*); Rust, leaf (*Puccinia hordei, P. recondite*); Rust, stem (*Puccinia graminis* f. sp., *tritici*); Rust, stripe (*Puccinia striiformis*); Scald (*Rhynchosporium secalis*); Septoria Leaf and glume blotch (*Septoria* spp., *Stagonospora* spp.); Spot blotch (*Cochliobolus sativus*); Tan spot, Yellow leaf spot (*Pyrenophora trichostoma*)

Head blight – Do not use Willowood Pyrac 2SC for control of Fusarium head blight (head scab). It cannot prevent reduction in grain quality associated with Fusarium head blight.

Net blotch, Septoria leaf and glume blotch, Spot blotch, Tan spot - If early season environmental conditions are favorable for the occurrence of these fungal diseases, apply 3 to 6 fl. oz. product per acre. Use Willowood Pyrac SC either on its own or tank mixed with/in conjunction with a herbicide application. Make certain that any tank mix partners are registered for use on the same crops or use sites on this product label, and follow all label instructions, restrictions and precautions on both labels. A repeat application may be necessary once flag leaf appears. If environmental conditions are favorable for or contributing to the occurrence of these fungal diseases, use Willowood Pyrac 2SC at the higher listed rate, but do not exceed yearly maximum of 18 fl. oz/ product (0.29 lb a.i.) per acre. Do not use for early season control in the State of California.

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per vear
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)

- Wait 14 days after last application to feed green chopped barley or harvest hay
- In the State of California, do not use for early season control
- Pre-Harvest Interval (PHI) is 14 days in CO, ID, NV, NM, OR, UT, WA, WY and parts of AZ (north of I-10), MT (west of Rte 87 / I-15), TX (west of Rte 283/377), and WY (west of I-25 / I-90) see map, below. For all other areas, make application at 50% head emergence or earlier (Feekes 10.3 or Zadok's 55).



14-Day PHI Area for Barley (shaded areas)

#### **CORN**

(including Field, Pop and Sweet; and Seed Production Corn)

**Directions:** Apply 6 to 12 fl. oz. product (0.1 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information). Take care when mixing a crop oil or adjuvant with Willowood Pyrac 2SC for use on corn. If applying to corn after it has reached the V8 growth stage or before the VT stage (tassel fully emerged), crop damage can occur. Grower and user should contact adjuvant manufacturer or supplier to determine if a particular adjuvant is safe to use on corn during that growth period.

For control of Anthracnose (Colletotrichum graminicola); Blight, Northern corn leaf (*Exserohilum turcicum*); Blight, Southern corn leaf (*Bipolaris maydis*); Blight, Yellow leaf (*Phyllosticta maydis*); Eyespot (*Bakatiella zeae*); Leaf spot, gray (*Cercospora zeamaydis*); Leaf spot, Northern corn (*Cochliobolus carbona*); Physoderma brown spot (*Physoderma maydis*); Rust, common (*Puccinia sorghi*); Rust, Southern (*Puccinia polyspora*)

For control of soilborne Rhizoctonia on corn seedlings see 'Seedling Disease' section.

Northern and Southern Corn Leaf Blight – for optimum results apply at a rate of 9 to 12 fl. oz. product (0.15 - 0.195 lbs a.i.) per acre, particularly under environmental conditions favorable for disease

Anthracnose, Blight (Northern corn leaf, Southern corn leaf, Yellow leaf), Northern corn leaf spot, Physoderma brown spot – in California, the use rate for these fungal diseases in 9 to 12 fl. oz. product (0.15 – 0.195 lbs a.i.) per acre.

- Do not apply more than 72 fl. oz. Willowood Pyrac 2SC (1.18 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of 2 Willowood Pyrac 2SC applications per year in field corn
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 7 days

#### **OATS**

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results in oats (and other cereal crops) the plant's flag leaf should be protected from fungal diseases. Begin treatment before fungal diseases appear, directly after appearance of flag leaf.

For control of Blotch, leaf (Pyrenophora avenae); Blotch, Septoria and stem rot (Septoria avenae, Phaeosphaeria avenaria, Stagnospora avenae); Blotch, spot (Bipolaris spp.); Helminthosporium leaf spot (Drechslera avenae); Rust, crown (Puccinia coronate); Rust, leaf (Puccinia spp.); Rust, stem (Puccinia graminis)

Head blight – Do not use Willowood Pyrac 2SC for control of Fusarium head blight (head scab). It cannot prevent reduction in grain quality associated with Fusarium head blight.

Leaf blotch, Septoria blotch, Stem rot, Spot blotch - If early season environmental conditions are favorable for the occurrence of these fungal diseases, apply 3 to 6 fl. oz. product per acre. Use Willowood Pyrac SC either on its own or tank mixed with/in conjunction with a herbicide application. Make certain that any tank mix partners are registered for use on the same crops or use sites on this product label, and follow all label instructions, restrictions and precautions on both labels. A repeat application may be necessary once flag leaf appears. If environmental conditions are favorable for or contributing to the occurrence of these fungal diseases, use Willowood Pyrac 2SC at the higher listed rate, but do not exceed yearly maximum of 18 fl. oz/ product (0.29 lb a.i.) per acre. Do not use for early season control in the State of California.

#### **Restrictions:**

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Wait 14 days after last application to feed green chopped oats or harvest hay
- In the State of California, do not use for early season control
- Do not apply after oats begin to flower (Feekes 10.5: Zadok's 59).

#### RYE

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results in rye (and other cereal crops) the plant's flag leaf should be protected from fungal diseases. Begin treatment before fungal diseases appear, directly after appearance of flag leaf.

For control of Leaf spot (*Pyrenophora* spp.); Mildew, powdery (*Erysiphe graminis*); Rust, leaf (*Puccinia recondite*); Rust, stem (*Puccinia graminis*); Rust, stripe (*Puccinia striiformis*); Septoria leaf and glume blotch (*Septoria* spp., *Stagonospora* spp.)

Head blight – Do not use Willowood Pyrac 2SC for control of Fusarium head blight (head scab). It cannot prevent reduction in grain quality associated with Fusarium head blight.

Leaf spot, Septoria leaf and glume blotch- If early season environmental conditions are favorable for the occurrence of these fungal diseases, apply 3 to 6 fl. oz. product per acre. Use Willowood Pyrac SC either on its own or tank mixed with/in conjunction with a herbicide application. Make certain that any tank mix partners are registered for use on the same crops or use sites on this product label, and follow all label instructions, restrictions and precautions on both labels. A repeat application may be necessary once flag leaf appears. If environmental conditions are favorable for or contributing to the occurrence of these fungal diseases, use Willowood Pyrac 2SC at the higher listed rate, but do not exceed yearly maximum of 18 fl. oz/ product (0.29 lb a.i.) per acre. Do not use for early season control in the State of California.

#### Restrictions:

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- In the State of California, do not use for early season control
- Do not apply after 50% head emergence (Feekes 10.3; Zadok's 55)

#### **SORGHUM**

**Directions:** Apply 6 to 12 fl. oz. product (0.1 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate.

For control of Anthracnose (*Colletotrichum graminocola*); Gray leaf spot (*Cercospora* spp.); Leaf blight, Northern (*Excerohilum turcicum*); Leaf blight, Southern (*Bipolaris*, spp.); Rust (*Puccinia*, spp.)

Northern and Southern Leaf Blight – Make application at 9 to 12 fl. oz. per acre rate.

#### Restrictions:

- Do not apply more than 12 fl. oz. Willowood Pyrac 2SC (0.2 lb. pyraclostrobin) per acre per year
- Make a maximum of 1 Willowood Pyrac 2SC application per year (if necessary, follow with a fungicide with a different mode of action (other than Group 11)
- Do not apply after 25% flowering

## WHEAT AND TRITICALE

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results in wheat and triticale (and other cereal crops) the plant's flag leaf should be protected from fungal diseases. Begin treatment before fungal diseases appear, directly after appearance of flag leaf.

For control of Black point kernel smudge (*Alternaria* spp., *Helminthosporium* spp.); Blotch, septoria leaf and glume (*Septoria* spp., *Stagonospora* spp.); Blotch, spot (*Cochliobolus sativus*); Mildew, powdery (*Erysiphe graminis* f. sp., *tritici*); Rust, leaf (*Puccinia triticina*); Rust, Stem (*Puccinia graminis* f. sp., *tritici*); Rust, stripe (*Puccinia striiformis* f. sp., *tritici*); Tan spot, Yellow leaf spot (*Pyrenophora* spp.)

Head blight – Do not use Willowood Pyrac 2SC for control of Fusarium head blight (head scab). It cannot prevent reduction in grain quality associated with Fusarium head blight.

Tan spot, Septoria leaf and glume blotch, Spot blotch - If early season environmental conditions are favorable for the occurrence of these fungal diseases, apply 3 to 6 fl. oz. product per acre. Use Willowood Pyrac SC either on its own or tank mixed with/in conjunction with a herbicide application. Make certain that any tank mix partners are registered for use on the same crops or use sites on this product label, and follow all label instructions, restrictions and precautions on both labels. A repeat application may be necessary once flag leaf appears. If environmental conditions are favorable for or contributing to the occurrence of these fungal diseases, use Willowood Pyrac 2SC at the higher listed rate, but do not exceed yearly maximum of 18 fl. oz/ product (0.29 lb a.i.) per acre. Do not use for early season control in the State of California.

#### **Restrictions:**

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Wait 14 days after last application to feed green chopped wheat or triticale, or harvest hay
- In the State of California, do not use for early season control
- Do not apply after wheat or triticale begin to flower (Feekes 10.5; Zadok's 59)

#### **CROP-SPECIFIC USE DIRECTIONS - LEGUMES**

## **DRIED SHELLED PEAS AND BEANS (except Soybeans)**

(including Broad bean, Chickpea, Guar, Lablab bean, Lentil, Pigeon pea, *Lupinus* spp. (Grain lupin, Sweet lupin, White lupin); *Phaseolus* spp. (Field bean, Kidney bean, Lima bean, Navy bean, Pink bean, Pinto bean, Tepary bean); *Vigna* spp. (Adzuki bean, Black-eyed pea, Catjang, Cowpea, Crowder pea, Moth bean, Mung bean, Rice bean, Southern pea, Urd bean); *Pisum* spp. (Field pea))

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Alternaria leaf and pod spot (*Alternaria* spp.); Anthracnose (*Colletotrichum* spp.); Ascochyta blight (*Phoma exigua, Ascochyta* spp.); Cercospora leaf spot (*Cercospora* spp.); Mildew, downy (*Phytopthora nicotianae*); Mildew, powdery (*Erysiphe polygoni*); Micosphaerella blight (*Mycosphaerella* spp.); Rust (*Uromyces appendiculatus*); Rust, Asian soybean (*Phakopsora pachyrhizi*)

For control of soilborne Rhizoctonia on dry shelled beans seedlings see 'Seedling Disease' section.

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days

- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Do not feed bean forage or hay or pea vines or hay to livestock within 14 days of latest application
- Pre-Harvest Interval (PHI) is 21 days

#### **EDIBLE-PODDED LEGUME VEGETABLES**

(including Jack bean, Pigeon pea, Soybean (immature seed), Sword bean; *Phaseolus* spp. (Runner bean, Snap bean, Wax bean); *Vigna* spp. (Asparagus bean, Chinese longbean, Moth bean, Yardlong bean); *Pisum* spp. (Dwarf pea, Edible-podded pea; Snowpea; Sugar snap pea))

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Alternaria leaf and pod spot (*Alternaria* spp.); Anthracnose (*Colletotrichum* spp.); Ascochyta blight (*Phoma exigua, Ascochyta* spp.); Cercospora leaf spot (*Cercospora* spp.); Mildew, downy (*Phytopthora nicotianae*); Mildew, powdery (*Erysiphe polygoni*); Micosphaerella blight (*Mycosphaerella* spp.); Rust (*Uromyces appendiculatus*); Rust, Asian soybean (*Phakopsora pachyrhizi*)

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Do not feed bean forage or hay or pea vines or hay to livestock within 14 days of latest application
- Pre-Harvest Interval (PHI) is 7 days

#### **PEANUT**

#### **Directions:**

Use Rate 1: Apply 6 to 15 fl. oz. product (0.1 – 0.245 lb a.i.) per acre Use Rate 2: Apply 9 to 15 fl. oz. product (0.15 – 0.245 lb a.i.) per acre Use Rate 3: Apply 12 to 15 fl. oz. product (0.195 – 0.245 lb a.i.) per acre

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 28 days after first application See use directions for specific diseases, below. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

#### For Control Of:

Use Rate 1: Leaf spot, early (*Cercospora arachidicola*); Leaf spot, late (*Cercosporidium personatum*); Pepperspot (*Leptosphaerulina crassiasca*); Rust (*Puccinia arachidis*); Web blotch (*Phoma arachidocola*)

Use Rate 2: Rhizoctonia limb rot, Peg rot, Pod rot (*Rhizoctonia solani*); Sclerotium rot, Southern stem rot, Southern blight and white mold (*Sclerotium rolfsii*); Suppression of Sclerotinia blight (*Sclerotinia minor*)

Use Rate 3: Cylindrocladium black rot (Cylondorcladium crotalariae)

For control of soilborne Rhizoctonia on peanut seedlings see 'Seedling Disease' section.

Early and late leaf spot, pepperspot, rust, web blotch (Use Rate 1 diseases) – for best results, begin treatment before fungal diseases appear. If environmental conditions are favorable for occurrence of fungal diseases, repeat application can be made after first application – observe the following intervals:

6 to 12 fl. oz. product applied	7 to 14 day application interval
9 to 15 fl. oz. product applied	14 to 21 day application interval

Rhizoctonia, Sclerotium – For best results, begin treatment before fungal diseases appear. Repeat applications can be made 14 to 28 days after first application. Observe the following intervals:

9 to 15 fl. oz. product applied	14 day application interval
15 fl. oz. product applied	15 to 28 day application interval

#### **Restrictions:**

- Do not apply more than 45 fl. oz. Willowood Pyrac 2SC (0.73 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 28 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a
  fungicide with a different mode of action (other than Group 11); Rotate Willowood Pyrac 2SC with
  at least 1 application of a fungicide of a different mode of action, if the peanut spray program
  consists of four or less fungicide applications per year.
- Forage is not to be grazed or harvested; Livestock can be fed peanut meal from treated crops
- Pre-Harvest Interval (PHI) is 14 days

### **SOYBEANS**

#### **Directions:**

Use Rate 1: Apply 6 to 12 fl. oz. product (0.1 – 0.195 lb a.i.) per acre.

Use Rate 2: Apply 12 fl. oz. product (0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

Use Rate 1 – For control of: Anthracnose (*Colletotrichum truncatum*); Blight, cercospora (*Cercospora kikuchii*); Blight, pod and stem (*Diaporthe phaseolorum*); Blight, rhizoctonia aerial (*Rhizoctonia solani*); Brown Spot (*Septoria glycines*); Leaf spot, alternaria (*Alternaria* spp.); Leaf spot, frogeye (*Cercospora sojina*); Rust, Asian soybean (*Phakopsora pachyrhizi*)

Use Rate 2 – For suppression of Southern blight (Sclerotium rolfsii)

For control of soilborne Rhizoctonia on soybean seedlings see 'Seedling Disease' section.

Soybean rust – For best results, begin treatment before rust appears on soybeans,

#### Restrictions:

- Do not apply more than 24 fl. oz. Willowood Pyrac 2SC (0.39 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Do not feed forage to livestock within 14 days of latest application
- Do not feed hay to livestock within 21 days of latest application
- Pre-Harvest Interval (PHI) is 21 days

#### SUCCULENT SHELLED PEAS AND BEANS

(including Pigeon pea, *Phaseolus* spp. (Lima bean, green); *Pisum* spp. (Broad bean, English pea, Garden pea, Green pea); *Vigna* spp. (Black-eyed pea, Cowpea, Southern pea))

**Directions:** Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Alternaria leaf and pod spot (*Alternaria* spp.); Anthracnose (*Colletotrichum* spp.); Ascochyta blight (*Phoma exigua*, *Ascochyta* spp.); Cercospora leaf spot (*Cercospora* spp.); Mildew, downy (*Phytopthora nicotianae*, *P. phaseoli*); Mildew, powdery (*Erysiphe polygoni*); Micosphaerella blight (*Mycosphaerella* spp.); Rust (*Uromyces appendiculatus*); Rust, Asian soybean (*Phakopsora pachyrhizi*)

- Do not apply more than 18 fl. oz. Willowood Pyrac 2SC (0.29 lb. pyraclostrobin) per acre per year
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Do not feed bean forage or hay or pea vines or hay to livestock within 14 days of latest application
- Pre-Harvest Interval (PHI) is 7 days

#### **CROP-SPECIFIC USE DIRECTIONS - OILSEEDS**

#### **COTTON**

**Directions:** Apply 6 to 12 fl. oz. product (0.1 – 0.195 lb a.i.) per acre.

For best results in controlling fungal diseases that attack foliage or cause boll rot, begin treatment before diseases appear If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Alternaria leaf spot, boll rot (*Alternaria* spp.); Anthracnose, boll rot (*Glomerella* spp); Ascochyta blight, boll rot (*Ascochyta* spp.); Cercospora blight and leaf spot (*Cercospora* spp.); Diplodia boll rot (*Diplodia* spp.); Hard lock, boll rot (*Fusarium* spp.); Phoma blight, boll rot (*Phoma* spp.); Rust (*Puccinia* spp.; *Phykopsora* spp.); Stemphyllium leaf spot (*Stemphyllium* spp.)

For control of soilborne Rhizoctonia on cotton seedlings see 'Seedling Disease' section.

#### **Restrictions:**

- Do not apply more than 36 fl. oz. Willowood Pyrac 2SC (0.58 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 30 days

#### **OIL SEED CROPS**

(including Borage, Calendula, Castor Oil Plant, Chinese Tallowtree, Crambe, Cuphea, Echium, Euphorbia, Evening primrose, Flax seed, Gold of pleasure (Camelina), Hare's ear mustard, Jojoba, Lesquerella, Lunaria, Meadowfoam, Milkweed, Mustard seed, Niger seed, Oil radish, Poppy seed, Rapeseed, Rose hip, Safflower, Sesame, Stokes aster, Sunflower, Sweet rocket, Tallowwood, Tea oil plant, Vernonia

**Directions:** Apply 6 to 12 fl. oz. product (0.1 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Pasmo (Septoria linicola) in Flax Seed

For control of Blackleg (*Leptosphaeria maculans*) and Blackspot (*alternaria* spp.) in Rapeseed For control of Leaf spot, alternaria (*Alternaria* spp.); leaf spot, Cercospora (*Cercospora helianthi*), leaf spot, Septoria (*Septoria* spp), Mildew, downy (*Plasmopara halstedii*); Mildew, Powdery (*Erysiphe cichoracearum*); Rust (*Puccinia helianthi*, *Uromyces* spp.); Rust, White (*Albugo tragopogonis*) in Sunflowers

For control of *Alternaria* spp. and *Septoria* spp. in all other oilseed crops

For control of soilborne Rhizoctonia on sunflower seedlings see 'Seedling Disease' section.

Pasmo in Flax Seed – Begin treatment about 7 to 10 days after flax seed has begun to flower. If environmental conditions are favorable, if disease pressure is high, or if pasmo continues, a repeat application can be made 7 to 10 days after first application.

Blackleg in Rapeseed – Begin treatment when rapeseed plants have reached 2- to 4- leaf stage.

Blackspot in Rapeseed – Begin treatment when pods have just begun developing on rapeseed plants. If environmental conditions are favorable, if disease pressure is high, or if blackspot continues, a repeat application can be made at 7 to 10 days after first application.

- Do not apply more than 24 fl. oz. Willowood Pyrac 2SC (0.39 lb. pyraclostrobin) per acre per year (for sunflower, including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 21 days

#### **CROP-SPECIFIC USE DIRECTIONS – ORCHARD CROPS**

#### **CITRUS FRUITS GROUP**

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

#### **Directions:**

Use Rate 1: Apply 9 to 12 fl. oz. product (0.15 – 0.195 lb a.i.) per acre Use Rate 2: Apply 12 to 15 fl. oz. product (0.195 – 0.245 lb a.i.) per acre

For best results, begin treatment before fungal diseases appear (see below for specific instructions for Greasy Spot). If necessary, a repeat application can be made 10 to 21 days after first application. If fungal disease is present, or if conditions are optimal for diease, use Willowood Pyrac 2SC at the higher listed rate.

#### For Control Of:

Use Rate 1: Greasy spot (*Mycosphaerella citri*); Scab (*Elsinoe* spp.)
Use Rate 2: Alternaria brown spot (*Alternaria citria*); Anthracnose (*Colletotrichum actuatum*, *C. Gloeosporoides*); Black spot (*Guignardia citricarpa*); Melanose (*Diaporthe citri*); Post bloom fruit drop (*Colletotrichum actuatum*)

Greasy Spot – for optimum results, make application against greasy spot during mid to late season fungicide spray application (for all other fungal diseases, apply Willowood Pyrac 2SC with early season spraying)

#### Restrictions:

- When applying aerially to citrus orchards, use a minimum of 10 gallons spray solution per acre
- Do not apply more than 54 fl. oz. Willowood Pyrac 2SC (0.88 lb. pyraclostrobin) per acre per year
- Application interval is 10 to 21 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 0 days

#### **PECAN**

**Directions:** Apply 6 to 7 fl. oz. product (0.1 - 0.12 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear, and at the beginning any spray program for pecan (such as first cover, or prepollination stage). A repeat application can be made 14 days after first application.

For control of Pecan scab (Cladosporium caryigenum)

- Do not apply more than 28 fl. oz. Willowood Pyrac 2SC (0.46 lb. pyraclostrobin) per acre per year
- Application interval is 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)

Pre-Harvest Interval (PHI) is 14 days

# CROP-SPECIFIC USE DIRECTIONS – ROOT AND TUBER VEGETABLES

#### **POTATO**

#### **Directions:**

Use Rate 1: Apply 6 to 9 fl. oz. product (0.1 - 0.15 lb a.i.) per acre Use Rate 2: Apply 6 to 12 fl. oz. product (0.1 - 0.195 lb a.i.) per acre

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If making application early in the season and disease pressure is not yet elevated, apply Willowood Pyrac 2C at lower listed rate and broader application interval.

#### For Control Of:

Use Rate 1: Black dot (*Colletotrichum coccodes*); Early blight (*Alternaria solani*) Use Rate 2: Late blight (*Phytopthora infestans*); Powdery mildew (*Erysiphe* spp., *Leveillula taurica*); Suppression only – White mold (*Sclerotonia sclerotiorum*)

For control of soilborne Rhizoctonia on potato seedlings see 'Seedling Disease' section.

Late blight – for optimum results, apply a fungicide with a different mode of action (other than Group 11) 5 to 7 days after applying Willowood Pyrac 2SC

#### **Restrictions:**

- Do not apply more than 72 fl. oz. Willowood Pyrac 2SC (1.18 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 7 to 14 days
- Make a maximum of one Willowood Pyrac 2SC application before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 3 days

#### **SUGAR BEET (roots and tops)**

**Directions:** Apply 9 to 12 fl. oz. product (0.15 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. A repeat application can be made 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate.

If desired, use Willowood Pyrac 2SC with the following additives:

Nonionic adjuvants (NIS)

Crop oil concentrate (COC)

Methylated seed oil (MSO)

Herbicides, including those containing sethoxydim, clethodim, quizalofop-p-ethyl or rimsulfuron

#### Precautions for combinations:

- Temporary crop injury can occur and can increase proportionally with the amount of adjuvants or additives used; for best results, use low rates of adjuvants or additives
- When tank mixing Willowood Pyrac 2SC with other products, COC or MSO can also be used (but be careful of crop injury – see crop injury precaution above)
- When tank mixing, make certain that any tank mix partners are registered for use on the same crops or use sites on this product label, and follow all label instructions, restrictions and precautions on both labels
- Follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information

For control of Cercospora leaf spot (Cercospora beticola); Powdery mildew (Erysiphe betae)

For control of soilborne Rhizoctonia on dry shelled beans seedlings see 'Seedling Disease' section.

Willowood Pyrac 2SC will also help manage the fungal diseases Crown rot and Rhizoctonia stem canker .

#### **Restrictions:**

- Do not apply more than 48 fl oz. Willowood Pyrac 2SC (0.78 lb. pyraclostrobin) per acre per year (including in furrow and foliar uses)
- Application interval is 14 days
- Do not mix Willowood Pyrac 2SC with silicone adjuvants either alone or in a tank mix with other products.
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications (one to sugarbeet before 4-leaf plant growth stage, and one application after 4-leaf plant growth stage) before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 7 days

#### TUBEROUS AND CORM VEGETABLES SUBGROUP

(Including Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen, Edible canna, Ginger, Leren, Sweet Potato, Tanier, True yam, Turmeric, Yam bean)

For POTATO, see separate use directions.

**Directions:** Apply 6 to 12 fl. oz. product (0.1 – 0.195 lb a.i.) per acre

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If making application early in the season and disease pressure is not yet elevated, apply Willowood Pyrac 2C at lower listed rate and higher application interval.

For control of Leaf spot (*Cercospora* spp., *Alternaria* spp.); Mildew, downy (*Plasmopara* spp.); Mildew, powdery (*Erysiphae* spp., *Leveillula taurica*); Rust (*Uromyces* spp., *Puccinia*, spp.)

- Do not apply more than 72 fl oz. Willowood Pyrac 2SC (1.18 lb. pyraclostrobin) per acre per year
- Application interval is 7 to 14 days
- Make a maximum of one Willowood Pyrac 2SC application before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 3 days

#### CROP-SPECIFIC USE DIRECTIONS - OTHER

#### **GRASS GROWN FOR SEED**

**Directions:** Apply 6 to 12 fl. oz. product (0.1 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. A repeat application can be made 14 to 21 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application.

For control of Rust (*Puccinia recondite, P. graminis*) For suppression of Powdery mildew (*Erysiphe graminis*)

#### **Restrictions:**

- Do not apply more than 24 fl. oz. Willowood Pyrac 2SC (0.39 lb. pyraclostrobin) per acre per year
- Application interval is 14 to 21 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Wait 27 days after latest application to graze or feed forage or hay to livestock
- Pre-Harvest Interval (PHI) is 14 days

#### **MINT**

**Directions:** Apply 9 to 12 fl. oz. product (0.15 – 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application. If desired, use Willowood Pyrac 2SC with adjuvants (follow all instructions and restrictions on the crop oil or adjuvant label, and see ADDITIVES AND MIXING for additional information)

For control of Leaf spot (*Ramularia* spp., *Alternaria* spp., *Phoma* spp.); Powdery mildew (*Erysiphe* spp.); Rust (*Puccinia* spp.)

- Do not apply more than 48 fl. oz. Willowood Pyrac 2SC (0.78 lb. pyraclostrobin) per acre per year
- Application interval is 7 to 14 days
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 14 days

#### SUGARCANE\*

**Directions:** Apply 9 to 12 fl. oz. product (0.15 - 0.195 lb a.i.) per acre.

For best results, begin treatment before fungal diseases appear. If environmental conditions are contributing to the occurrence of fungal diseases, repeat application(s) can be made 7 to 14 days after first application. If fungal disease is present, or if conditions are optimal for disease, use Willowood Pyrac 2SC at the higher listed rate, and at smaller application interval, if making a repeat application.
\*Do not use in the State of California

For control of Rust, brown (Puccinia melanocephala); Rust, orange (Puccinia kuehnii)

- Do not apply more than 48 fl. oz. Willowood Pyrac 2SC (0.78 lb. pyraclostrobin) per acre per year
- Application interval is 14 to 28 days
- Do not use in the State of California
- Make a maximum of 2 consecutive Willowood Pyrac 2SC applications before switching to a fungicide with a different mode of action (other than Group 11)
- Pre-Harvest Interval (PHI) is 14 days

## CROP-SPECIFIC USE DIRECTIONS: SEEDLING DISEASES – SOILBORNE RHIZOCTONIA

For control of soilborne Rhizoctonia in seedlings of Corn; Cotton; Dried Shelled Beans\*; Peanut; Potato Soybean; Sugar Beet; Sunflower

\*Chickpea, Guar, Lablab bean, Lupinus spp. (Grain lupin, Sweet lupin, White lupin); Phaseolus spp. (Field bean, Kidney bean, Lima bean, Navy bean, Pink bean, Pinto bean, Tepary bean); Vigna spp. (Adzuki bean, Black eyed pea, Catjang, Crowder pea, Moth bean, Mung bean, Rice bean, Southern pea, Urd bean)

For best results, use indicated rates of Willowood Pyrac 2SC. Make an at plant, in-furrow treatment by spraying the product into the furrow prior to covering the seed. When applying to potato, apply in a band (4 – 8 inches) over the potato seed piece before covering.

Seedling	Use Rate per 1000 row feet
Corn, Cotton, Sunflower,	0.1 to 0.8 fl. oz.
Peanut, Soybean, Sugar Beet	
Dry Shelled Beans (except	0.1 to 0.6 fl. oz.
soybeans)	
Potato	0.4 to 0.8 fl. oz.

See Row Spacing charts, below for various use rates and equivalent per acre rates for Willowood Pyrac 2SC.

If environmental conditions are favorable for occurrence of fungal disease, or if Rhizoctonia is present or has occurred previously, apply Willowood Pyrac SC either on its own or tank mixed with/in conjunction with another, non-Group 11 fungicide, at the following rates:

Corn, Cotton, Sunflower,	9 to 12 fl. oz (0.15 – 0.195 lb.
Peanut, Soybean, Sugar Beet	a.i.) per acre)
Dry Shelled Beans (except	9 fl. oz. (0.15 lb a.i.) per acre
soybeans)	
Potato	8 to 12 fl. oz. (0.13 – 0.195 lb
	a.i.) per acre

- Do not apply more than 12 fl. oz. Willowood Pyrac 2SC (0.195 lb. pyraclostrobin) per acre in all listed crops except Dried Shelled Beans; in Dried Shelled Beans, do not apply more than 9 fl. oz. Willowood Pyrac 2SC (0.15 lbs a.i.) per acre.
- Apply Willowood Pyrac 2SC in at least 2.5 gallons finished product per acre for all listed crops except potato; in Potato, apply in at least 5 gallons finished product per acre

## ROW SPACING CHART: Corn, Cotton, Peanut, Soybean, Sunflower, Sugar Beet

	Willowood Pyrac 2SC Rate (fl. oz. per acre)							
D.		fl. oz. product per 1000 row feet						
Row Spacing	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
15-inch	3.5	7.0	10.5					
20-inch		5.2	7.8	10.4				
22-inch		4.7	7.1	9.5	11.8			
30-inch		3.5	5.2	6.9	8.7	10.4		
32-inch		3.3	5.0	6.7	8.4	10.0	11.7	
34-inch		3.2	4.8	6.4	8.0	9.6	11.2	
36-inch		3.0	4.5	6.0	7.5	9.0	10.5	12.0
38-inch			4.3	5.7	7.1	8.5	10.0	11.4
40-inch			4.0	5.4	6.7	8.1	9.4	10.8

Maximum use rate per 1000 row feet: 0.7 fl. oz. for 32- to 34-inch rows; 0.6 fl. oz. for 30-inch rows; 0.5 fl. oz. for 22 inch rows; 0.4 fl. oz. for 20-inch rows; 0.3 fl. oz. for 15-inch rows

### **ROW SPACING CHART: Dry Shelled Beans**

	Willowood Pyrac 2SC Rate (fl. oz. per acre)					
			fl. oz. prod	luct per 1000 r	ow feet	
Row Spacing	0.1	0.2	0.3	0.4	0.5	0.6
15-inch	3.5	7.0				
20-inch		5.2	7.8			
22-inch		4.7	7.1			
30-inch		3.5	5.2	6.9	8.7	
32-inch		3.3	5.0	6.7	8.4	
34-inch		3.2	4.8	6.4	8.0	
36-inch		3.0	4.5	6.0	7.5	9.0
38-inch			4.3	5.7	7.1	8.5
40-inch			4.0	5.4	6.7	8.1

Maximum use rate per 1000 row feet: 0.5 fl. oz. for 30- to 34-inch rows; 0.3 fl. oz. for 20- to 22-inch rows; 0.2 fl. oz. for 15 inch rows

#### **ROW SPACING CHART: Potato**

Willowood Pyrac 2SC Rate (fl. oz. per acre)						
Davis		fl. oz. product per 1000 row feet				
Row Spacing	0.4	0.6	0.73*	0.8		
32-inch	6.7	10.0	12.0			
34-inch	6.4	9.6	11.7			
36-inch	6.0	9.0		12.0		
38-inch	5.7	8.6		11.4		
40-inch	5.4	8.1		10.8		

<sup>\*</sup> Maximum use rate per 1000 row feet: 0.73 fl. oz. for 32- or 34-inch rows

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### **CONTAINER HANDLING:**

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration. Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

### Steps to be taken in case material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert materials (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

#### 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 BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

Cabrio, Headline, Poast and Pristine are registered trademarks of BASF.

Assure and Prism are registered trademarks of E.I. DuPont de Nemours and Company.

Select is a registered trademark of Arysta Life Science North America Corporation.

[EPA approval date]

## ACCEPTED

Apr 25, 2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 07000 00

87290-63

## **Sublabel B: Turfgrass and Ornamentals**

[Note to reviewer: [Text] in brackets denotes optional text].

[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

## **{BOOKLET FRONT PANEL LANGUAGE}**

GROUP 11 FUNGICIDE

## **WILLOWOOD PYRAC 2SC**

**FUNGICIDE** 

For disease control in turfgrass and ornamentals

#### **ACTIVE INGREDIENT\*:**

Pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1 <i>H</i> -pyrazol-3-yl]oxy]methyl]phenyl]	
methoxy-, methyl ester)	23.3%
OTHER INGREDIENTS:	<u>76.7%</u>
TOTAL:	100.0%
*Forming land to 2,000 pounds of purpolantrahin your roller	

<sup>\*</sup>Equivalent to 2.08 pounds of pyraclostrobin per gallon.

# KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

See inside label booklet for First Aid, Precautionary Statements and Directions for Use.

EPA Reg. No. 87290-63

**EPA Est. No.** 

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

**Net Contents:** 

## **{LANGUAGE INSIDE BOOKLET}**

	FIRST AID				
If swallowed	Call a poison control center or doctor immediately for treatment advice.				
	<ul> <li>Have person sip a glass of water if able to swallow.</li> </ul>				
	<ul> <li>Do not induce vomiting unless told to by a poison control center or doctor.</li> </ul>				
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
If on skin or	Take off contaminated clothing.				
clothing	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>				
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> </ul>				
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing</li> </ul>				
	eyes.				
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
If inhaled	Move person to fresh air.				
	<ul> <li>If person is not breathing, call 911 or an ambulance; then give artificial</li> </ul>				
	respiration, preferably mouth-to-mouth, if possible.				
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>				
	HOT LINE NUMBER				

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For general information on product use, etc., call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Mon. - Fri. 8:00 am to 12:00 pm Pacific Time. For emergencies, call the poison control center at 1-800-222-1222.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** May be fatal if swallowed. Avoid contact with skin, eyes, or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, waterproof gloves, and protective eyewear.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Protective eyewear
- Shoes plus socks
- Waterproof gloves

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

#### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. A hazardous chemical reaction may occur. **ENGINEERING CONTROLS STATEMENTS** 

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**

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

#### **Groundwater Advisory**

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. 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), notification to workers, 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 12 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

## 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 of agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter treated areas until sprays have dried.

#### PRODUCT INFORMATION

Willowood Pyrac 2SC is a fungicide in a suspension concentrate formulation that controls a broadspectrum of fungal diseases and provides good residual protection in ornamentals and turfgrass. The length of residual control varies based on how significant the disease pressure is, as well as management practices and environmental conditions at the application site. For best results, this product must be applied prior to or at the earliest stages of disease development, and applying Willowood Pyrac 2SC once disease is well established may result in unsatisfactory control.

For optimal disease control, apply this product preventively either by itself or in tank mixes with other fungicides registered for these uses. The active ingredient in this product (pyraclostrobin) is in the strobilurin class of compounds (Group 11 Fungicides) and for best results, apply according to a scheduled spray program in rotation with other fungicides with a different mode of action.

#### APPLICATION INFORMATION

This product may be applied to the following use sites:

Turfgrass	Ornamentals
Cemeteries	Containers
Golf Courses	Greenhouses
Lawns (Commercial, Institutional, Municipal and	Interiorscapes
Residential)	Landscapes (Commercial & Residential)
Parks	Lathhouses / Shadehouses
Recreational Areas (incl. athletic and sports fields)	Recreational Areas (incl. golf courses)
Sod Farms	Retail Nurseries
	Outdoor Nurseries (incl. flower bulbs & conifer/forest nurseries)

#### **APPLICATION INSTRUCTIONS**

Apply this product using aerial or ground spray equipment following the instructions in the USE DIRECTIONS section, using the shorter application intervals and/or higher rates listed if conditions that promote disease exist for prolonged periods. Willowood Pyrac 2SC must be well shaken prior to use and applied using calibrated sprayers with a water volume and pressure that ensures complete foliar coverage. After application, foliage should be allowed to dry before irrigating or mowing (except when treating fairy ring, brown ring patch and Pythium root dysfunction).

#### **Ground Applications**

Apply in 2-4 gallons of water per 1000 square feet using the rates listed in the Use Directions section. Applications may be repeated as necessary at the interval specified.

#### **Aerial Applications**

Aerial applications may only be made to sod farms and the following production ornamentals: Container and Field Nurseries, Flower Bulb Production and Forest and Conifer Nurseries. Apply using a minimum of 10 gallons of spray solution per acre using the rates listed in the Use Directions section and repeat applications as necessary at the interval specified.

#### SPRAY DRIFT MANAGEMENT

**DO NOT** spray when conditions favor drift beyond the area intended for application. Conditions that contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All application equipment must be properly maintained and calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

#### **Aerial Application Methods and Equipment**

The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

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

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or rotor blade diameter.
- 2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

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

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

#### Controlling droplet size:

- **Volume** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When 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 parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### Wind

Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### **Temperature and Humidity**

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures. When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions because of the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **Sensitive Areas**

Apply Willowood Pyrac 2SC only when the potential for drift to adjacent sensitive areas (e.g., bodies of water or nontarget crops) is minimal and when wind is blowing away from the sensitive areas.

## **Use Precautions for Sprinklers and Drip Irrigation Application**

## **Drip Irrigation**

Apply Willowood Pyrac 2SC through drip irrigation systems to potted ornamentals or to bedded, field-grown ornamentals for Soilborne disease control. Apply 8 to 16 fluid ounces Willowood Pyrac 2SC per acre as a preventative disease application. The soil or potting media must have adequate moisture capacity prior to drip application.

Terminate drip irrigation at fungicide depletion from the main feed supply tank or after 6 hours from start, whichever is shorter. For maximum efficacy, delay subsequent irrigation (water only) for at least 24 hours following drip application.

#### **Sprinkler Irrigation**

Apply Willowood Pyrac 2SC through sprinkler irrigation to turf on sodfarms, to potted ornamentals, or to bedded, field-grown ornamentals. Apply this product through sprinkler irrigation systems, including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system except as specified on this label.

Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, inject this product into no more than the last 20 to 30 minutes of the set.

Do not apply when wind speed favors drift beyond the area intended for treatment. Plant injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform treated water. Thorough coverage of foliage is required for good control.

Maintain good agitation during the entire application period. If you have questions about calibration, contact a state extension service specialist, equipment manufacturers or other experts.

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 backflow.

The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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 where pesticide distribution is adversely affected. 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.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. 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.

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

#### **Specific Instructions for Public Water Systems**

- 1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside the diameter of the fill pipe.
- 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 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, or in cases where there is not water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### RESISTANCE MANAGEMENT

The active ingredient in this product is pyraclostrobin, a Group 11 Fungicide that is effective against strains resistant to non-Qol fungicides (benzimidazoles, dicarboximides, phenylamides and sterol inhibitors). Continual or repeated use of Group 11 fungicides such as pyraclostrobin, azoxystrobin and trifloxystrobin may lead to resistance to this product. To minimize the likelihood of resistance to this product developing, do NOT make more sequential applications of Pyrac 2SC or other Group 11 fungicides than permitted in the Use Directions.

#### **Resistance Management Guidelines**

The following guidelines may be used to delay resistance to this product:

- 1) Tank mixes that incorporate fungicides registered for this use with different modes of actions (i.e., action groups) being sure to use no less than the lowest rates listed on the respective labels in the tank mix.
- 2) This product should be used as part of a comprehensive integrated pest management (IPM) program, including agricultural techniques that minimize the likelihood of diseases developing, as well as in disease-forecasting programs that suggest timing of applications dependent on environmental factors that promote the development of diseases.
- 3) Monitoring should be done in order to verify the efficacy of the fungicides used against the diseases targeted by the IPM program, as well as other factors that may influence development of disease and performance of the fungicide. Local experts should be notified and consulted if a disease that was controlled by this (or other Group 11) fungicides is no longer controlled or suppressed.

When treating for **Pythium, Gray Leaf Spot, Dollar Spot or Anthracnose in turfgrass**, do NOT apply this product more than twice sequentially before alternating with a fungicide with a different mode of action registered for used on the disease being treated. When treating **all other turfgrass diseases**, do NOT apply this product more than three times sequentially before alternating with a fungicide with a different mode of action registered for used on the disease being treated.

When treating for diseases in ornamental plants, do NOT apply this product more than twice sequentially before alternating with a fungicide with a different mode of action registered for used on the disease being treated. Do NOT alternate other Group 11 fungicides with this product.

#### NOTICE REGARDING ADDITIVES

Do NOT use this product with any adjuvants that are organosilicate-based. Due to the number of adjuvants available for use, neither the seller nor the manufacturer can verify the safety of using this product with all additives.

#### **TANK MIXES**

While this product may be used with most insecticide, fertilizer or fungicide products, users should know that plant injury, reduced control or physical incompatibility may result. Tank mixing with other non-Group 11 fungicides may also increase control of target diseases. When tank mixing, the most restrictive combination of precautions, restrictions and label directions must be followed.

#### **Compatibility Test for Tank Mixes**

The following procedure should be used to test for product compatibility. When adding components of the tank mix to the test container, mix 2 teaspoons / pound or one teaspoon / pint of labeled rate per acre.

- 1) With a large jar, add water to the jar using water from the same source as will be used in the tank
- 2) Add water-dispersible products such as dry flowables, suspension concentrates, suspo-emulsions or wettable powders. Cap the jar and invert 10 times.
- 3) Add water-soluble products. Cap the jar and invert 10 times.
- 4) Add emulsifiable concentrates such as methylated seed oil or oil concentrates. Cap the jar and invert 10 times.
- 5) Add water-soluble additives. Cap the jar and invert 10 times.

Let the jar set for 15 minutes and then inspect for signs of incompatibility. The solution should be uniform and fully integrated with no signs of oil on the surface, particles that precipitate to the bottom or a thick texture. Do NOT use any combination that may clog spray nozzles.

#### **Mixing Order**

NOTE: The amount of spray solution mixed should be just that needed for immediate use.

- 1) Fill sprayer tank ½ full with water and commence agitation.
- 2) Add any products in water-soluble PVA bags to the tank and wait for the bags to fully dissolve and the product to be mixed evenly throughout the tank before going to the next step.
- 3) Being sure to shake containers well prior to use, add water-dispersible products (such as this product, dry flowables, wettable powders, suspension concentrates or suspo-emulsions) to the tank mix.
- 4) Add water-soluble products.
- 5) Add emulsifiable concentrates such as methylated seed oil or oil concentrates.
- 6) Add water-soluble additives such as ammonium nitrate (UAN) or ammonium sulfate (AMS).
- 7) Add the remaining amount of water.

Be sure to maintain agitation constantly during mixing and application. Prior to application, the spray mixture must NOT stand unagitated for extended periods of time.

#### **Cleaning Spray Equipment**

Clean spray equipment thoroughly before and after applying this product, especially if a product with the potential to injure turfgrass was used prior to the Willowood Pyrac 2SC application.

#### **USE DIRECTIONS FOR TURFGRASS**

This product will control the following diseases in turfgrass:

Anthracnose	Bentgrass dead spot	Bermudagrass decline
Brown patch	Brown ring patch	Dollar spot*
Fairy ring	Fusarium patch	Gray leaf spot
Gray snow mold	Large patch	Leaf spot
Melting out	Necrotic ring spot	Pink patch
Pink snow mold	Powdery mildew	Pythium blight
Pythium root dysfunction	Rapid blight	Red thread
Rhizoctonia leaf or sheath spot	Rust	Summer patch
Take-all patch	Yellow tuft (downy mildew)	

<sup>\*</sup> Suppression only

Willowood Pyrac 2SC will significantly suppress but not control dollar spot completely, so if pressure from dollar spot is moderate to severe when controlling other diseases, this product should be tank mixed with another nonstrobilurin fungicide that is effective against dollar spot.

If treating for pink and/or gray snow mold, this product should be tank mixed with another nonstrobilurin fungicide that is effective against these molds for best results.

#### **Uses and Tolerances for Turfgrass**

Because the manufacture nor the seller cannot test this product on all possible combinations of turfgrass species, application techniques and tank mix partners, safety for all turfgrass uses cannot be assured. It is the user's responsibility to determine if this product may be used safely prior to widespread use. A test application should be made under the same conditions that are expected for the actual application, and the test area monitored for a period of 14-days post application for signs of any adverse effects.

#### **Use Rates**

Apply using the rates specified in the TURFGRASS APPLICATION RATES AND INTERVALS section in 2-4 gallons of water per 1000 square feet (87-174 gallons of water per acre). When applying to sod farms aerially, use no less than 10 gallons of spray solution per acre.

#### **Use Restrictions and Limitations for Turfgrass**

- Do NOT apply by air in New York State.
- Do NOT apply by air for turfgrass uses other than to sod farms.
- Do NOT apply more than 4.4 fluid ounces of this product per 1000 square feet per year (1.5 gallons or 13.37 pounds per acre per year).
- Do NOT apply to crops intended for food or feed use.
- Do NOT apply to turfgrass using any type of irrigation equipment (except on sod farms).

# **TURFGRASS APPLICATION RATES AND INTERVALS**

# Anthracnose (Colletotrichum graminicola)

Use F	Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Make applications preventively commencing when conditions are conducive for disease and prior to disease development.

# Bentgrass Dead Spot (Ophiosphaerella agrostis)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Make applications preventively commencing when conditions are conducive for disease and prior to disease development.

## Bermudagrass Decline (Gaeumannomyces graminis var. graminis)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	N/A	This product combined with cultural practices that discourage disease development (such as core aeration, appropriate fertilization and raised mowing heights) will assist in controlling Bermudagrass decline. Apply the listed amount in 4 gallons of water per 1000 square feet twice in a year. The first application should be made post-greenup in the spring and the second when air temperatures are above 80°F and humidity is 75% or more in the fall.

# Brown Patch (Rhizoctonia solani)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Make application when conditions are favorable for disease development.

## Brown Ring Patch (Rhizoctonia circinata var. circinata aka 'Waitea patch')

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	14 – 28	Because application made after disease is established will not control this disease, apply when early yellow ring development is observed. After application, symptoms may take up to 2-3 weeks to disappear. Apply the listed amount in 2-4 gallons of spray per 1000 square feet and add an appropriate soil wetting agent to the spray mix. The turf should be irrigated briefly after application in order for the fungicide to penetrate the thatch. A repeat application may be required after 28 days.

## **Dollar Spot** (Sclerotinia homoeocarpa) (Suppression only)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	14	This product will significantly suppress but not completely control dollar spot. If dollar spot is moderately to severely present when treating for other diseases, this product should be tank mixed with a different fungicide effective against dollar spot such as iprodione. Applications should be made preventively commencing when conditions are conducive for disease and prior to disease development.

# Fairy Ring (various Basidiomycete fungi)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	28	Make application as soon as possible after fairy ring development is observed. After application, symptoms may take up to 2-3 weeks to disappear. Apply the listed amount in 2-4 gallons of spray per 1000 square feet and add an appropriate soil wetting agent to the spray mix. The turf should be irrigated briefly after application in order for the fungicide to penetrate the thatch. A repeat application may be required after 28 days.

# Fusarium Patch (Microdochium nivale)

Use F	Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development. When treating for this disease, if snow cover is not present this product should be used preventively.

## Gray Leaf Spot (Pyricularia grisea)

Use F	Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
per 1000 feet	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

## **Gray Snow Mold** (*Typhula incarnata*)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
			Make 2 applications in late fall just prior to snow cover, 14-28 days apart. For best results prior to extended
0.7	30.5	14-28	periods of snow cover, apply 0.55-0.70 fluid ounces of this product per 1000 square feet of treatment area tank mixed with a non-strobilurin fungicide such as iprodione.

# Large Patch or Brown Patch of warm season turfgrasses (Rhizoctonia solani)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	This product will control brown patch in centipedegrass, kikuyugrass, seashore paspalum, St. Augustinegrass and zoysiagrass (zoysia patch). Make a minimum of two applications sequentially before or immediately after initial symptoms are observed in the fall. It may be necessary to reapply in the spring once greenup commences.

## **Leaf Spot** (*Bipolaris* spp., *Drechslera* spp., and *Exserohilum* spp.)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results, applications of this product should be rotated with other fungicides effective against Leaf Spot such as iprodione.

# **Melting Out** (*Drechslera poae*)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results, applications of this product should be rotated with other fungicides effective against Melting Out including vinclozolin.

## Necrotic Ring Spot (Leptosphaeria korrae)

Use F	Use Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
per 1000 feet	Acre	(days)	Instructions
0.7	30.5	14-28	This product will assist in controlling necrotic ring spot if tank mixed with a non-strobilurin fungicide such as thiophanate methyl, chlorothalonil or triticonazole fungicide. Apply in the fall, winter or spring when conditions promote disease formation.

## Pink Patch (Limonomyces roseipellis)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4.0.7	17.4 – 30.5	14 – 28	Make application when conditions are favorable for
0.4 - 0.7	17.4 - 30.3	14 – 20	disease development.

# Pink Snow Mold (Microdochium nivale)

Use F	Use Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.7	30.5	14-28	Apply 2 applications in late fall just prior to snow cover, 14-28 days apart. For best results prior to extended periods of snow cover, apply 0.55-0.70 fluid ounces of this product per 1000 square feet of treatment area tank mixed with a non-strobilurin fungicide such as iprodione.

# Powdery Mildew (Blumeria graminis)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per Acre	Interval (days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

## **Pythium Blight** (*Pythium aphanidermatum, Pythium* spp.)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	10 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. If this disease is already present and pressure is severe, this product should be tank mixed with a non-strobilurin fungicide labeled for use against Pythium Blight.

# **Pythium Root Dysfunction** (*Pythium volutum, Pythium* spp.)

Use F	Use Rate		
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.7	30.5	14 – 28	To control this disease, apply this product preventively when environmental conditions favor disease development and prior to seeing symptoms. Once this product is applied, the next application should be of another fungicide effective against Pythium Root Dysfunction. After application, irrigate the treated area.

## Rapid Blight (Labyrinthula terrestris)

Use Rate			
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are conducive for disease and prior to disease development. If using the lower application rate listed, the shorter application interval should be used.

## Red Thread (Laetisaria fuciformis)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4.07	17.4 – 30.5	14 – 28	Make application when conditions are favorable for
0.4 - 0.7	17.4 - 30.3	14 – 20	disease development.

## Rhizoctonia leaf or sheath spot (R. oryzae, R. zea)

Use F	Use Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	This disease may occur on both cool-season and warm- season turfgrass when conditions are warm and humid, and symptoms include brown (necrotic) rings and dry spots. Apply preventively commencing when conditions are conducive for disease and prior to disease development, and addition of a soil-wetting agent may be helpful.

# Rust (Puccinia spp. And Uromyces spp.)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Make application when conditions are favorable for disease development.

## **Summer Patch** (Magnaporthe poae)

Use Rate			
Fluid ounces per 1000 feet <sup>2</sup>	Fluid ounces per	Application Interval	
	Acre	(days)	Instructions
0.4 – 0.7	17.4 – 30.5	14 – 28	Apply preventively in the spring once soil temperatures at a depth of 2" reach 60-65°F, or as recommended by local experts.

## **Take-all Patch (***Gaeumannomyces graminis* var. *avenae*)

Use Rate			
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.7	30.5	28	Apply preventively commencing when conditions are conducive for disease and prior to disease development. Two applications 28 days apart should be made in the spring and in the fall.

# Yellow Tuft / Downy Mildew (Sclerophthora)

Use F	Rate		
Fluid ounces	Fluid	Application	
per 1000 feet <sup>2</sup>	ounces per	Interval	
	Acre	(days)	Instructions
0.4.0.7	17.4 – 30.5	14 – 28	Apply preventively commencing when conditions are
0.4 - 0.7	17.4 - 30.3	14 – 20	conducive for disease and prior to disease development.

# **TURFGRASS DILUTIONS**

At a use rate of 0.40 fluid ounces per 1000 square feet:

Gallons per 1000 square feet of spray volume	Fluid ounces per 100 gallons of spray solution
2	20.00
3	13.33
4	10.00

At a use rate of 0.55 fluid ounces per 1000 square feet:

Gallons per 1000 square	Fluid ounces per 100
feet of spray volume	gallons of spray solution
2	27.50
3	18.33
4	13.75

At a use rate of 0.70 fluid ounces per 1000 square feet:

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	Gallons per 1000 square	Fluid ounces per 100
	feet of spray volume	gallons of spray solution
	2	35.00
Г	3	23.33
	4	17.50

# USE DIRECTIONS FOR PRODUCTION ORNAMENTALS AND LANDSCAPE MAINTENANCE

This product is NOT REGISTERED FOR USE ON ORNAMENTAL PLANTS IN CALIFORNIA.

This product will control the following aerial, crown rot and foliar diseases in ornamental plants and flower bulbs:

Anthracnose Downy Mildews Powdery Mildews Scab

Blights Leaf Spots Rust

Apply before disease has developed and continued at the intervals specified below being sure to follow appropriate guidelines for resistance management. Control may not be achieved if used for eradication or as a late curative treatment, and this product is most effective when used as part of a preventive disease management program.

#### **Uses and Tolerances**

Because the manufacture nor the seller cannot test this product on all possible combinations of plant species/cultivars, application techniques and tank mix partners, safety for all ornamental uses cannot be assured. Refer to the table at the end of this label for a list of plant species that have been tested with Willowood Pyrac 2SC. It is the user's responsibility to determine if this product may be used safely prior to widespread use. A test application should be made under the same conditions that are expected for the actual application, and the test plants monitored for a period of 14-days post application for signs of any adverse effects.

#### **Use with Additives**

All of the following directions are made based on experience without additives being used since they are not usually needed when applying this product. Only surfactants approved for use with Willowood Pyrac 2SC when applied to ornamental should be used in tank mixes. Prior to widespread use, a test application should be made using the desired tank mix and the test plants monitored for a period of 14-days post application for signs of any adverse effects. Do NOT use organosilicone based adjuvants with this product or plant injury may result.

#### **Use Restrictions and Limitations for Ornamentals**

- Do NOT apply to crops intended for food or feed use.
- Do NOT apply by air in New York State.
- To minimize the potential of resistance to the product being developed, do NOT make more than two sequential applications of this product before alternating to a fungicide with a different mode of action that is labeled for this use.
- Do NOT apply this product to plants that have been damaged by prior applications of a pesticide.
- When applying outdoors, do NOT apply more 1.5 gallons or 13.37 pounds of this product per acre per year.
- When applying in greenhouses, do NOT make more than 8 applications of this product per year.
- This product may be applied by air ONLY to production ornamentals including forest and conifer nurseries, flower bulb production and field and container nurseries.
- Do NOT apply to greenhouse vegetables intended for crop production or for transplant to outdoor uses.
- Direct application of, or spray drift from, this product to Wintercreeper (*Euonymus vegetus*) and Nine bark (*Physocarpus opulifolius*) may result in injury to the plant.
- Direct application of, or spray drift from, this product to the following grape varieties may result in injury to the plants: Concord, Fredonia, Niagara, Noiret (NY73.0136.17), Rougeon, Steuben and Worden.

• If applied to impatiens (*Impatiens* spp.) and petunia (*Petunia* spp.) when flowering, discoloration of the flowers may occur.

#### APPLICATION DIRECTIONS FOR ORNAMENTALS

Apply this product by aerial equipment, ground sprayer or sprinkler and drip irrigation systems using the rates, timing and instructions below.

#### Foliar- and Crown-Directed Applications

For light to moderate disease pressure, apply using the lower rates and a 7-day interval or the higher rates and a 14-day interval. When conditions exist that promote disease formation, apply at the higher rates listed on a 7-day interval. Apply as a broadcast or banded-spray to the foliage or crown of the plant until runoff using sufficient water to ensure complete coverage. For best results, complete and thorough coverage of the crown, foliage and base of the plant, as well as the growth media surrounding the crown, is necessary. Repeat applications at the intervals specified in these instructions for as long as necessary, being sure to alternate with other fungicides as instructed in order to prevent resistance development.

#### **Drench Applications**

To control certain crown, seedling and soilborne diseases in production ornamentals, apply this product as a drench treatment being sure to obtain thorough coverage and wetting of all parts of the plant as well as the surrounding growth media for best results. Repeat applications at the intervals specified in these instructions for as long as necessary, being sure to alternate with other fungicides as instructed in order to prevent resistance development. Refer to the Drench Treatment Rates to Control Specific Soilborne Diseases for specific instructions.

Because control may not be sufficient, do NOT apply this product after disease symptoms are observed.

# ORNAMENTAL APPLICATION RATES AND INTERVALS FOR FOLIAR AND CROWN DISEASES

**Anthracnose** (Colletotrichum spp., Gloeosporium spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

#### **Blossom Blight** (Ophiosphaerella agrostis)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

#### Crown and Basal Rot (Fusarium spp., Phytophthora spp., Pythium spp., Rhizoctonia solani)

Use Rate in fluid ounces per	Application Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results the crown and base of the plant as well as the potting media or soil around the crown must be completely covered by the application. For herbaceous plants use 6.1-9.1 fluid ounces, and for woody ornamentals use 6.1-12.2 fluid ounces.

## Downy Mildew (Peronospora spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
0.0.04	7 – 14	Apply preventively commencing when conditions are conducive for
3.0 – 6.1	1 – 14	disease and prior to disease development.

## **Leaf Spot** (Alternaria spp., Cercospora spp., Mycosphaerella spp., Myrothecium spp., Phyllosticta spp.)

Use Rate in fluid ounces per	Application Interval	Instructions
100 gallons	(days)*	Instructions
1.5 – 6.1	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

## **Leaf Spot** (*Didymellina* spp., *Ramularia* spp., *Septoria* spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
3.0 – 6.1	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

#### **Leaf Spot** (*Diplocarpon rosae, Entomosporium* spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. When controlling D. rosae, for best results tank mix with a fungicide containing triazole or mancozeb.

# Phytophthora Aerial Blight and Pythium (Phytophthora spp., Pythium spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results the crown and base of the plant as well as the potting media or soil around the crown must be completely covered by the application. For herbaceous plants use 6.1-9.1 fluid ounces, and for woody ornamentals use 6.1-12.2 fluid ounces.

## **Sudden Oak Death (SOD)** (*Phytophthora ramorum*)

Use Rate in fluid ounces per 100 gallons	Application Interval (days)*	Instructions
12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results the crown and base of the plant as well as the potting media or soil around the crown must be completely covered by the application. For this disease, apply preventively as a foliar spray being sure to completely cover all stems and foliage. For plants that have leaves that are hard to wet, a wetting agent (spreader-sticker) is recommended. Do NOT apply this product after the appearance of disease. Following two applications of Willowood Pyrac 2SC, rotate to dimethomorph or mefenoxam containing products.

**Powdery Mildew** (*Erysiphe* sp., *Microsphaera* sp., *Oidium* sp., *Phyllactinia* sp., *Podosphaera* sp., *Sphaerotheca* sp., *Uncinula* sp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
3.0 – 6.1	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

#### Rhizoctonia Blight (Rhizoctonia solani)

Use Rate in fluid ounces per	Application Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development. For best results the crown and base of the plant as well as the potting media or soil around the crown must be completely covered by the application. For herbaceous plants use 6.1-9.1 fluid ounces, and for woody ornamentals use 6.1-12.2 fluid ounces.

#### Rot - Botrytis Rot (Botrytis cinerea, Botrytis Tulipae), Sclerotinia Rot (Sclerotinia spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
6.1 – 12.2	7 – 14	Applications should be made preventively commencing when conditions are conducive for disease and prior to disease development.

## Rust (Puccinia spp.)

Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
3.0 – 6.1	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.

#### Rust (Gymnosporangium spp., Melamspora spp.)

Han Data in	A	
Use Rate in	Application	
fluid ounces per	Interval	
100 gallons	(days)*	Instructions
		Apply preventively commencing when conditions are conducive for
6.1 – 12.2	7 – 14	disease and prior to disease development. Use higher rates on
		Gymnosporangium spp. And Melamspora spp.

## Scab (Venturia spp., Cladosporium spp.)

Use Rate in	Application		
fluid ounces per	Interval		
100 gallons	(days)*	Instructions	
3.0 – 6.1	7 – 14	Apply preventively commencing when conditions are conducive for disease and prior to disease development.	

<sup>\*</sup>Use the listed interval when moderate-to-high disease pressure conditions are expected. If disease pressure is non-existent or conditions are unfavorable for infection, the interval may be extended up to 28 days.

# DRENCH TREATMENT RATES TO CONTROL SPECIFIED SOILBORNE DISEASE

Soilborne disease (Fusarium spp., Phytophthora spp., Pythium spp., Rhizoctonia solani)

Use Rate in	
fluid ounces per	
100 gallons	Instructions
6.1 – 12.2	Apply as a preventative treatment. For best results the crown and base of the plant as well as the potting media or soil around the crown must be completely covered by the application. Use 6.1 to 12.2 fluid ounces per 100 gallons of this product as a soil drench. Reapply as needed within 7 to 21 days.  6-inch pot suggested drench volume: 200-250 ml per pot.

## ORNAMENTAL DILUTIONS

Use Rate	Spray Volume	Spray Volume	Spray Volume
Fluid ounces of product	(ml of product	(ml of product	(ml of product
per 100 gallons	per 4 gallons)	per 3 gallons)	per 2 gallons)
3.0	3.58	2.66	1.77
6.1	7.22	5.41	3.61
9.1	10.77	8.07	5.38
12.2	14.43	10.82	7.22

# Willowood Pyrac 2SC Tolerant Plant Species

Plants in this table have been found to be tolerant to Willowood Pyrac 2SC when it is applied according to the use instructions stated in this label.

African violet S	Dalata avilla la sa autha	•	Scientific Name
	Saintpaulia ionantha	Cherry, flowering,	Prunus serrulata
		Kwanzan	'Kwanzan'
Ajuga A	ljuga reptans	Cherry, flowering, Mt.	Prunus serrulata 'Mt. Fuji'
		Fuji, (Shirotae)	(Shirotae)
Almond, nonbearing P	Prunus dulcis	Chestnut, American	Castanea dentata
	Noe vera	China, rose	Hibiscus sp.
Apple, nonbearing N	<i>llalus</i> sp.	Chinquapin	Cantanea pumila
Apricot, nonbearing P	Prunus armeniaca	Chrysanthemum	Chrysanthemum sp.
	<i>huja</i> sp.	Citrus, nonbearing	Citrus spp.
	Ardisia sp.	Columbine	Aquilegia sp.
Arrowwood V	/iburnum dentatum	Cone flower	Rudbeckia hirta
· · · · · · · · · · · · · · · · · · ·	raxinus ennsylvanica	Coral bells	Heuchera sp.
	ospermum sp.	Cortaderia	Cortaderia sp.
	Asparagus densiflorus	Cotoneaster, cranberry	Cotoneaster apiculatus
	Astilbe sp.	Crabapple Crabapple	Malus sp.
	Aucuba japonica	Cranberry, American	Vaccinium macrocarpon
	Geum chiloense	Crape myrtle	Lagerstroemia indica
	Rhododendron sp.	Cryptomeria	Cryptomeria sp.
	Sypsophila repens	Cupid's dart	Catananche cerulean
	Centaurea montana	Cyclamen	Cyclamen sp.
	Platycodon	Daffodil	Narcissus
	randiflorus	Danodii	pseudonarcissus
Ŭ	lippeastrum vittatum	Dahlia	Dahlia sp.
,	Berberis thunbergii	Daylily	Hemerocallis sp.
	Aurinia saxatillis	Deutzia	Deutzia sp.
	Ayrica cerifera	Dietes	Dietes vegeta
	Monardia didyma	Dogwood	Cornus sp.
	Begonia x	Douglas Fir	Pseudotsuga sp.
	uperflorenscultorum	Dusty Miller	Centaurea cineraria
	Campanula glomerata	Echinacea	Echinacea purpurea
	/accinium myrtillus	Elaeagnus, Russian	Elaeagnus angustifolia
	,	olive	
	Rudbeckia sp.	Elder, water	Sambucus sp.
	Gaillardia grandiflora	Euonymus	Euonymus alata
	iriope sp.	Fern, Kimberly Queen	Nephrolepis obliterata
Boxwood, Japanese, B	Buxus – B. japonica, B.	Fern, wood	Dryopteris sp.
common s	empervirens	Forsythia	Forsythia sp.
Brachycome, blue B	Brachycome sp.	Foxglove	Digitalis sp.
Bridal wreath S	Spiraea vanhouttei	Gardenia	Gardenia jasminoides
Butterfly bush B	Buddleia sp.	Gayfeather	Liatris sp.
Caladium C	Caladium sp.	Gazania	Gazania sp.
Camellia, Japanese C	Camellia japonica	Geranium	Pelargonium sp.
	Canna x generalis	Gerbera	Gerbera sp.
	Dianthus caryophyllus	Gladiolus	Gladiolus sp.
	Cryptomeria japonica	Globe thistle	Echinops ritro
	Chamaecyparis	Goldbell tree, Chinese	Forsythia viridissima
	nisifera		

Common Name	Scientific Name	Common Name	Scientific Name
Cherry, nonbearing	Prunus avium, P.	Grape, European, non-	Vitis vinifera
	cerasus	bearing	
Hawthorn, Indian	Rhaphiolepis sp.	Myrica cerifera	Myrica cerifera
Hazel	Corylopsis sp.	Myrtle	Myrtus sp.
Heavenly bamboo	Nandina domestica	Narcissus	Narcissus
			pseudonarcissus
Hemlock, Canada	Tsuga Canadensis	Nectarine, nonbearing	Prunus persica
Holly, Chinese,	llex – I. cornuta, I.	Oak, bur, red	Quercus sp. – Q.
Japanese, Yaupon	crenata, I. vomitoria		macrocarpa, Q. rubra
Hosta	Hosta sp.	Oleander	Nerium oleander
Hydrangea	Hydrangea sp.	Olive, fragrant tea	Osmanthus fragrans
Impatiens*, New	Impatiens spp.	Pansy	<i>Viola</i> sp.
Guinea, balsam, (nonflowering)	(nonflowering)		
Iris	Iris sp.	Peach, nonbearing	Prunus persica
Ivy, common,	Hedera sp.	Pear, nonbearing	Pyrus sp.
California, English	1104014 0p1	Pecan, nonbearing	Carya illinoensis
Jasmine, star	Trachelospermum	Periwinkle, Madagascar	Catharanthus roseus
Jessamine	jasminoides Gelsemium sempervirens	Periwinkle, perennial	Vinca major, V. minor
Juniper, creeping,	Juniperus – J.	Petunia*, (nonflowering)	Petunia spp.
Chinese	horizontalis, J.	r etarila , (riorillowerilig)	(nonflowering)
Officoc	chinensis		(Hormowering)
Lamb's ear	Stachys byzantine	Phlox	Phlox sp.
Lantana	Lantana	Pine, black, white, blue,	Pinus – P. thunbergiana,
	montevidensis	Mugo	P. strobes, P. pinea, P.
			mugo
Larkspur	Delphinium elatum	Pine, European	Abies alba
Leopard's bane	Doronicum cordatum	Pistachio, nonbearing	Pistacia vera
Leucophyllum	Leucophyllum sp.	Pittosporum, Japanese	Pittosporum tobira
Lilac, common	Syringa sp.	Plum, nonbearing	Prunus domestica
Lily	Lilium sp.	Plum, purple leaf	Prunus cerasifera
Liriope, variegated	Liriope muscari variegata	Poinsettia	Euphorbia pulcherrima
Lisianthus	Eustoma grandiflora	Poplar	Populus trichocarpa, P. deltoides
Lobelia	Lobelia sp.	Primrose	Oenothera speciosa
Loropetalum	Loropetalum chinense	Privet	Ligustrum sp.
Lupine	Lupinus spp.	Purple ornamental	Pennisetum
~p~~~	-7	grass	alopecuroides
Magnolia, star, saucer	Magnolia – M. stellata,	Purslane	Portulaca sp.
<b>5</b> , , ,	M. soulangiana		'
Maidenhair tree	Gingko biloba	Quince	Chaenomeles sp.
Mandevilla	Mandevilla sp.	Ranunculus	Ranunculus sp.
Maple, Amur,	Acer – A. ginnala,	Rhaphiolepis	Rhaphiolepis sp.
Japanese, Norway,	A. palmatum,	-1 -1-1-1	
sugar, soft, negundo	A. platanoides,		
J , - , - gansas	A. saccharum,		
	A. saccharinum,	i	İ

Common Name	Scientific Name	Common Name	Scientific Name
	A. negundo	Redbud	Cercis sp.
Marigold	Tagetes sp.	Redtip photinia	Photinia fraseri
Maudlin, blue	Ageratum	Redvein enkianthus	Enkianthus campanulatus
	houstonianum		
Meadow sage	Salvia x superb	Rhododendron	Rhododendron sp.
Monkey grass	Ophiopogon japonicus	Rock cress	Arabis cauncasica
Morningglory	Ipomoea sp.	Rose	Rosa sp.
Moss, rose	Portulaca grandiflora	Rose mallow	Hibiscus moscheutos
Mountain laurel	Kalmia latifolia	Ruellia	Ruellia sp.
Russian arborvitae	Microbiota decussata	Sweetspire	Itea sp.
Sage, silverado	Leucophyllum sp.	Sweet William	Dianthus barbatus
Sago	Cycas revoluta	Thrift	Armeria maritima
Salvia	Salvia coccinea	Tick seed	Coreopsis sp.
Scabious, sweet	Scabiosa atropurpurea	Tulip	Tulipa sp.
Sedum	Sedum sp.	Verbena	Verbena sp.
Snapdragon	Antirrhinum sp.	Viburnum, Water elder	Viburnum sp.
Speedwell	Veronica spicata	Vinca, annual	Catharanthus roseus
Spindle tree, Burning bush	Euonymus sp.	Viola	Viola sp.
Spirea	Spiraea sp.	Wall germander	Teucrium chamaedrys
Spruce	Picea sp.	Walnut tree, black, common	Juglans – J. nigra, J. rigia
Spurge, Japanese	Pachysandra terminalis	Wormwood	Artemisia sp.
St. John's wort	Hypericum calycinum	Yarrow	Achillea sp.
Stonecrop	Sedum sp	7innia	Zinnia sp

Stonecrop Sedum sp. Zinnia Zinnia sp.

\*Impatiens and petunia occasionally have shown discoloration on the flowers following applications of Willowood Pyrac 2SC made directly onto the flowers. Be cautious with application of Willowood Pyrac 2SC when these species are flowering. Not all cultivars and flower colors have been evaluated. Before making applications of Willowood Pyrac 2SC on the entire area, a small area should be treated first to ensure that a phytotoxic response will not occur.

#### Plant Species NOT Tolerant to Willowood Pyrac 2SC

Do not expose these species or varieties to Willowood Pyrac 2SC.

Common Name	Scientific Name	
Grape		
Concord, Fredonia, Niagara, Noiret	Vitis sp.	
(NY73.0136.17) Rougeon, Steuben, and Worden		
Impatiens – flowering	Impatiens spp.	
Nine bark	Physocarpus opulifolius	
Petunia – <b>flowering</b>	Petunia spp.	
Wintercreeper	Euonymus vegetus	

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original containers only. Keep container closed when not in use. Do not store near food or feed.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### **CONTAINER HANDLING:**

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration. Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

#### Steps to be taken in case material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert materials (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

#### 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 BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

[EPA approval date]