

# Axyl-Shield 2E Foliar

FUNGICIDE FOR THE CONTROL OF CERTAIN DISEASES IN VARIOUS CROPS  
CAUSED BY THE OOMYCETE CLASS OF FUNGI.

FOR USE AS A SEED TREATMENT FOR CONTROL OF SYSTEMIC DOWNY MILDEW, *PYTHIUM* SEED ROT,  
*PYTHIUM* DAMPING-OFF, AND EARLY SEASON *PHYTOPHTHORA* DISEASES OF CERTAIN CROPS.  
FOR THE CONTROL OF CERTAIN DISEASES IN CONIFERS, NON-BEARING CITRUS, NON-BEARING  
DECIDUOUS FRUITS AND NUTS, ORNAMENTALS, AND TURF.  
NOT FOR RESIDENTIAL USE

**ACTIVE INGREDIENT:**

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester . . . . . 23.0%

**OTHER INGREDIENTS:** . . . . . 77.0%

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

Contains Petroleum Distillates.

Contains 2 lbs. active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**DANGER/PELIGRO**



**POISON/VENENO**

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

See inside booklet for complete First Aid, Precautionary Statements, Directions For Use, and  
Limitation of Warranty and Liability.

**Manufactured For:**

**Sharda USA LLC**

7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

EPA Reg. No. 83529-42  
EPA Est. No. 70815-GA-001

**Net Contents: 1 Gallon**

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye 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 eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <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>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <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 further treatment advice.</li> </ul>
<p><b>NOTE TO PHYSICIAN:</b> Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Consideration should be given to gastric lavage with an endotracheal tube in place. A slurry of activated charcoal in water may be left in stomach. Give a saline laxative followed by symptomatic and supportive care. Probable mucosal damage may contraindicate the use of gastric lavage.</p>	
<p><b>EMERGENCY TELEPHONE NUMBERS:</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR 24- HOUR EMERGENCY MEDICAL ASSISTANCE CALL: <b>1-800-222-1222</b>. FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC <b>1-800-424-9300</b>.</p>	

## **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER/PELIGRO**

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. Avoid contact with skin. Do not get in eyes or on clothing. Wear goggles, face shield, or safety glasses. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate or Viton
- Shoes plus socks
- Protective eyewear such as goggles, face shield or safety glasses

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

#### **Engineering Control 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**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

### **GROUNDWATER ADVISORY STATEMENT**

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

### **PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

### **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.

Maximum usage when applying both metalaxyl and mefenoxam containing products to the same crop within the same season: Do not apply more than the maximum seasonal total for the active ingredient as stated on the label of the product containing the lowest seasonal total on that crop.

### AGRICULTURAL USE REQUIREMENTS

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

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

**For Turf & Ornamental: Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. Exception:** If the product is soil-incorporated, or applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated. There is no restricted-entry interval (REI) requirement following soil injection, soil incorporated, or a soil drench application to ornamentals.

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

- Coveralls
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear such as goggles, face shield or safety glasses

### NON-AGRICULTURAL USE REQUIREMENTS

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

**Do not enter or allow others or pets to enter the treated area until sprays have dried.**

**For Turf & Ornamental:** Do not enter treated areas without footwear until sprays have dried.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND RESTRICTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.**

### USE INFORMATION

**Axyl-Shield 2E Foliar** is a systemic fungicide for use on selected crops to control certain diseases caused by members of the Oomycete class of fungi. Other fungicides must be used to control diseases incited by other classes of fungi.

**DO NOT USE THIS PRODUCT IN FOLIAR APPLICATIONS UNLESS SPECIFIED ON THIS LABEL OR IN SOLUTIONS USED TO DIP PLANTS.**

**Resistance Management: Axyl-Shield 2E Foliar** is a systemic fungicide with a specific mode of action and can be subject to development of insensitive strains of fungi. Insensitivity to this product cannot be predicted. Therefore, Sharda USA LLC does not assume any liability for crop damage resulting from insensitive strains of fungi. If treatment of listed crops is not effective following the use of **Axyl-Shield 2E Foliar** as instructed on this label, an insensitive strain of fungi could be the reason. If the treatment is ineffective due to the presence of an **Axyl-Shield 2E Foliar** insensitive strain of fungi, neither **Axyl-Shield 2E Foliar** nor any other fungicide with similar action will effectively control that disease. If insensitivity occurs, other types of suitable fungicides should be used. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance on your particular crop and disease control situation.

Do not make foliar applications to field grown tobacco or other crops unless specified as increased insensitivity can occur.

**THIS LABEL IS FOR FIELD USE ONLY AND IS NOT REGISTERED FOR USE ON RESIDENTIAL AREAS, TRANSPLANT TRAYS, GREENHOUSES, LATH HOUSES, FLOAT HOUSES, HYDROPONIC PRODUCTION, OR IN BEDDING PLANT STRUCTURES.**

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Where rate ranges are specified on this label, use the higher rate within the specified rate range when heavy disease pressure is expected and the lower rate within the specified rate range when disease pressure is expected to be light unless otherwise noted.

**ATTENTION:** DURING EXTENDED INFECTION PERIODS, ADDITIONAL FUNGICIDE APPLICATIONS BEYOND THE NUMBER OF APPLICATIONS ALLOWED BY THIS LABEL MAY BE NEEDED. DURING EXTENDED INFECTION PERIODS, USE ANOTHER FUNGICIDE REGISTERED FOR THE CROP/DISEASE APPEARING ON THIS LABEL.

Conditions conducive to extension of infection periods include: (1) a cool and wet environment for *Pythium* seeding disease, (2) long growing seasons, (3) a cool and humid environment for downy mildew, and (4) use of susceptible varieties.

### MIXING INSTRUCTIONS

1. Add 1/4 to 1/2 of the required amount of water to the spray tank.
2. Add the proper amount of **Axyl-Shield 2E Foliar**.
3. Add the rest of the water.

When tank mixing other products with **Axyl-Shield 2E Foliar**, follow the proper sequence of adding products to the spray tank. Add wettable powders or water dispersible granules first, then flowable products with emulsifiable concentrates, such as **Axyl-Shield 2E Foliar**, added last. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

**Axyl-Shield 2E Foliar** is usually compatible with Balan, Bravo, Di-Syston, Dithane M-22, Dithane M-45, Nemaicur, D.z.n., Furadan, Lorsban, Manzate, Manzate 200, Mocap, Mocap Plus 4-2EC, Terraclor 2E, Terraclor 75W, and Tillam.

To assure the compatibility of **Axyl-Shield 2E Foliar** with these and other products, pour the products into a small container of water in the correct proportions. Mix thoroughly and let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

**BEFORE TANK MIXING AXYL-SHIELD 2E FOLIAR WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF AXYL-SHIELD 2E FOLIAR.**

### APPLICATION INSTRUCTIONS

Apply **Axyl-Shield 2E Foliar** by ground or air in sufficient water or liquid fertilizer to provide uniform coverage of the soil surface. Apply in a minimum of 20 gals. per acre for ground applications and 5 gals. per acre by air. Refer to the specific crop directions for use for application instructions.

For banded applications, the area refers to the area covered by the band, not total cropland area planted. Some row-crop instructions are based on treating in-the-row--these rates are generally specified as amount (i.e., fl. oz.) of product per certain row length (i.e., 1,000 ft.). Others express rates as amount per treated acre which means the total area treated with the pesticide. If rates are expressed as amount per treated acre and banded applications are used, the amount of pesticide used per acre will be proportionately less. Use the formula below to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre of crop when banded applications are made.

Calculate the amount of **Axyl-Shield 2E Foliar** needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

### Application Through Irrigation Systems

**Axyl-Shield 2E Foliar** alone or in combination with other pesticides which are registered for application through irrigation systems, may be applied through irrigation systems. Apply this product through center pivot, solid set, hand move, moving wheel, micro-sprinkler or drip irrigation systems. **Do not**

apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts. Do not connect any irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety device for the public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **Operating Instructions**

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
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.

### **Application Instructions**

Apply **Axyl-Shield 2E Foliar** on the schedule specified in the specific crop use instructions, not according to the irrigation schedule.

**Axyl-Shield 2E Foliar** has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses EXCEPT on avocados and citrus. The following calibration and application techniques are provided for reference, **and do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment**. Check the state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

**NOTE:** Do not inject **Axyl-Shield 2E Foliar** at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part **Axyl-Shield 2E Foliar** in the mix tank. **Axyl-Shield 2E Foliar** is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used, but should be replaced once a year. Do not use Viton, Buna-N, Neoprene, or PVC seals.

### **Center Pivot Irrigation Equipment**

**NOTE:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating **Axyl-Shield 2E Foliar** through center pivot irrigation systems because of non-uniform application. (3) Plug the first nozzle closest to well head to protect water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 1/2 to 1 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80 to 95% of the manufacturer's rated capacity.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of **Axyl-Shield 2E Foliar** required to treat the area covered by the irrigation system.
5. Add the required amount of **Axyl-Shield 2E Foliar** and sufficient water to meet the injection time requirements to the solution tank.
6. Make sure the system is fully charged with water before starting injection of **Axyl-Shield 2E Foliar** solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant solution tank agitation during the injection period.
8. Continue to operate the system until the **Axyl-Shield 2E Foliar** solution has cleared the sprinkler head.

### **Solid Set, Hand Move and Moving Wheel Irrigation Equipment**

1. Determine the acreage covered by the sprinklers.

2. Fill injector solution tank with water and adjust flow rate to use the contents over 20- to 30-minute interval.
3. Determine the amount of **Axyl-Shield 2E Foliar** required to treat the area covered by the irrigation system.
4. Add the required amount of **Axyl-Shield 2E Foliar** into the same quantity of water used to calibrate the injection period.
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject **Axyl-Shield 2E Foliar** at the end of the irrigation cycle in 1/2 to 1 inch of water or as a separate application to maximize the effectiveness of the fungicide.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the **Axyl-Shield 2E Foliar** solution has cleared the last sprinkler head.

### Micro Sprinkler or Drip Irrigation Systems Use Instructions

1. Calibrate each run of the irrigation system separately to determine the amount of time it takes water to move through the system, and to make sure all emitters in the system are putting out the same amount of water.
2. Use only pressure injection or venturi equipment.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitter or drip tubes closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the **Axyl-Shield 2E Foliar** in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injector rate.
6. If a soluble fertilizer is used, measure the time intervals with a salt bridge. If a drip system is being calibrated, substitute soluble fertilizer for the **Axyl-Shield 2E Foliar** in the injector and measure the time intervals with a salt bridge.

### Step-by-Step Instructions

1. Before calibrating, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio used when mixing **Axyl-Shield 2E Foliar**.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual **Axyl-Shield 2E Foliar** application.
4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Monitor both emitters to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of **Axyl-Shield 2E Foliar**, or adjust the injector to a slower flow rate.
7. Once the system is calibrated, dilute the needed amount of **Axyl-Shield 2E Foliar** with water using a minimum of 10 parts water to 1 part **Axyl-Shield 2E Foliar**.
8. Do not begin to inject **Axyl-Shield 2E Foliar** into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the **Axyl-Shield 2E Foliar** into the system at the end of the irrigation set in 1/2 to 1 inch of irrigation water.

### ALFALFA (Including birdsfoot trefoil)

Apply **Axyl-Shield 2E Foliar** to the soil at planting to control damping-off caused by *Pythium* spp. and root rots caused by *Phytophthora* spp.

### Stand Establishment

Apply 1 to 2 pts. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water. If inter-seeding alfalfa into existing stands for renovation, apply 1 pt. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water.

If alfalfa seed was previously treated with a metalaxyl or mefenoxam seed treatment product, apply **Axyl-Shield 2E Foliar** at 1 pt. per acre at planting. Use 2 pts. per acre in areas where disease pressure is heavy.

### Alfalfa Restrictions:

- Do not feed green forage or cut hay for 60 days following application.

## APPLES (Bearing and Non-bearing Trees)

**Axyl-Shield 2E Foliar** will aid in the control of crown, collar and root rot caused by *Phytophthora* spp. when used in conjunction with good cultural practices and rootstocks that are intolerant to the disease. Make **Axyl-Shield 2E Foliar** applications before symptoms appear, especially in areas of the orchard favorable for disease development. **Axyl-Shield 2E Foliar** will not revitalize trees showing moderate to severe disease symptoms.

**Broadcast Spray or Banded Applications:** Apply 2 gals. per treated acre as a broadcast spray (6 fl. oz. per 1,000 sq. ft.) in sufficient water to obtain thorough coverage. The treated area is based on the area under the tree canopy or the area of the sprayed row. Soil surface sprays of **Axyl-Shield 2E Foliar** will not be effective until the fungicide is moved into the root zone by rainfall or irrigation. Make applications in early spring before growth starts and in the fall after harvest, but before the ground freezes.

**Drench:** Mix 1 qt. of **Axyl-Shield 2E Foliar** with 100 gals. of water. Apply the amount of diluted mixture indicated in the table below around the trunk of each tree. Make applications in early spring before growth starts and in the fall after harvest, but before the ground freezes. On new plantings, delay the first application until 2 weeks after planting.

To determine trunk diameter, measure the trunk 12 inches above the soil line.

Trunk Diameter	Qts. of Diluted Mixture Per Tree
< 1 inch	1 qt.
1 to 3 inches	2 qts.
3 to 5 inches	3 qts.
> 5 inches	4 qts.

### Apple Restrictions:

- Do not dip roots of trees in or spray bare roots with solutions containing **Axyl-Shield 2E Foliar**.
- Do not graze or feed cover crops in treated orchards.

## ASPARAGUS

**Axyl-Shield 2E Foliar** will control crown rot and spear rot caused by *Phytophthora* spp. Apply 2 qts. per acre as a broadcast spray in a minimum of 10 gals. of water over the beds.

**Cutting Beds:** Apply 30-60 days before the first cutting. For additional control, make another application just prior to harvest.

**New Plantings:** Apply after planting seedlings or after covering 1-year old crowns.

### Asparagus Restrictions:

- Do not apply **Axyl-Shield 2E Foliar** within 1 day of harvest.

## AVOCADOS

### Root Rot – *Phytophthora cinnamomi*

Begin applications at the start of the growing season or at transplanting. Make two additional applications at 3-month intervals. Applications are not needed during the winter months of November-February. **Axyl-Shield 2E Foliar** may be applied as a sleeve drench at the time of transplanting, as a soil surface spray under sprinkler irrigation systems, as a directed spray under drip emitters or injected into the irrigation water.

**Sleeve Drench:** Mix 1 fl. oz. of **Axyl-Shield 2E Foliar** with 18 gals. of water. At the time of transplanting, drench the roots inside the sleeve with 1 qt. of **Axyl-Shield 2E Foliar** solution per tree.

**NOTE:** The sleeve drench will not replace soil surface applications for long-term control of root rot.

**Sprinkler Irrigation:** Apply as a soil surface spray under the canopy of the tree in sufficient water to obtain uniform coverage. See the table below for the proper amount of **Axyl-Shield 2E Foliar** to use based on the diameter of the tree canopy. Start applications at the beginning of the growing season or at transplanting and continue at 3-month intervals.



**Drip Irrigation:** Apply the specified amount of **Axyl-Shield 2E Foliar** (see table) to the soil directly under the drip emitter at each tree. If there is more than 1 emitter per tree, distribute the total amount of **Axyl-Shield 2E Foliar** needed among the emitters.

**Injection into Irrigation Water (Sprinkler or Drip Irrigation Only):** Inject **Axyl-Shield 2E Foliar** into the irrigation water at a rate of 2 to 4 fl. oz. per 1,000 gals. (3 3/4 to 7 1/2 ppm active ingredient) at each irrigation. If **Axyl-Shield 2E Foliar** is not applied at each irrigation, use the table below to determine how much **Axyl-Shield 2E Foliar** to inject into the irrigation water. If **Axyl-Shield 2E Foliar** is used more frequently than every 3 months, adjust the rates so that no more than the specified amount is applied during each 3-month period. See the **Use Information** section of this label for further instructions and precautions when making applications through irrigation systems.

Diameter of Tree Canopy (Ft.)	Amount of Axyl-Shield 2E Foliar per 10 Trees Per 3 months
2	1/2 to 1 fl. oz.
5	3 to 6 fl. oz.
10	13 to 26 fl. oz.
15 or wider	29 to 58 fl. oz.

**NOTE:** (1) For optimum results, use **Axyl-Shield 2E Foliar** as soon as soil tests indicate the presence of *Phytophthora*. (2) For new plantings, use *Phytophthora*-resistant rot stocks with **Axyl-Shield 2E Foliar**. Mature trees in moderate to advanced stages of decline will not be cured with **Axyl-Shield 2E Foliar**.

**Avocado Restrictions:**

- Do not apply more than 6 gals. per acre of **Axyl-Shield 2E Foliar** per year.
- Do not make an application within 28 days of harvest.

**BERRIES**

**Blueberries**

**Axyl-Shield 2E Foliar** will aid in the control of root rot caused by *Phytophthora* spp. when used in conjunction with good cultural practices to minimize disease problems. **Axyl-Shield 2E Foliar** will not revitalize plants showing moderate to severe root rot symptoms.

**Established Plantings:** Apply 1 pt. per 1,000 linear ft. of row (14 1/2 pts. per acre broadcast basis) in a 3-foot band over the row before the plants start growth in the spring. One additional application can be made to coincide with periods most favorable for root rot development.

**New Plantings:** Apply 2 gals. per acre broadcast to the soil at or after the time of planting. Make one or two additional applications to coincide with periods most favorable for root rot development. For banded applications use an 18-inch band over the row. Use the formula in the **Use Information** section of the label to calculate the amount needed per acre.

**Berries Restriction:**

Do not apply more than 3.6 gals. per acre broadcast on new plantings during the 12 months before bearing harvestable fruit.

**Cranberries**

Make a soil application of **Axyl-Shield 2E Foliar** to control of *Phytophthora* root rot of cranberries caused by *Phytophthora* spp.

Apply **Axyl-Shield 2E Foliar** at 4 to 7 pts. per acre as a broadcast soil application for control of *Phytophthora* root rot of cranberries. Make three applications per crop season. Make the first application in the fall after harvest. Make the second application in the spring. Make the third application up to but no later than 45 days before harvest.

Apply **Axyl-Shield 2E Foliar** using ground or chemigation equipment. Use sufficient water to allow movement of Axyl-Shield 2E Foliar into the root zone. Use a minimum of 20 gals. of water per acre when applying by ground equipment. Refer to the **Application Through Irrigation Systems** section of the label for instructions and precautions when making applications through irrigation systems.

### **Cranberry Restrictions:**

- Do not apply **Axyl-Shield 2E Foliar** to cranberries by air.
- Do not apply within 45 days before harvest.
- Do not apply more than 21 pts. per acre per growing season.

### **Raspberries**

**Axyl-Shield 2E Foliar** is a soil-applied systemic fungicide for use in the control of *Phytophthora* root rot.

Apply 1 pt. per 1,000 linear ft. or row to the soil surface in a 3-foot band over the row. Make 1 application in the spring and another in the fall after harvest. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

#### • **Raspberry Restrictions:**

Do not apply **Axyl-Shield 2E Foliar** within 45 days before harvest.

### **Strawberries**

**Axyl-Shield 2E Foliar** provides control of red stele (*Phytophthora fragariae*), vascular collapse (*P. cactorum*), and leather rot (*P. cactorum*) when used as directed. Applications may be made using ground application equipment or through drip irrigation systems.

**New Plantings:** Apply **Axyl-Shield 2E Foliar** at 2 qts. per treated acre in sufficient water to move the fungicide into the root zone of the plants. Make 1 application after transplanting followed by an additional application 30 days before the beginning of harvest or at fruit set. A third application may be made during the harvest season, depending on environmental conditions and disease pressure. For banded applications, use the formula in the **General Information** section of this label to determine the amount of **Axyl-Shield 2E Foliar** needed per acre. When applying **Axyl-Shield 2E Foliar** through drip irrigation systems, use the same amount as would be applied in a banded application to cover the root zone of the plants. Observe the precautions concerning application of **Axyl-Shield 2E Foliar** through irrigation systems in the **Use Information** section of this label.

**Established Plantings:** Apply **Axyl-Shield 2E Foliar** at 2 qts. per treated acre in sufficient water to move the fungicide into the root zone of the plants. Make 1 application in the spring after the ground thaws and before first bloom. A second application may be applied after harvest in the fall. For supplemental control of leather rot, an application may be made during the growing season at fruit set. For banded applications, use the formula in the **General Information** section of this label to determine the amount of **Axyl-Shield 2E Foliar** needed per acre. When applying **Axyl-Shield 2E Foliar** through drip irrigation systems, use the same amount as would be applied in a banded application to cover the root zone of the plants. Observe the precautions concerning application of **Axyl-Shield 2E Foliar** through drip irrigation systems in the **General Information** section of this label.

For low annual rainfall areas, a surface application of **Axyl-Shield 2E Foliar** needs to be moved into the root zone by rainfall, overhead irrigation, or mechanical incorporation.

### **Strawberry Restrictions:**

- Do not use more than a total of 6 qts. of **Axyl-Shield 2E Foliar** per treated acre per year.

## **CITRUS**

Citrus: grapefruits, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats, satsuma mandarin, and hybrids of these.

Use **Axyl-Shield 2E Foliar** on citrus for control of citrus foot rot, root rot, and trunk cankers caused by *Phytophthora* spp. **Axyl-Shield 2E Foliar** can be applied as a topical canker application and as a soil application, as a spray or through sprinkler or drip irrigation systems. If trees are on a drip irrigation system, distribute the amount of **Axyl-Shield 2E Foliar** needed per tree (see tables) to the soil directly under the drip emitters at each tree. If there is more than 1 emitter per tree, distribute the total amount of **Axyl-Shield 2E Foliar** needed among the emitters.

**NOTE:** Where nematodes are a problem, best results can be achieved if effective EPA-registered nematicides are used. Nematicides can be used in combination or in sequence with **Axyl-Shield 2E Foliar** applications.

**Use Precaution:** For best *Phytophthora* control, use a combination of cultural practices and resistant varieties.

### Citrus in Nurseries (Arizona, California, Florida and Puerto Rico Only)

Make the first application of **Axyl-Shield 2E Foliar** at the time of planting. Repeat applications at 3-month intervals when trees are actively growing. For banded applications, use a band wide enough to cover the root systems of the plants. Do not apply **Axyl-Shield 2E Foliar** solutions to bare roots.

**Soil Drench:** Apply 4 to 6 fl. oz. per 100 gals. of water as a drench over the row at a rate of 100 to 250 gals. per 1,000 feet of row. The width of the drench treatment must be wide enough to cover the root systems of the plants. Follow with 1/2 to 1 inch irrigation over the treated area.

**Soil Surface Spray:** Apply 1 to 2 gals. per treated acre in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain thorough coverage. If applications are banded, the treated area must be wide enough to cover the root systems of the plants. Follow applications with a 1/2 to 1 inch irrigation over the treated area.

### Citrus Resets or New Plantings (Arizona, California, Florida and Puerto Rico Only)

Make the first application of **Axyl-Shield 2E Foliar** to citrus resets or new plantings at the time of transplanting. Make up to 3 additional applications per year at 3-month intervals or when root growth flushes occur.

**Water Ring Drench:** Mix 4 to 6 fl. oz. per 100 gals. of water. Apply 5 gals. of the mix around the base of each tree within the watering ring.

**Soil Surface Spray (Arizona and California Only):** Apply 1 to 2 gals. per treated acre (3 to 6 fl. oz. per 1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil surface. Apply spray to the soil surface beneath the tree canopy or apply through irrigation water. If natural rainfall is not expected within 3 days of a soil surface application, irrigate with 1/2 to 1 inch water over the treated area. See instructions below for application through irrigation water.

**Soil Surface Spray (Florida and Puerto Rico Only):** Apply 1 gal. per treated acre (3 fl. oz. per 1,000 sq. ft.) under the canopy of the tree. Make applications through low volume irrigation systems at the rate of 1 qt. per grove acre for trees less than 5 years old, make 2-3 applications per year. Make applications on a spring + summer, summer + fall, or spring + summer + fall schedule.

### Established Plantings

**Soil Application (Florida and Puerto Rico Only):** Apply 1/2 gal. per treated acre to groves that have a *Phytophthora* propagule count of 10 to 20 per cubic centimeter (cc) of soil as a feeder root rot disease maintenance treatment. For trees 5 years or older, apply 1 qt. per grove acre through low volume irrigation. Make 2-3 applications per year. Make applications on a spring + summer, summer + fall, or spring + summer + fall schedule. **For groves with extremely high propagule counts (above 20 per cc of soil), apply 1 gal. per treated acre for 1 year (2-3 applications) to reduce the population.**

**Soil Surface Spray (Arizona and California Only):** Make **Axyl-Shield 2E Foliar** applications during the spring root-flush. Make 1-2 additional applications per year at 3-month intervals to coincide with flushes of root growth. Use the table below to determine the proper rate based on tree size and the number of applications per year. For applications based on broadcast rates, use **Axyl-Shield 2E Foliar** at 1-2 gals. per acre (3-6 fl. oz. per 1,000 sq. ft.) when 3 applications are planned, and at 3 gals. per acre (9 fl. oz. per 1,000 sq. ft.) when 2 applications are planned. Apply in sufficient water to provide uniform coverage or apply through irrigation water. See instructions below for application through irrigation water.

Diameter of Tree Canopy (Ft.)	Fl. Oz. of Axyl-Shield 2E Foliar per 10 Trees	
	2 Applications per Year	3 Applications per Year
5	1.5	1
10	7.5	5
15	15	10
20	30	20

**Trunk Spray for Control of Gummosis Caused by *Phytophthora* spp. (Arizona, California and Texas Only):** Add 1 gal. of **Axyl-Shield 2E Foliar** to 3 gallons of water and spray the surface of the trunks using enough spray to thoroughly wet the cankers. In Florida, add 1 gal. of **Axyl-Shield 2E Foliar** to 10 gals. of water and spray the surface of the trunks using enough spray to thoroughly wet the cankers. **Axyl-Shield 2E Foliar** may be applied up to 3 times per year.

**Application through Irrigation Water (Sprinkler or Drip Irrigation Only):** See comments and precautions in the **General Information** section of this label. Inject **Axyl-Shield 2E Foliar** into the irrigation water at rates specified in the tables above.

**Citrus Restrictions:**

- Do not use **Axyl-Shield 2E Foliar** in Florida on the highly susceptible sweet orange rootstock.
- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse nurseries.
- Do not make trunk and soil applications to the same tree in the same cropping season.
- Do not apply more than 6 gals. of **Axyl-Shield 2E Foliar** per treated acre per year.

**CLOVER**

**Axyl-Shield 2E Foliar** applied to the soil at planting will provide control of damping-off caused by *Pythium* spp. and root rots caused by *Phytophthora* spp.

**Stand Establishment**

Apply 1 to 2 pts. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water. If seed was previously treated with a metalaxyl or mefenoxam seed treatment product, make an application of **Axyl-Shield 2E Foliar** at 1 pt. per acre at planting. Use 2 pts. per acre in areas where disease pressure is heavy.

**Clover Restrictions:**

- Do not feed green forage or cut hay for 90 days following application.

**COLE CROPS**

**Broccoli, Cabbage, Cauliflower, Chinese broccoli, Gai Lon, White flowering broccoli, and Chinese cabbage (Napa, Bok Choy)**

**Axyl-Shield 2E Foliar** applied as a soil application at planting will control damping-off caused by *Pythium* spp. and basal stem rot caused by *Phytophthora* spp. Make applications preplant incorporated or as a soil surface spray after planting.

**Preplant Incorporated Application:** Apply 4 to 8 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For control of *Pythium* damping-off only use 1 to 2 pts. per acre. For banded applications, make a 7-inch band. Use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 4 to 8 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, a 7-inch band is recommended. Use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, **Axyl-Shield 2E Foliar** should be incorporated mechanically before planting or be moved into the seed zone after planting with 1/2 to 1 inch sprinkler irrigation.

**Axyl-Shield 2E Foliar** may be tank mixed with Terraclor 75WP to control club root (*Plasmodiophora brassicae*) or wirestem/black root (*Corticum solani*). Before applying observe all precautions, limitations, rates and directions for use including the need for incorporation on the Terraclor 75WP label.

**Cole Crops Restrictions:**

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse crops or field-grown vegetable bedding plants.
- Do not dip plants in solutions containing **Axyl-Shield 2E Foliar**.
- Do not use **Axyl-Shield 2E Foliar** as a transplant water treatment.

**COTTON**

**Seed Rots and Seedling Diseases of Cotton Caused by *Pythium* spp.**

Apply 1/4 to 1/2 pt. per 13,000 linear feet of row (0.3 to 0.6 fl. oz. per 1,000 linear ft.) as an in-furrow spray in 5 to 15 gals. of water or liquid fertilizer at planting. Mount the spray nozzle so the spray is directed into the furrow over the seed just before the seeds are covered. For control of *Pythium* and *Rhizoctonia*, apply 2 to 4 qts. Terraclor 2E or 1 2/3 to 1 3/4 lbs. Terraclor 75W per 13,000 linear ft. of row in tank mixture with **Axyl-Shield 2E Foliar**.

**NOTE:** If **Axyl-Shield 2E Foliar** is applied with Terraclor 2E or Terraclor 75W, observe all precautions and restrictions that appear on the Terraclor 2E or Terraclor 75W labels.

## CUCURBIT VEGETABLES

Cucurbit vegetables: balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds, cantaloupe, casaba, crenshaw, honeydew melon, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer squash, winter squash, watermelon, and cucurbit hybrids only.

**Axyl-Shield 2E Foliar** applied at planting will provide control of damping-off and cottony leak caused by *Pythium* spp. Make applications preplant incorporated or as a soil surface spray after planting.

**Preplant Incorporated Application:** Apply 4 to 8 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the Use Information section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 4 to 8 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the General Information section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or moved into the seed zone after planting with 1/2 to 1 inch sprinkler irrigation.

### Cucurbit Restrictions:

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.
- Do not dip plants in solutions containing **Axyl-Shield 2E Foliar**.
- Do not use **Axyl-Shield 2E Foliar** as a transplant water treatment.

## NON-BEARING DECIDUOUS FRUITS AND NUTS IN ORCHARDS

To treat fruit-bearing Deciduous Fruits & Nuts, see **Directions for Use** under the **Apples** and **Stone Fruits, Walnuts and Almonds** sections of this label.

### Phytophthora Diseases

**Axyl-Shield 2E Foliar** will aid in the control of crown, collar, and root rot of deciduous fruit and nut trees caused by *Phytophthora* spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Make applications before symptoms appear, especially in areas favorable for disease development. **Axyl-Shield 2E Foliar** will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first applications at the time of planting (See **NOTE** below). Make additional applications at 3-month intervals when conditions are favorable for disease development. For established plantings, make the first application in the spring before growth starts.

Apply 2 gals. per treated acre (6 fl. oz. per 1,000 sq. ft.) in sufficient water to obtain uniform coverage of the soil under the canopy of the trees. For banded applications, use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. Soil surface sprays of **Axyl-Shield 2E Foliar** will not be effective until the fungicide is moved into the root zone by rainfall or irrigation.

### Non-Bearing Deciduous Fruits and Nuts in Orchards Restrictions:

- Do not apply to plantings that will bear harvestable fruit within 12 months of the last application.
- Do not use **Axyl-Shield 2E Foliar** to dip or spray tree roots, and do not concentrate it around the tree trunks.
- Do not apply to trees under stress.
- For intense plantings (2 to 3 times the normal planting rate), make applications on a per area basis, i.e. per acre or 1,000 sq. ft. Do not calculate the amount of **Axyl-Shield 2E Foliar** on a per tree basis.
- In California, do not apply **Axyl-Shield 2E Foliar** to newly planted trees within 90 days of planting.
- Do not apply more than 6 gals. of **Axyl-Shield 2E Foliar** per treated acre per year.

## GINSENG

**Axyl-Shield 2E Foliar** applied to the soil before early growth followed by applications of a metalaxyl or mefenoxam granular product will control *Phytophthora* root rot in ginseng caused by *Phytophthora cactorum*.

Apply **Axyl-Shield 2E Foliar** at 1 1/2 qts. per acre as a drench in 100 to 400 gallons of water uniformly to the soil surface in the spring before the plants begin growing.

### Ginseng Restrictions:

- Make only one application of **Axyl-Shield 2E Foliar** per year.

### GRASSES\*

\*Make applications to any grass, *Gramineae* family (either green or cured), **EXCEPT:** Sugarcane, and any of the following that will be fed or grazed by livestock: barley, buckwheat, corn, millet (pearl or proso), oats, popcorn, rice, rye, sorghum, teosinte, triticale, wheat, or wild rice; or to any enclosed pasture grasses or grasses grown for hay or silage such as bermudagrass, bluegrass, bromegrass, or fescue.

**Axyl-Shield 2E Foliar** applied to the soil at planting will provide control of seedling diseases caused by *Pythium* spp.

### For Stand Establishment

Apply up to 4 pts. per acre as a broadcast surface spray at planting in a minimum of 20 gals. of water. Use 1-2 pts. per acre if grass seed was previously treated with a metalaxyl or mefenoxam seed treatment product. Use 2-4 pts. per acre in areas where there has been a history of *Pythium* disease.

### Grass Restrictions:

- Do not graze, feed green forage, or cut for hay for 60 days following application.
- Do not apply to range grasses.

### HOPS

**Axyl-Shield 2E Foliar** applied as a soil drench followed by foliar applications with Kocide 101 or a comparable copper fungicide registered for use on hops will control downy mildew caused by *Pseudoperonospora Humuli*.

**Soil Drench:** Apply 1 qt. of **Axyl-Shield 2E Foliar** per acre of hops in a minimum of 20 gals. of water or liquid fertilizer to the soil surface over the crowns after pruning, but before training. Make early application before shoots are 6 inches long.

**Foliar Spray:** When primary infection (spikes) persist after a soil drench treatment, and/or there is evidence of a secondary (foliar) infection, make foliar sprays of **Axyl-Shield 2E Foliar** in combination with contact copper fungicides. Apply **Axyl-Shield 2E Foliar** at 1 qt. per acre in a tank-mix combination with Kocide 101 at 2 lbs. per acre (or an equivalent rate of a comparable copper fungicide registered for use on hops). Apply with ground equipment in a minimum of 50 gals. of water per acre.

### Hops Restrictions:

- Do not make more than 3 applications of **Axyl-Shield 2E Foliar** per season (1 soil drench + 2 foliar sprays).
- Do not make the last application within 45 days before harvest.
- Do not apply foliar sprays of **Axyl-Shield 2E Foliar** without a copper fungicide registered for use on hops.

### LEAFY VEGETABLES\*

\*Celery, gardengrass, upland cress, endive, fennel, lettuce (head and leafy), parsley, rhubarb, spinach, and Swiss chard.

**Axyl-Shield 2E Foliar** applied as a soil application will control damping off caused by *Pythium* spp. in leafy vegetables (*Albugo occidentalis*) and downy mildew in spinach. Make banded applications over the row, preplant incorporated, or injected with liquid fertilizer.

**Preplant Incorporated Application:** Apply 4-8 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 4-8 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the seed zone after planting with 1/2 to 1 inch sprinkler irrigation.

**White Rust and Downy Mildew Control (Spinach Only):** In addition to the preplant incorporated or surface application described above, apply **Axyl-Shield 2E Foliar** at 1 pt. per acre of crop, shanked in 21 days after planting or after the first cutting. One other application may be shanked in after the next

cutting. A total of two applications can be made on a 21-day interval. Use sufficient mechanical or bypass agitation to keep the **Axyl-Shield 2E Foliar** mixed with the water or fertilizer.

#### **White Rust Precautions/Restrictions:**

The additional applications of **Axyl-Shield 2E Foliar** noted above, and made after each cutting by shanking the fungicide into the beds with liquid fertilizer, provide continuing control of white rust. However, white rust can only be controlled in a preventative disease control program that begins with an application of **Axyl-Shield 2E Foliar** to the soil at planting. If **Axyl-Shield 2E Foliar is not used at planting, do not use Axyl-Shield 2E Foliar at any other time throughout the season**. Do not apply **Axyl-Shield 2E Foliar** in foliar applications or in situations where white rust infections are already established. The use of **Axyl-Shield 2E Foliar** in curative applications greatly increases the risk of the fungus developing insensitivity to metalaxyl. The development of insensitivity will destroy the effectiveness of **Axyl-Shield 2E Foliar** in controlling white rust.

#### **Leafy Vegetable Restrictions:**

- Do not harvest spinach within 21 days of a **Axyl-Shield 2E Foliar** application.
- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.
- Do not use **Axyl-Shield 2E Foliar** as a transplant water treatment.
- Do not apply more than 11 pts. of **Axyl-Shield 2E Foliar** per acre per growing season in spinach.
- Do not exceed a total of 2.8 lbs. active ingredient per acre of metalaxyl per growing season when using a combination of **Axyl-Shield 2E Foliar** and other metalaxyl products in spinach.

#### **LEGUME VEGETABLES (Succulent or Dried)**

**Legume Vegetables:** field beans, French beans, kidney beans, lima beans, mung beans, navy beans, pinto beans, runner beans, snap beans, wax beans, broad beans (fava beans), chickpeas (garbanzo beans), lentils, lupines (sweet, white sweet, white, and grain), garden peas, field peas, sugar peas, southern peas (black-eyed peas, crowder peas, cowpeas, and catjang), and edible soybeans.

**Pythium Damping-Off and Root Rot:** **Axyl-Shield 2E Foliar** applied at planting will control damping-off and root rot caused by *Pythium* spp. Make applications preplant incorporated, or at a soil surface spray after planting.

**Preplant Incorporated Application:** Apply 2-4 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 2-4 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

**Axyl-Shield 2E Foliar** may be tank mixed with Terraclor 2E or 75WP to control *Rhizoctonia* root and stem rot or white mold (*Sclerotinia sclerotiorum*) in snap and dry beans. Observe all precautions, limitations, rates, and directions for use on the respective Terraclor label before applying.

#### **Legume Restrictions:**

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.

#### **ONIONS – DRY BULB\*, GREEN\*\*, AND ONION GROWN FOR SEED**

\*Garlic, onions (dry bulb), and shallots (dry bulb).

\*\*Green onions, leeks, spring onions or scallions, Japanese bunching onions, green shallots, or green eschalots.

**Axyl-Shield 2E Foliar** applied at planting will control damping-off caused by *Pythium* spp. Make applications preplant incorporated or as a soil surface spray after planting.

**Preplant Incorporated Application:** Apply 2-4 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 2-4 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the seed zone after planting with 1/2 to 1 inch sprinkler irrigation.

**Onions – Dry Bulb, Green, and Onion Grown for Seed**

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.

**PAPAYA (Hawaii Only)**

**Axyl-Shield 2E Foliar** aids in the control of *Phytophthora* root rot of papaya in new plantings in the field.

**Papaya in the Field – New Plantings:** Make the first application of **Axyl-Shield 2E Foliar** at the time of transplanting to the field or within 1 week of transplanting. Apply 3 1/2-7 qts. per acre\* of soil treated (2 1/2-5 fl. oz. per 1,000 sq. ft.) as a soil surface spray in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. After application, immediately irrigate with 1/8 to 1/4 inch of water. Repeat in 2-4 weeks if conditions are favorable for disease. Use the table below as a guide for treating individual trees.

**Papaya Restrictions:**

- Do not apply more than 2 applications per year in the field to newly transplanted stock.
- Do not apply within 3 months of harvest.

Diameter of Tree Canopy (Ft.)	Fl. Oz. of Axyl-Shield 2E Foliar per 10 Trees
3	3/16 to 3/8
4	3/8 to 3/4
6	3/4 to 1 1/2
8	1 1/4 to 2 1/2

\* 1 qt. = 1/2 lb. a.i.

**PEANUTS**

**Axyl-Shield 2E Foliar** is a soil-applied systemic fungicide for use in control of seedling and pod diseases of peanuts incited by *Pythium* spp.

**Seedling Diseases:** Apply 1 pt. per acre of crop as an application to the seed in-furrow or in a 7-inch band at the time of planting. For the in-furrow applications, position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution or crop injury may occur.

**Pod Rot:** Apply 1-2 qts. per acre at early pod set or pegging through overhead irrigation systems. See the **Use Information** section of this label for further instructions and precautions when making applications through irrigation systems.

If pathogens other than *Pythium* spp. are present, use fungicides that control those diseases in combinations with **Axyl-Shield 2E Foliar**.

If the predominant pod rot pathogens are *Pythium* spp. and *Rhizoctonia* spp., use **Axyl-Shield 2E Foliar** at 1-2 qts. per acre tank mixed with 4-8 pts. per acre of Terraclor 2E or PCNB 2E (see product labels).

**PEPPERS AND EGGPLANT**

Soil applications of **Axyl-Shield 2E Foliar** will control damping-off caused by *Pythium* spp. and crown rot caused by *Phytophthora capsici*. Apply **Axyl-Shield 2E Foliar** to the soil before the plants are infected with *Phytophthora* to obtain satisfactory disease control.

Apply 4-8 pts. per treated acre at the time of planting in sufficient water (20-50 gals.) or liquid fertilizer to provide uniform coverage. For direct seeded peppers, apply preplant or prior to emergence. If rainfall is not expected before the plants begin growth, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the root zone after planting with 1/2-1 inch of sprinkler irrigation water. For banded applications, make a 12-to 16-inch band. After the initial application, make 2 post-directed applications at 4 pts. per treated acre at 30-day intervals. Direct spray to the base of the plants and cover 6-8 inches of soil on either side of the plants. Such applications must be incorporated mechanically or by sprinkler irrigation to move the **Axyl-Shield**



**2E Foliar** into the root zone. **Axyl-Shield 2E Foliar** may be applied with liquid fertilizer shanked in as a band treatment to either side of the plant. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

#### **Peppers and Eggplant Precautions:**

**Axyl-Shield 2E Foliar** may cause some yellowing of the pepper leaves.

- Plants already infected with *Phytophthora* cannot be cured with **Axyl-Shield 2E Foliar** applications.
- The foliar blight phase of *Phytophthora* cannot be controlled with foliar applications of **Axyl-Shield 2E Foliar**.
- In areas where there is a history of late *Phytophthora* infections, make an application of another EPA-registered fungicide labeled for *Phytophthora* control 17-21 days following the last **Axyl-Shield 2E Foliar** application.

#### **Peppers and Eggplant Restrictions:**

- Do not apply within 7 days of harvest.
- Do not apply more than 12 pts. of **Axyl-Shield 2E Foliar** per acre of crop per season
- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouses or field-grown vegetable bedding plants.

### **PINEAPPLE**

**Axyl-Shield 2E Foliar** applied as a “seed piece” dip, provides effective control of heart rot disease of pineapple caused by *Phytophthora* spp.

Apply **Axyl-Shield 2E Foliar** as a crown dip before planting at the rate of 1-2 qts. per 100 gals. of water. Use 75-100 gals. of dip solution per planted acre, depending on crown size, plant density and dipping techniques.

#### **Pineapple Restrictions:**

- Do not harvest plant material for animal feed if there is a crop failure within 1 year of planting treated crowns.

### **ROOT AND TUBER VEGETABLES**

Root and tuber vegetables: artichoke (Jerusalem), beet (sugar\*\* and table), carrot, cassava, chicory, dasheen (taro), ginger, ginseng\*\*\*, horseradish, parsnip, potato, radish, rutabaga, salsify, sweet potato, tanier, turnip, and yams.

#### **Root and Tuber Vegetable Restrictions:**

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.

\*\*See separate section for Sugar Beets.

\*\*\*See separate section for Ginseng.

**Axyl-Shield 2E Foliar** applied to the soil at planting will provide control of diseases caused by *Pythium* and *Phytophthora* spp. Make applications preplant incorporated or as a soil surface spray after planting.

**Preplant Incorporated Application:** Apply 4-8 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer to provide uniform coverage and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per dose.

**Surface Application:** Apply 4-8 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds start germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

### **POTATOES**

**Axyl-Shield 2E Foliar** will provide effective control of *Pythium* leak caused by *Pythium* spp., pink rot caused by *Phytophthora erythroseptica*, and *Pythium* seedling caused by *Pythium* spp.

Apply 1.68 oz. of **Axyl-Shield 2E Foliar** per 1,000 linear ft. of row on a 6-8-inch band at planting in a minimum of 3 gals. of water per acre. Make application directly over the seed piece(s) prior to row closure or use markout method (incorporated).

Impregnate **Axyl-Shield 2E Foliar** on dry fertilizer provided the application rate of 1.68 fl. oz. per linear ft. of row is observed and placement is in a 6-8-inch band incorporated within the planted hill. **Axyl-Shield 2E Foliar** can be applied in combination with liquid fertilizers.

**Storage Rots: Axyl-Shield 2E Foliar** effectively controls storage rots caused by *Pythium* leak and pink rot when used in conjunction with other management practices such as crop rotation. Apply **Axyl-Shield 2E Foliar** at 12.8 fl. oz. per acre at flowering and make a second application 14 days later. If the field has a history of storage rot problems, make a third application 14 days after the second application. If conditions favor the development of foliar diseases, use **Axyl-Shield 2E Foliar** in tank mixtures with a companion fungicide such as mancozeb, chlorothalonil, or other approved products. When using such tank mixtures, observe all precautions, limitations, rates and directions for use on all product labels.

**Potato Restrictions:**

- Do not apply this product within 14 days of harvest.

**SOYBEANS**

**Axyl-Shield 2E Foliar** is a soil-applied systemic fungicide for use in the control of *Phytophthora* root and stem rot and *Pythium* damping-off. Apply **Axyl-Shield 2E Foliar** broadcast, banded or in the seed furrow before the seeds are covered. The seed furrow applications will provide more consistent results if rain is not expected before the seeds germinate.

For optimum control against *Phytophthora* root and stem rot, apply **Axyl-Shield 2E Foliar** to soybean varieties that have some tolerance to the races of *Phytophthora* present in the field. Use the higher rate within the specified rate range of **Axyl-Shield 2E Foliar** in areas with a history of heavy *Phytophthora* damage. Under heavy late season *Phytophthora* pressure, **Axyl-Shield 2E Foliar** will not provide complete control.

**Surface Application:** For full season control, apply 5 pts. per treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. For banded applications, make a 7-inch band. Use the formula in the **General Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. For early to mid- season control, apply 1 1/2-3 pts. per treated acre.

**In-Furrow Applications:** For full season control, apply 1.1 fl. oz. per 1,000 linear feet of row as an in-furrow spray in 5-10 gals. of water or liquid fertilizer at planting. Position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly with the spray solution. Use sufficient water or liquid fertilizer to provide uniform coverage. Use the table below to determine the amount of **Axyl-Shield 2E Foliar** needed per acre based on row spacing. For early to mid-season control, apply 0.3-0.6 fl. oz. per 1,000 linear feet of row.

**Suggested Rates Per Acre According to Row Spacing**

Row Spacing	Linear Ft. of soybean Row per Acre	Fluid Ounces of Axyl-Shield 2E Foliar Needed Per Acre Rate Desired		
		0.3 fl. oz.	0.6 fl. oz.	1.1 fl. oz.
38 in.	13,756	4	8	15
36 in.	14,520	4 1/2	9	16
30 in.	17,424	5 1/2	11	19
24 in.	21,780	6 1/2	13	24
20 in.	26,136	8	16	28

**NOTE: Axyl-Shield 2E Foliar** is specific for *Pythium* and *Phytophthora* and will not control other diseases that may attack soybeans.

**STONE FRUITS\*, WALNUTS, AND ALMONDS**

Stone Fruits\*, Walnuts, and Almonds: Apricots, cherries (sweet and sour), nectarines, peaches (Chickasaw, Damson, and Japanese), and prunes.

Use of **Axyl-Shield 2E Foliar** will aid in the control of crown, collar and root rot caused by *Phytophthora* spp. When used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Make **Axyl-Shield 2E Foliar** applications before symptoms appear, especially in areas favorable for disease development. **Axyl-Shield 2E Foliar** will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first application of **Axyl-Shield 2E Foliar** 2 weeks after planting. Make additional applications 2-3-month intervals or during periods most favorable for root, crown or collar rot development.

For established plantings, make the application in the spring before plants start growth. Make additional applications at 2- to 3-month intervals or to coincide with periods most favorable for root, crown or collar rot development.

Apply 2 gals. per treated acre (6 fl. oz. per 1,000 sq. ft.) in sufficient carrier to obtain thorough coverage of the soil under the canopy of the trees. Treat sufficient surface area in nurseries to cover the root zone on the plants. For banded applications, use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. Soil surface sprays of **Axyl-Shield 2E Foliar** will not be effective until the fungicide is moved into the root zone by rainfall or irrigation.

For intense plantings (2-3 times the normal planting rate) make applications on a per area basis, i.e. per acre or 1,000 sq. ft.

**\*Stone fruit, Walnut, and Almond Restrictions:**

- Do not dip the roots of trees in **Axyl-Shield 2E Foliar** solutions, spray the roots or concentrate it around the tree trunks. Do not apply it to trees under stress.
- Do not calculate the amount of **Axyl-Shield 2E Foliar** on a per tree basis.
- In California, do not apply **Axyl-Shield 2E Foliar** to newly planted trees within 90 days of planting.
- Do not graze livestock in treated areas, and (2) Do not graze or feed cover crops in treated orchards.
- Make up to 3 applications per year.

### SUGAR BEETS

**Axyl-Shield 2E Foliar** controls diseases caused by *Pythium* spp. Make applications preplant incorporated or as a surface spray at planting.

**Preplant Incorporated Application:** Apply 4-8 pts. per treated acre as a broadcast soil application in sufficient water or liquid fertilizer and incorporate in the top 2 inches of soil. For banded applications, make a 7-inch band. Use the formula in the Use Information section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Surface Application:** Apply 4-8 pts. per treated acre at planting in sufficient water or liquid fertilizer to provide uniform coverage. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. If natural rainfall is not expected before the seeds begin germinating, mechanically incorporate **Axyl-Shield 2E Foliar** before planting or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation.

### TOBACCO

**Axyl-Shield 2E Foliar** is a soil-applied systemic fungicide for use in the field before transplanting for control of black shank (*Phytophthora parasitica* var. *Nicotianae*) and blue mold (*Peronospora tabacina*) on all types of tobacco. For control of anthracnose and other tobacco diseases, use approved fungicides to control those diseases.

**Tobacco Restrictions:**

- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse crops or tobacco plant beds.
- Do not dip plants in solutions containing **Axyl-Shield 2E Foliar**
- Do not use **Axyl-Shield 2E Foliar** for disease control in float-house, float-bed production facilities, hydroponic production, or greenhouse facility.
- Do not use **Axyl-Shield 2E Foliar** as a transplant water treatment.
- Do not use **Axyl-Shield 2E Foliar** as a foliar spray to field planted tobacco.
- Pennsylvania – Do not use **Axyl-Shield 2E Foliar** for black shank control.

**Field Planted Tobacco**

**Blue Mold:** Apply **Axyl-Shield 2E Foliar** as a broadcast soil application prior to transplanting and incorporate in the top 2 to 4 inches of soil. For flue-cured tobacco, use 1-2 qts. per treated acre, depending on disease pressure and length of control desired. Under low disease pressure or for early season control, use 1 qt. per treated acre. For burley and other tobacco types, use 2 qts. per treated acre.

For prolonged control of blue mold in field planted tobacco, make a supplemental application of 1 qt. per acre of crop as a soil application at lay-by or the last cultivation. Position the nozzles so that the spray is deposited under the plants and is covered by soil by the cultivator. Do not make this application if more than 2 qts. per acre of **Axyl-Shield 2E Foliar** were applied prior to transplanting or if no **Axyl-Shield 2E Foliar** was applied prior to transplanting.

**Black Shank:** Use **Axyl-Shield 2E Foliar** as a broadcast soil application prior to transplanting and incorporate in the top 2 to 4 inches of soil. Apply **Axyl-Shield 2E Foliar** using conventional ground application equipment in sufficient water or fertilizer to provide uniform coverage. Use the table below to determine the amount of **Axyl-Shield 2E Foliar** needed per acre depending on the black shank severity.

Type of Tobacco	Disease Level in Field	Rate of Axyl-Shield 2E Foliar per Acre
Flue-Cured	Low to moderate (less than 6% disease)	2 qts.
	High (more than 6% disease)	4 qts.
Burley and Other**	Low to moderate (less than 6% disease)	4 qts.
	High (more than 6% disease)	6 qts.

\*\*Florida and Georgia – Use 6 qts. per treated acre of **Axyl-Shield 2E Foliar** in fields with heavy black shank levels (greater than 6%).

\*\*Pennsylvania – Do not use **Axyl-Shield 2E Foliar** for black shank control.

For prolonged control of black shank in field planted tobacco, use one of the following application methods:

- Make a preplant incorporated and a supplemental lay-by application (last cultivation). Apply the supplemental application at last cultivation at the rate of 1 to 2 qts. per acre as a soil treatment. Position the nozzles so that the spray is deposited under the plants and is covered with soil by the cultivator. Do not make this application if more than 2 qts. per acre of **Axyl-Shield 2E Foliar** was applied at transplanting;
- Make a preplant incorporated plus 2 supplemental soil applications at first cultivation and last cultivation (lay-by). Apply **Axyl-Shield 2E Foliar** at 2 qts. per acre just prior to transplanting followed by a second application of 2 qts. per acre at the first cultivation followed by a third application of 2 qts. per acre at lay-by or the last cultivation.

#### Resistance Management:

For best results against black shank, use **Axyl-Shield 2E Foliar** with tobacco varieties that have high resistance to black shank and use crop rotation. In fields where there is a history of severe black shank incidence, use the highest rate within the specified rate range and plant a variety that is resistant to the race of *Phytophthora* present in the field. Burley L8 hybrids are only resistant to *Phytophthora* Race O.

**Do not use Axyl-Shield 2E Foliar** in high black shank areas on highly susceptible flue-cured varieties.

Failure to adequately control nematodes in fields treated with **Axyl-Shield 2E Foliar** can result in poor control of black shank.

**No-Till Tobacco:** For black shank and blue mold on all types of tobacco, apply **Axyl-Shield 2E Foliar** to the field before transplanting and incorporate into the top 2-4 inches of soil. Apply 1-2 qts. per treated acre as a preplant, broadcast or banded soil application. For banded applications, use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre. A lay-by soil application may be made 30 to 35 days after planting at 1 qt. per acre. Do not make the lay-by application if more than 2 qts. per acre of **Axyl-Shield 2E Foliar** were applied at transplanting or if no **Axyl-Shield 2E Foliar** was applied at transplanting.

#### TOMATOES

Soil applications of **Axyl-Shield 2E Foliar** at planting controls damping-off caused by *Pythium* spp. Soil applications applied 4-12 weeks before harvest under the vines will control fruit and root rot caused by *Pythium* spp. and *Phytophthora* spp.

**Damping-Off (*Pythium* spp.):** Apply 2-4 qts. per treated acre in sufficient water or liquid fertilizer to provide uniform coverage at the time of planting. If rainfall is not expected before the seeds start to germinate, mechanically incorporate **Axyl-Shield 2E Foliar** before planting, during the planting operation, or be moved into the seed zone after planting with 1/2-1 inch sprinkler irrigation. For banded applications, make a 7-inch band. Use the formula in the **Use Information** section of this label to calculate the amount of **Axyl-Shield 2E Foliar** needed per acre.

**Root and Fruit Rot (*Phytophthora* spp. and *Pythium* spp.):** Make 1-2 additional applications during the growing season, depending on the severity of the conditions for disease infection.

Apply 2 qts. per treated acre beginning 4-6 weeks after planting. Make a second application as needed up to 4 weeks before harvest, but before the last irrigation. Apply **Axyl-Shield 2E Foliar** as a directed soil surface spray under the vines or injected into the beds with liquid fertilizer. If less than the full bed is treated, use the formula in the **Use Information** section to determine the amount of **Axyl-Shield 2E Foliar** needed per acre. If **Axyl-Shield 2E Foliar** is injected into the beds with liquid fertilizer, base calculations on a 7-inch band.

If soil surface sprays are used, incorporate **Axyl-Shield 2E Foliar** into the soil with 1/2-1 inch of rainfall or sprinkler irrigation.

Apply **Axyl-Shield 2E Foliar** with water or liquid fertilizer. Use the test in the **Use Information** section to check for compatibility with various fertilizers.

Keep **Axyl-Shield 2E Foliar** suspended in the fertilizer solution with bypass or mechanical agitation. Refer to the **Use Information** section for drip irrigation instructions.

#### Tomato Restrictions:

- Do not apply more than 6 qts. per treated acre per season.
- Do not use **Axyl-Shield 2E Foliar** for disease control in greenhouse or field-grown vegetable bedding plants.
- Do not use **Axyl-Shield 2E Foliar** as a transplant water treatment.

#### REPLANTING

If replanting is necessary, make an additional application of **Axyl-Shield 2E Foliar** provided that the total amount of active ingredient in **Axyl-Shield 2E Foliar** applied does not exceed the maximum allowed for the specific crop.

#### ROTATION (PLANTBACK) RESTRICTION

Do not plant any crop which is not registered for use with the **Axyl-Shield 2E Foliar** active ingredient in soil treated with this active ingredient for a period of 12 months, unless a shorter interval is specified on the following list.

Rotation Crop	Planting Time From Last Axyl-Shield 2E Foliar Application
Alfalfa (including birdsfoot trefoil), Almonds, Apples, Asparagus, Avocados Blueberries Citrus, Clover, Cole Crops, Cotton, Cranberries, Cucurbit Vegetables Deciduous Fruits and Nuts* Eggplant Garlic, Ginseng, Grapes, Grasses** Hops Leafy Vegetables (Excluding Brassica), Legume Vegetables (beans and peas – succulent and dried) Onions (dry bulb, green, and seed) Papaya, Peanuts, Peppers, Pineapples, Potatoes Raspberries, Root and Tuber Vegetables Soybeans, Spinach, Stone Fruits, Strawberries, Sugar Beets Tobacco, Tomatoes Walnuts	0 days
Cereal Grains (Corn)	14 days
Corn	9 months
Crops <b>Not Intended</b> for Food or Feed	0 days
All Other Crops <b>Intended</b> for Food or Feed	12 months

\*These crops and other perennial crops may be planted immediately following last application of **Axyl-Shield 2E Foliar**, provided they will not bear harvestable fruit within 12 months.

\*\*Any grass, Gramineae family (either green or cured), except the following: Do not apply to sugarcane; to any of the following that will be fed to or grazed by livestock: barley, buckwheat, corn, millet (Pearl or proso), oats, popcorn, rice, rye, sorghum, teosinte, triticale, wheat, or wild rice; or to any enclosed pasture grasses or grasses grown for hay or silage such as bermudagrass, bluegrass, brome grass, or fescue.

## CONIFERS, NON-BEARING CITRUS, NON-BEARING DECIDUOUS FRUITS AND NUTS, ORNAMENTALS AND TURF (Not for use on Residential Turf)

**Axyl-Shield 2E Foliar** is a systemic fungicide for use on ornamentals, turf, non-bearing citrus grown in nurseries and as landscape plantings, conifers grown in nurseries and plantations, including Christmas trees and non-bearing deciduous fruit and nut trees grown in nurseries.

**Resistance Management: Axyl-Shield 2E Foliar** is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, Sharda USA LLC will not assume liability for crop damage resulting from resistant strains of fungi. Consult with State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible **Axyl-Shield 2E Foliar** resistant strains of fungi.

Use **Axyl-Shield 2E Foliar** only as a soil application for control of soil-borne diseases with the exception of azalea petal blight.

### Conifers, Non-Bearing Citrus, Non-Bearing Deciduous Fruits and Nuts, Ornamentals and Turf Restrictions:

- Do not use **Axyl-Shield 2E Foliar** for the control of downy mildew diseases, except for use in turf.
- Do not apply under windy conditions.
- Do not allow spray to overlap.
- Not for residential use.

### Mixing Instructions

**Axyl-Shield 2E Foliar** is usually compatible with Banner Maxx<sup>®</sup>, Daconil<sup>®</sup>, Fore<sup>®</sup>, Heritage<sup>®</sup>, and Pennant<sup>®</sup>.

To assure the compatibility of **Axyl-Shield 2E Foliar** with these and other products, pour the products into a small container of water in the correct proportions. Mix thoroughly and let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is considered compatible.

Do not prepare more spray mixture than what is required for the immediate operation. Agitate the spray solution continuously during mixing and during application. Rinse the spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

### Axyl-Shield 2E Foliar Alone

Add 1/4-1/2 of the required amount of water to the spray tank. With the agitator running, add the **Axyl-Shield 2E Foliar** to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the **Axyl-Shield 2E Foliar** has completely dispersed into the mix water. Maintain agitation until all the mixture has been sprayed.

### Axyl-Shield 2E Foliar + Tank Mixtures

Add 1/4-1/2 of the required amount of water to the spray tank. Start the agitator before adding any tank mix partners. Add tank mix partners in this order: wettable powders, dry flowable formulations, liquid flowable formulations, microencapsulated formulations, and emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water and the **Axyl-Shield 2E Foliar** to the spray tank. Allow the **Axyl-Shield 2E Foliar** to completely disperse into the mix water. Maintain agitation until all of the mixture has been sprayed.

**NOTE:** When using **Axyl-Shield 2E Foliar** in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including **Axyl-Shield 2E Foliar**. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using **Axyl-Shield 2E Foliar** in a tank mixture, observe all directions for use, sites, use rates, dilution ratios, precautions and limitations which appear on the tank mix partner label. Do not exceed label dosage. The most restrictive label precautions and limitations must be followed. Do not mix this product with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the products are registered.

### Application Instructions

For banded applications, calculate the amount of **Axyl-Shield 2E Foliar** needed as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre}$$

## Application Through Irrigation Systems

**Axyl-Shield 2E Foliar** alone or in tank mixture with other pesticides registered for application through irrigation systems may be applied in irrigation water at rates specified on this label. This product may be applied through micro sprinkler or drip irrigation systems. Do not apply this product through any other type of irrigation system. Plant injury or lack of effectiveness may result from nonuniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

**Axyl-Shield 2E Foliar** can be injected into the irrigation line in concentrated form, or diluted with water or liquid fertilizer solutions with pH levels less than 7.5. If diluted, use a pesticide supply tank. Agitation is not needed unless the diluted solution will remain in the supply tank longer than 24 hours.

**Axyl-Shield 2E Foliar** is normally diluted at a ratio of 10:1 to 50:1, depending on injection setups. Injecting a larger volume of a more dilute mixture will usually allow a more accurate calibration of the metering equipment. Meter the fungicide into the irrigation water during the first part of the irrigation cycle.

**NOTE: Axyl-Shield 2E Foliar** is highly corrosive to seals and other pump components. Use components made of Teflon, polyethylene, polypropylene and nylon. When **Axyl-Shield 2E Foliar** is diluted at least 50:1, silicone rubber and Viton can be used. Do not use PVC or EPDM based components.

## Safety Devices for Irrigation Systems Connected to Public Water Supplies

If the source of water for your irrigation system is a public water supply, follow the instructions below.

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, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

## Safety Devices for Irrigation Systems Not Connected to a Public Water Supply

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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 irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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 the 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.

## Application Instructions

**Axyl-Shield 2E Foliar** must be applied on the schedule specified in the use directions, not according to the irrigation schedule.

The following calibration and application techniques are provided for reference, and do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

### Use Instructions

1. Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in all systems are putting out the same amount of water.
2. Use only pressure injection or venturi equipment.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) for the **Axyl-Shield 2E Foliar** in the injector tank. It is important to use the same volume of soap solution as the planned volume of **Axyl-Shield 2E Foliar** solution when calibrating the system. The detergent will bubble as it leaves the emitters. The time period over which the bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.

### Step-by-Step Instructions

1. Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio to be used with mixing **Axyl-Shield 2E Foliar**.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual **Axyl-Shield 2E Foliar** application.
4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Monitor both emitters to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected. Stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of **Axyl-Shield 2E Foliar**, or adjust the injector to a slower flow rate.
7. Once the system is calibrated, dilute the needed amount of **Axyl-Shield 2E Foliar** with water using a minimum of 15 parts water to 1 part of **Axyl-Shield 2E Foliar** in the solution tank.
8. Do not begin to inject **Axyl-Shield 2E Foliar** into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the **Axyl-Shield 2E Foliar** into the system at the beginning of the irrigation set in 1/2-1 inch of irrigation water.

## ORNAMENTALS

### Not for Residential Use

Use **Axyl-Shield 2E Foliar** on container, bench, or bed grown ornamentals in greenhouses or outdoor nurseries, and for use on ornamentals grown for indoor and outdoor landscaping, for control of damping-off, and root and stem rot diseases caused by *Pythium* and *Phytophthora*. **Axyl-Shield 2E Foliar** may be applied through irrigation systems, as a soil drench or as a soil surface spray, or incorporated into a soil mix for subsequent seeding or transplanting of ornamentals. **Axyl-Shield 2E Foliar** may be applied as a foliar spray on azaleas. **Within a specified rate range given for a specific group of ornamentals, use the lower rate within the specified rate range for the shortest interval listed and the higher rate within the specified rate range for the longest interval. Under severe disease conditions, use the highest rate within the specified rate range and the shortest interval specified.**

For drench applications, use enough of the specified **Axyl-Shield 2E Foliar** water solution to wet the root zone of plants. In general, 1 pt. per sq. ft. of this solution is sufficient for ornamentals growing in containers with 4 inches of growth media. Containers with growth media depth greater than 4 inches generally require 1 1/2 to 2 pts. per sq. ft. of the solution. If soil surface applications are made, irrigate with at least 1/2 inch of water if rainfall does not occur within 7 days.



**USER PRECAUTION:** Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for tolerance to **Axyl-Shield 2E Foliar**. Neither the manufacturer nor the seller has determined if **Axyl-Shield 2E Foliar** is safe to use on ornamental and nursery plants not specified on this label. The professional user must determine if **Axyl-Shield 2E Foliar** can be used safely prior to commercial use. In a small area, test the specified rates for a particular group of unlabeled plants, i.e., bedding plants, foliage, etc., for phytotoxicity prior to widespread use.

**Foliage Plants**

Aglaonema  
Aphelandra  
Dieffenbachia  
Peperomia  
Philodendron\*  
Pothos  
Schefflera  
Sedum  
Sempervivum  
Zygocactus

**Drench:** Mix 1/2-1 1/4 fl. oz. with 100 gals. of water. Apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1 1/2-2 pts. solution per sq. ft. Repeat applications at 2-to 3-month intervals if necessary.

**\*NOTE:** On **Philodendron**, use 1-2 fl. oz./100 gals.

**Soil Mix:** Thoroughly mix 1/4-1/2 fl. oz. with each cu. yd. of soil mixture.

**Soil Surface Spray to Foliage Plants in the Landscape:** Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within 7 days.

**Foliage Plant Restriction:**

- Do not use more than 3/4 fl. oz./100 gals. and do not apply more frequently than once every 3 months.

<p><b>Bedding Plants</b>  Ageratum  Algerian ivy  Artemisia  Aster  Begonia  Caladium  Carnation  Chrysanthemum  Coleus  Daisy  English ivy*  Foxglove  Gaillardia  Geranium  Impatiens  Marigold  Pansy  Petunia  Phlox  Pinks,  Primrose  Prostrate  Rosemary  Salvia  Snapdragon  Verbena  Vinca  Zinnia</p>	<p><b>Drench at Seeding:</b> (Soil 2-3 inches deep) Mix 1/4-1/2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft.</p> <p><b>Drench at Transplanting:</b> (Soil 2-3 inches deep) Mix 1/2-2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1 1/2-2 pts. solution per sq. ft. Repeat applications at 1- to 2-month intervals if necessary.</p> <p><b>Soil Mix at Seeding and at Transplanting:</b> Thoroughly mix 1/4 fl. oz. with each cu. yd. of soil mixture.</p> <p><b>Soil Surface Spray to Bedding Plants in the Landscape:</b> Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within 7 days.</p> <p><b>Bedding Plant Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply rates of 1 1/2-2 fl. oz./100 gals. more often than once every 6 weeks.</li> <li>• Do not apply to <b>English Ivy</b> more than once every 6 months.</li> </ul>
<p><b>Flowers</b>  African violet  Anthurium  Baby's breath  Carnation  Chrysanthemum  Columbine  Delphinium  Easter lily*  Geranium  Gloxinia  Poinsettia  Rose</p>	<p><b>Drench:</b> Mix 1/2-2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1 1/2-2 pts. solution per sq. ft. Repeat applications at 1- to 2-month intervals if necessary.</p> <p><b>Soil Surface Spray to Flowers in the Landscape:</b> Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within 7 days.</p> <p><b>Flower Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply rates of 1 1/2-2 fl. oz./100 gals. more often than every 6 weeks.</li> <li>• Do not apply more than 1 fl. oz./100 gals. of water to Easter lily and only make one at-planting application.</li> </ul>

<p><b>Rhododendrons and Azaleas</b></p>	<p><b>Drench:</b> <i>Phytophthora</i> root and crown rot – Mix 1-2 1/2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1 1/2-2 pts. solution per sq. ft. Repeat applications at 2- to 4-month intervals if necessary.</p> <p><b>Soil Surface Spray:</b> Apply 2-4 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within 7 days.</p> <p><b>Foliar Spray:</b> <i>Phytophthora</i> shoot blight – Mix at 1 1/4-2 1/2 fl. oz. with 100 gals. of water. Spray to runoff. Repeat at 2- to 3-month intervals if necessary.</p> <p>Use the lower rate within the specified rate range for “Coral Bell” variety.</p> <p><b>Rhododendrons and Azaleas Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply repeat soil applications of 2 1/2 fl. oz./100 gals. closer than every 3 months.</li> <li>• Do not exceed a total of 4 fl. oz. in 6 months.</li> </ul>
<p><b>Woody Ornamentals other than Azaleas</b></p> <p>Arborvitae  <i>Aucuba japonica</i>  Boxwood  Ceanothus  Cotoneaster  Dogwood  Ficus  “Halls” Honeysuckle  Ilex  <i>Juniperus</i> spp.  Photinia  <i>Pieris japonica</i>  <i>Pinus</i> spp.  Pittosporum  White cedar  White pine  Yew</p>	<p><b>Drench:</b> Mix 1-4 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1 1/2 to 2 pts. solution per sq. ft. Repeat applications at 2- to 3-month intervals if necessary.</p> <p><b>Soil Surface Spray:</b> Apply 2 to 5 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of 1/2 inch of water if rainfall does not occur within 7 days.</p> <p><b>Woody Ornamentals other than Azaleas Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply rates greater than 3 1/4 fl. oz./100 gals. more often than once every 10 weeks.</li> <li>• Do not apply to <b>Euonymus</b>.</li> </ul>

## INTERIORSCAPES AND INDIVIDUAL PLANT USE

In situations where water volumes used are much less than 100 gals. and the area treated is small, the table below provides **Axyl-Shield 2E Foliar** rates to make small quantities of solution. Refer to the plant type for the correct fl. oz. of product to use when utilizing this table.

Rate of Axyl-Shield 2E Foliar (fl. oz.)	Amount of Axyl-Shield 2E Foliar to Add to Water to Make the Following Quantities			
	1 gal.	5 gals.	10 gals.	25 gals.
0.5	7 drops	37 drops/ 0.75 mL	75 drops/ 1.5 mL	3.75 mL/ 3/4 tsp.
1.0	15 drops	75 drops/ 1.5 mL	3.0 mL/ 1/2 tsp.	7.5 mL/ 1 1/2 tsp./ 1/2 Tbsp.
2.0	30 drops	3.0 mL/ 1/2 tsp.	6.0 mL/ 1 1/4 tsp.	15.0 mL/ 3.0 tsp./ 1 Tbsp.
3.0	45 drops	4.5 mL/ 1 tsp.	9.0 mL/ 2 tsp.	22.5 mL/ 4 1/2 tsp./ 1 1/2 Tbsp.
4.0	60 drops/ 1.25 mL	6.0 mL/ 1 1/4 tsp.	12.0 mL/ 2 1/2 tsp.	30.0 mL/ 2 Tbsp./ 1 oz.

**Soil Drench:** Apply enough solution to wet the root area of the plants; apply at least 1 pint of solution per square foot.

### CITRUS IN NURSERIES AND LANDSCAPE PLANTINGS (NON-BEARING)

**Axyl-Shield 2E Foliar** on nonbearing citrus will control citrus foot rot, root rot, and trunk canker caused by *Phytophthora* spp. Apply to the soil as a drench or as a spray in a banded application. Make the first application of **Axyl-Shield 2E Foliar** at the time of planting. Make repeated applications at 3-month intervals during the period when trees are actively growing.

**Soil Drench:** Mix 4-6 fl. oz./100 gals. of water and apply as a drench over the row at the rate of 100-250 gals./1,000 feet of row. The width of the drench treatment must be wide enough to cover the root systems of the plants.

**Soil Surface Spray:** Apply 2 gals. per acre of treated soil in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain uniform coverage. If applications are banded, make the treated area wide enough to cover the root systems of the plants. Follow with a 1/2-inch irrigation.

Calculate the amount of **Axyl-Shield 2E Foliar** needed for a banded treatment by using the formula at the end of the **Use Information** section of this label.

#### Citrus in Nurseries and Landscape Plantings (Non-Bearing) Restrictions:

- Do not use in greenhouse citrus nursery stock intended for commercial fruit production.
- Not for residential use.

**CONIFERS IN NURSERIES AND PLANTATIONS  
(INCLUDING CHRISTMAS TREES)**

**Not for residential use**

**Axyl-Shield 2E Foliar** controls *Phytophthora* root rot of conifers. Apply 1/2-1 inch of water after application if rain is not expected within 3 days.

**Conifers in Nurseries**

Seedbeds and Plug-Plantings	Apply 2 1/2 pts. of <b>Axyl-Shield 2E Foliar</b> in at least 50 gals. of water per acre in the spring and again in the fall.
2-0 Transplants	Apply 5 pts. <b>Axyl-Shield 2E Foliar</b> in at least 50 gals. of water per acre in the spring and again in the fall.

**Conifers in Plantations**

**Axyl-Shield 2E Foliar** will aid in the control of *Phytophthora* root rot when used in conjunction with good cultural practices. The use of **Axyl-Shield 2E Foliar** will not overcome poor management practices such as planting on sites that are prone to flooding or are poorly drained. **Axyl-Shield 2E Foliar** fungicide will not revitalize trees showing moderate to severe disease symptoms.

Apply 1 1/4-2 1/2 gals. of **Axyl-Shield 2E Foliar** in a minimum of 50 gals. of water as a directed soil spray. Do not apply as a foliar spray. Make applications in early spring before growth starts and in the fall before the ground freezes. Calculate the amount of **Axyl-Shield 2E Foliar** needed for a banded treatment by using the formula at the end of the **General Information** section of the label.

**DECIDUOUS FRUITS AND NUTS IN NURSERIES  
(NON-BEARING)**

**Axyl-Shield 2E Foliar** controls *Pythium* root rot and *Phytophthora* root, crown, and collar rot of non-bearing deciduous fruits and nuts.

Apply 6 fl. oz./1,000 sq. ft. in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. Treat sufficient surface area in nurseries to cover the root zone of the plants. Make additional applications as necessary at 3-month intervals during the growing season.

**Deciduous Fruits and Nuts in Nurseries (Non-Bearing) Restrictions:**

- Do not apply to trees that will bear harvestable fruit within 12 months of the last application.
- Do not apply more than 17.6 oz./1,000 sq. ft. (6 gals. Per acre) of **Axyl-Shield 2E Foliar** per year.

**TURF**

**Golf Courses, Lawns, Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas, Athletic Fields, and Sod Farms. Not registered for use on residential turf.**

**Axyl-Shield 2E Foliar** controls *Pythium* blight and *Pythium* damping-off in turf, yellow tuft (downy mildew) in bluegrass, and downy mildew in St. Augustinegrass. **Within the specified rate range given for turf, use the lower rate within the specified rate range for the shortest interval listed and the higher rate within the specified rate range for the longest interval. Under severe disease conditions, use the highest rate within the specified rate range and shortest interval specified.**

<b>Established Turf</b> <i>Pythium</i> Blight Yellow Tuft Downy Mildew	Apply as a preventative treatment at 1-2 fl. oz. in 3-5 gals. of water per 1,000 sq. ft. Retreat at 10- to 21-day intervals. During periods of prolonged conditions favorable for disease development, use 2 fl. oz. on a 14-day schedule.
<b>Newly Seeded Areas</b> <i>Pythium</i> Damping-Off <i>Pythium</i> Blight Yellow Tuft Downy Mildew	Apply 1-2 fl. oz. in 5-10 gals. of water per 1,000 sq. ft. immediately after seeding. Retreat at 7- to 14-day intervals if conditions remain favorable for disease.  <b>NOTE:</b> For long-term control of <i>Pythium</i> in areas when using seed treated with the active ingredient contained in <b>Axyl-Shield 2E Foliar</b> , make application of <b>Axyl-Shield 2E Foliar</b> 7-10 days after seeding.

**NOTE:** For control of other diseases of turf, use propiconazole alone or in tank mix combination with **Axyl-Shield 2E Foliar**. Refer to the propiconazole label for rates, precautions, restrictions, etc.

**Resistance Management:** To minimize the potential for resistance, 1) Make no more than 3 applications of **Axyl-Shield 2E Foliar** per season, and 2) Apply an alternate EPA-registered fungicide for *Pythium* control at least once during the season.

#### ROTATIONAL CROPS

Do not plant any crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months.

#### SEED TREATMENT

**Axyl-Shield 2E Foliar** is a systemic fungicide for use as a seed dressing.

The Federal Seed Act requires that containers containing treated seeds shall be labeled with the following statements:

- This seed has been treated with **Axyl-Shield 2E Foliar**, a fungicide containing metalaxyl.
- Do not use treated seed for feed, food, or oil purposes.

The U.S. Environmental Protection Agency requires the following statements on containers containing seed treated with metalaxyl:

- Store treated seed away from food and feedstuffs.
- Do not allow children, pets or livestock to have access to treated seeds.
- Wear long pants, long-sleeved shirt and protective gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading and planting.
- Dispose of all excess treated seed by burying seed away from bodies of water.
- Do not contaminate bodies of water when disposing of planting equipment wash water.
- Dispose of seed packaging or containers in accordance with local requirements.
- Excess treated seed may be used for ethanol production if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in ethanol by-products that are used in agronomic practice.

**Resistance Management:** **Axyl-Shield 2E Foliar** is a systemic fungicide having a specific mode of action. **Axyl-Shield 2E Foliar** may be subject to development of resistant strains of fungi. Development of resistance cannot be predicted.

Sharda USA LLC will not assume liability for crop damage resulting from resistant strains of fungi. Consult with State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible **Axyl-Shield 2E Foliar** resistant strains of fungi. Apply **Axyl-Shield 2E Foliar** as a water-based slurry with other registered seed treatment insecticides and fungicides through standard slurry or mist-type commercial seed treatment equipment.

<b>Grain Sorghum</b>	For <i>Pythium</i> damping-off control: Apply <b>Axyl-Shield 2E Foliar</b> as a seed treatment at 1-2 fl. oz. per 100 lbs. of seed
<b>Soybeans</b>	For <i>Pythium</i> damping-off and early season Phytophthora control: Apply <b>Axyl-Shield 2E Foliar</b> as a seed treatment at 1-2 fl. oz. per 100 lbs. of seed.
<b>Sunflower</b>	For control of systemic downy mildew: Apply <b>Axyl-Shield 2E Foliar</b> as a seed treatment at 4 fl. oz. per 100 lbs. of seed.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Store in a cool, dry location, out of direct sunlight, and away from exposure to air and moisture. Do not store in temperatures over 90°F for prolonged period of time. After prolonged storage in intense cold, allow product to return to approximately 75°F before use.

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

### CONTAINER HANDLING:

**Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes.

Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC: 1-800-424-9300.**

## CONDITIONS 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 Sharda USA 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 Sharda USA LLC and Seller harmless for any claims relating to such factors.

Sharda USA 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 conditions not reasonably foreseeable to or beyond the control of Seller or Sharda USA LLC and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Sharda USA 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 Sharda USA 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 SHARDA USA 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 SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sharda USA 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 Sharda USA LLC.

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# Axyl-Shield 2E Foliar

FUNGICIDE FOR THE CONTROL OF CERTAIN DISEASES IN VARIOUS CROPS  
CAUSED BY THE OOMYCETE CLASS OF FUNGI.

FOR USE AS A SEED TREATMENT FOR CONTROL OF SYSTEMIC DOWNY  
MILDEW, *PYTHIUM* SEED ROT, *PYTHIUM* DAMPING-OFF, AND EARLY  
SEASON *PHYTOPHTHORA* DISEASES OF CERTAIN CROPS.

FOR THE CONTROL OF CERTAIN DISEASES IN CONIFERS, NON-BEARING  
CITRUS, NON-BEARING DICOUOUS FRUITS AND NUTS, ORNAMENTALS, AND TURF.  
NOT FOR RESIDENTIAL USE

## ACTIVE INGREDIENT:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester . . . . . 23.0%

OTHER INGREDIENTS: . . . . . 77.0%

TOTAL: . . . . . 100.0%

Contains Petroleum Distillates.

Contains 2 lbs. active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN  
DANGER/PELIGRO**



**POISON/VENENO**

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

See inside booklet for complete Directions For Use and Limitation of Warranty and Liability.

## FIRST AID

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Consideration should be given to gastric lavage with an endotracheal tube in place. A slurry of activated charcoal in water may be left in stomach. Give a saline laxative followed by symptomatic and supportive care. Probable mucosal damage may contraindicate the use of gastric lavage.

**EMERGENCY TELEPHONE NUMBERS:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL: **1-800-222-1222**. FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC **1-800-424-9300**.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER/PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. Avoid contact with skin. Do not get in eyes or on clothing. Wear goggles, face shield, or safety glasses. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. **PESTICIDE STORAGE:** Store in a cool, dry location, out of direct sunlight, and away from exposure to air and moisture. Do not store in temperatures over 90°F for prolonged period of time. After prolonged storage in intense cold, allow product to return to approximately 75°F before use. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. **For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. **For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC: 1-800-424-9300.**

Manufactured For: Sharda USA LLC, 7217 Lancaster Pike, Suite A, Hockessin, Delaware 19707  
EPA Reg. No. 83529-42 EPA Est. No. 70815-GA-001 Net Contents: 1 Gallon