OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
WASHINGTON, D.C. 20460

January 29, 2026

Chloe Tullock
NewLeaf Symbiotics
1005 North Warson Road
St. Louis MO, 63132

Subject: Pesticide Registration Improvement Act (PRIA) Labeling Amendment – New Use in Residential Settings and Addition of Application Methods
Product Name: TS601
EPA Registration Number: 95699-1
EPA Receipt Date: 11/14/2024
Action Case Number: 00638211

Dear Chloe Tullock:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable under FIFRA section 3(c)(5).

You must submit and/or cite all data required for registration or registration review of your product when the U.S. Environmental Protection Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to EPA’s Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Jennifer Odom-Douglas via email at odomdouglas.jennifer@epa.gov.

Sincerely,

Alexandra Boukedes

Digitally signed by Alexandra Boukedes
Date: 2026.01.29 15:00:05 -05'00'

Alexandra Boukedes, Product Manager 92
Microbial Pesticides Branch
Biopesticides and Pollution Prevention Division (7511M)
Office of Pesticide Programs

Enclosures: Stamped Label
Science Memo dated June 11, 2025

TS601™ [TS601 logo]

[Alternate Brand Names: TS601-P; TS601-SC; TS601-RC]

[NewLeaf Symbiotics NL Image/Logo][Distributor Brand Name Logo] [Distributor Company Logo]
([Biological Fungicide][Bio[-]fungicide]) for Use in ([Agriculture] [Greenhouses][Ornamentals][Turf])

ACTIVE INGREDIENT:
Methylorubrum populi strain NLS0089* 2.0%
OTHER INGREDIENTS: 98.0%
Total: 100.0%
* Contains not less than 1 X 10^9 CFU/g of product.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See ([back] [side] [other] [inside]) ([side] [of label] [panel(s)] [attached] [booklet]) for additional precautionary information, directions for use, storage and disposal and Limited Warranty and Disclaimer.

FIRST AID	
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF 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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this product (including general health concerns or pesticide incidents), call the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday, 8 AM to 12 PM PST, or at http://npic.orst.edu. For medical emergencies, call your local poison control center at 1-800-222-1222.	

EPA Reg. No.: 95699-1
EPA Est. No.: XXXXX-XX-XXX

Net weight:
[Batch] [Lot] No.:

Manufactured for:
NewLeaf Symbiotics, Inc.
1001 N. Warson Road
Suite 100
St. Louis, MO 63132

[Not for Sale or Use After:][Expiration Date:]

Pat. newleafsym.com/patents/

[Note to Reviewer: Language within brackets is optional label language. When brackets are enclosed in parenthesis, one bracketed option must be chosen.] [* Not registered for use in California]

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:
CAUTION: Harmful if inhaled. Avoid breathing spray mist. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE):
Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks

Mixer/loaders and applicators (except treated seed baggers and bag sewers) must wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

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

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR § 170.607 (d), (e), and (f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

USER SAFETY RECOMMENDATIONS
Users should:

- 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: *For terrestrial uses:* Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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 State or Tribal agency responsible for pesticide regulation.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are **NOT** within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is

used to produce agricultural plants on farms, forests, nurseries or greenhouses.

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

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 4 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 early entry into 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, wear:

- coveralls
- waterproof gloves
- shoes plus socks

BASIC USE INFORMATION

TS601 is a broad spectrum, preventative product for the suppression of listed plant diseases [via [multiple modes of action, including] induction of the plant's natural defense mechanisms (induced systemic resistance (ISR)). This results in reduced disease incidence and severity.] For the best results, apply at least 7 days before the expected disease occurs. Apply TS601 alone, in alternating spray programs, or in tank mixes with other registered crop protection products. [Apply TS601 as a foliar spray, pre-plant dip, soil and/ or seed application alone or in tank mixes with other registered crop protection products] [or] [with a seed lubricant][.] When conditions are conducive to heavy disease pressure, use TS601 ([in combination] [or] [in a rotational program]) with other registered fungicides effective against the target pathogen. Apply TS601 with spray equipment commonly used for making ground or aerial applications and irrigation systems commonly used for chemigation. Heavy rainfall or irrigation shortly after application may require retreatment. TS601 is labeled for use in field crops[*], indoor/outdoor nurseries[*], greenhouses[*], shadehouses[*], interiorscapes[*], commercial landscapes[*], and on turf[*].
[TS601 is most effectively used in a preventive disease management program.][For improved performance, use TS601 in a tank-mix or rotational program with other registered fungicides.][When using TS601 alone as a foliar spray or drench, use a rate of 1 - 10 oz TS601 per acre.][Increase the application rate and/or decrease spray intervals of TS601 depending upon disease pressure.]

FUNGICIDE RESTANCE MANAGEMENT AND INTEGRATED PEST MANAGEMENT (IPM)

Integrate TS601 into an overall disease and pest management strategy whenever fungicide use is necessary. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

Be sure use of this product conforms to resistance management strategies, which may include rotating

and/or tank mixing with other products with different modes of action.

USE RATE DETERMINATION

Carefully read and follow all label directions, use rates and restrictions. Application of TS601 prior to or in the early stages of disease development provides the best suppression of the targeted plant disease. Use maximum label rates and shortened spray intervals for conditions conducive to threatening or rapid disease development. For proper application, determine the number of acres to be treated, the label use rate and select appropriate gallonage to give good canopy penetration and coverage of plant parts to be protected. Prepare only the amount of spray solution required to treat the measured acreage. Accurate spray equipment calibration is essential prior to use.

PREHARVEST INTERVAL

TS601 can be applied up to and on the day of harvest.

[FOR USE AS A]FOLIAR SPRAY ON SELECT AGRICULTURAL FIELD CROPS AND SELECT AGRICULTURAL GREENHOUSE CROPS

MIXING INSTRUCTIONS

MIXING:

- Prepare a pre-mix that consists of 1-part TS601 plus a minimum of 3 parts water
- Once the premix is complete, introduce this solution into the full pesticide tank solution
- Maintain sufficient tank agitation during the mixing and application operations

TS601 must be diluted with water. Partially fill the spray tank with clean, non-chlorinated water and begin agitation. Add the specified amount of TS601 to the tank.. Finish filling the tank to the desired volume to obtain the proper spray concentration. It is critical that the spray solution be agitated during mixing and application to assure a uniform suspension. Do not allow spray mixture to stand overnight or for longer than 24 hours. [Maintain a spray solution pH between 5.5 and 7.5.]

TS601 may be tank mixed with other registered pesticides to enhance plant disease suppression [and/or other products labeled for foliar application]. This product **cannot** be mixed with any product with prohibition against such mixing. When tank mixing TS601 with other products [including when sold as a co-pack with [Carry-R Foliar][other brand names with same directions for use],]always read and follow all use directions, restrictions, and precautions of both TS601 and the tank-mix partner(s). Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

COMPATIBILITY: Do not combine TS601 in the spray tank with pesticides, surfactants or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective and non-injurious under your use conditions.

TS601 is compatible with many commonly used pesticides, fertilizers, adjuvants and surfactants but has <u>not</u> been fully evaluated with all of these. To ensure compatibility of tank-mix combinations, evaluate them prior to use as follows: Using a suitable container, add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

ADDITIVES: TS601 is compatible with a wide range of additives but has not been evaluated with all products. Contact your sales representative or dealer for specific information on compatible insecticides, miticides, and other additives.

APPLICATION INSTRUCTIONS

TS601 is a broad spectrum biofungicide for the prevention and suppression of diseases on labeled crops and non-crops. In [greenhouse] [and] [field] [and] [landscape] settings, TS601 should be applied at least 7 days before expected disease occurs. Repeat applications as needed. Apply in sufficient water to obtain thorough coverage. For improved performance under moderate to severe ([pathogen][disease]) pressure, increase rates or use TS601 in a tank-mix or rotational program with other registered fungicides.

SPRAY DRIFT: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors, including the location of application site in proximity to people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals when making decisions. Where states have more stringent regulations, they should be observed.

GROUND: This product can be applied by commonly used ground equipment, such as hose-end, pressurized, greenhouse and hand-held sprayers. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration. Maintain agitation during mixing and application to assure uniform product suspension. Thorough coverage of all foliage is essential for effective disease suppression. Use the application rate, indicated for the appropriate crop in the Application Rate tables of this label, in sufficient water to achieve thorough coverage. Overall, to achieve good coverage, use proper spray pressure, gallonage per acre, nozzles, nozzle spacing and ground speed.

AERIAL: This product can be applied by aerial application. Refer to the Aerial Drift Reduction Information section of this label for additional directions and precautions. Use the application rate, indicated for the appropriate crop in the Application Rate tables of this label, in sufficient water to achieve coverage and not less than 5 gallons of water per acre.

CHEMIGATION: This product can be applied through sprinkler (center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move) or drip-type irrigation systems. Refer to the Chemigation Directions for Use section of this label for additional directions and precautions. Maintain agitation during mixing and application to assure uniform product suspension. Use the application rate, indicated for the appropriate crop in the Application Rate tables of this label, in sufficient water to achieve through coverage.

Chemigation Instructions:

A. Apply this product only through sprinkler including center pivot, lateral move, or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
E. 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.

- Follow mixing instructions above. Agitation is recommended in the pesticide supply tank. Apply the pesticide during the first half of water application.

For Sprinkler Chemigation:

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

For chemigation through systems connected to public water systems:

- 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 regular serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream form the point of pesticide introduction As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

For Drip (Trickle) Chemigation:

- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve

located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Center Pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment (Use only with electric or oil hydraulic drive systems that provide a uniform water distribution):

- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch of water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures specified by the equipment manufacturer. Run system at 80-95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of TS601 fungicide required to treat area.
- Add required amount of TS601 fungicide and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until TS601 fungicide solution has cleared the sprinkler head.

Solid Set, Side (Wheel) Roll, and Hand Move Irrigation Equipment:

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10- to 30-minute interval.
- Determine the amount of TS601 fungicide required to treat area.
- Add the required amount of TS601 fungicide into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
- Operate system at normal pressures specified by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject TS601 fungicide at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until TS601 fungicide solution has cleared the last sprinkler head.

Begin applications when environmental conditions are conducive to disease development and repeat as needed. See application rate tables for more detailed application instructions.

Apply sufficient water to provide complete coverage of plants. When conditions are conducive to rapid disease development, use TS601 in a rotational program with other registered fungicides.

AERIAL DRIFT REDUCTION INFORMATION

BASIC: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all these factors when making

decisions. Where states have more stringent regulations, they should be observed.

INFORMATION ON DROPLET SIZE: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets will reduce drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE: Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage. Nozzle Orientation - Orienting nozzles, so that the spray is released parallel to the airstream, produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles that are oriented straight back produce the largest droplets and the lowest drift. Use medium or coarser spray according to the ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

BOOM WIDTH: For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade.

APPLICATION HEIGHT: Do not release spray at a height greater th.an 10 feet above the top of the ground or the crop canopy unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above ground or canopy.

SWATH ADJUSTMENT: Use upwind swath displacement. When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

WIND: Apply only when wind speed is 3 - 10 miles per hour as measured by an anemometer. Drift potential is lowest between wind speeds of 3 – 10 miles per hour. Many factors, however, including droplet size and equipment type, determine drift potential at any given speed. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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

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

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent, sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

TS601 has a 0-Day Pre-Harvest Interval for all crops contained on this label.

Under moderate to severe disease pressure, for improved performance, increase rates and reduce spray intervals or use TS601 in a tank-mix or rotational program with other registered fungicides.

[FOR USE AS A]SOIL-TREATMENT ON SELECT AGRICULTURAL FIELD CROPS

TS601 is a broad spectrum biofungicide for the prevention and suppression of diseases on labeled crops and non-crops. In [greenhouse] [and] [field] [and] [landscape] settings, TS**6**01 should be applied at least 7 days before expected disease occurs. Repeat applications as needed. Apply in sufficient water to obtain thorough coverage. For improved performance under moderate to severe ([pathogen][disease]) pressure, increase rates or use TS**6**01 in a tank-mix or rotational program with other registered fungicides.

MIXING INSTRUCTIONS

MIXING:

- Prepare a pre-mix that consists of 1-part TS601 plus a minimum of 3 parts water
- Once the premix is complete, introduce this solution into the full pesticide tank solution
- Maintain sufficient tank agitation during the mixing and application operations

TS601 must be diluted with water. Partially fill the spray tank with clean, non-chlorinated water and begin agitation. Add the specified amount of TS601 to the tank. Finish filling the tank to the desired volume to obtain the proper spray concentration. It is critical that the spray solution be agitated during mixing and application to assure a uniform suspension. Do not allow spray mixture to stand overnight or for longer than 24 hours. [Maintain a spray solution pH between 5.5 and 7.5.]

TS601 may be tank mixed with other registered pesticides to enhance plant disease suppression. This product cannot be mixed with any product with prohibition against such mixing. When tank mixing TS601 with other registered pesticides, always read and follow all use directions, restrictions, and precautions of both TS601 and the tank-mix partner(s). Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

COMPATIBILITY: Do not combine TS601 in the spray tank with pesticides, surfactants or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective and non-injurious under your use conditions.

TS601 is compatible with many commonly used pesticides, fertilizers, adjuvants and surfactants but has not been fully evaluated with all of these. To ensure compatibility of tank-mix combinations, evaluate them prior to use as follows: Using a suitable container, add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

ADDITIVES: TS601 is compatible with a wide range of additives but has not been evaluated with all

products. Contact your sales representative or dealer for specific information on compatible insecticides, miticides, and other additives.

APPLICATION INSTRUCTIONS:

All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 1 to 10 oz of TS601 in the appropriate amount of water per acre according to the mixing instructions. Use the higher rates when the weather conditions are expected to be conducive for disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. TS601 can be mixed with chemical fungicides registered for soil applications.

Soil Surface (Drench) Applications at Planting: Use at planting, seeding, or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, as a drench or directed spray using hand-held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler or drip irrigation systems.

Shanked-In or Injected Applications: TS601 can be shanked-in or injected into the soil prior to-, at-, or post-planting/ transplanting of crops alone or with most types of liquid nutrients.

In-Furrow Applications: For in-furrow applications, apply TS601 as an in-furrow spray in the appropriate amount of water per acre for the crop at planting according to the mixing instructions. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered.

Soil Surface (Drench) Applications at Any Stage of Growth: Apply the finished spray mixture to the surface of the soil as a drench or directed spray using hand-held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

[FOR USE AS]DRY SEED TREATMENT AND PLANTER BOX[/ HOPPER BOX] (ONSITE):

MIXING INSTRUCTIONS

TS601 may be applied mixed with seed flow lubricants and/or other products labeled for planter box use but has not been evaluated with all of these products. This product cannot be mixed with any product with prohibition against such mixing. When mixing TS601 with other products, including registered pesticides, always read and follow all use directions, restrictions, and precautions of both TS601 and the partner(s). Use of the resulting mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label application rates.

COMPATIBILITY: Do not combine TS601 in the planter box with pesticides, surfactants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective and non-injurious under your use conditions.

APPLICATION INSTRUCTIONS

Apply product by dispersing the powder evenly onto seed. Mix well and ensure that seed is uniformly coated. For application rates, see application rates table. Use higher rates if the field has a history of moderate to heavy ([disease]) pressure, [if the regional forecast indicates high expected disease pressure] or if minimum/low till programs are in place. [TS601 can be mixed with a seed flow lubricant [and other products labeled] for onsite planter box applications, see mixing instructions for details.]

[To ensure TS601 efficacy, seed should be planted within six months of mixing TS601 with seed flow lubricants and seed in the planter box.] [If sold as a co-pack with ([BioWake for Soybeans][Bolst-R][Calib-R Cotton][Calib-R SG][DUST+B4] [Nutriquire Terrasym Corn][Nutriquire Terrasym Soybean][Terrasym 450][Terrasym 450 + DUST][Terrasym VT][Provid-R Corn][other Brand Names with the same label directions for use]), pour ([T601][Supplemental Distributor Brand Name]) into the ([Bolst-R][Calib-R Cotton][Calib-R SG][DUST+B4] [Nutriquire Terrasym Corn][Nutriquire Terrasym Soybean][Terrasym 450][Terrasym 450 + DUST][Provid-R Corn][Terrasym VT][other Brand Names with the same label directions for use]) packaging. Seal package and mix well. Allow product to settle before reopening package for application to seed.] [If sold as a co-pack with [Revline Hopper Throttle™ Peanut][or][Revline Hopper Throttle™ Soybean][or][Revline Hopper Throttle™ Cotton][or][other Brand Names with the same label directions for use]), push down button labeled ([TS601][Supplemental Distributor Brand Name] to release contents into the base. Seal package and shake aggressively. Allow product to settle before reopening package for application to seed.]

[FOR USE AS]SEED TREATMENT

MIXING INSTRUCTIONS

MIXING: TS601 may be mixed with other registered pesticides to enhance seed germination. This product cannot be mixed with any product with prohibition against such mixing. When mixing TS601 with other registered pesticides, always read and follow all use directions, restrictions, and precautions of both TS601 and the mix partner(s). Use of the resulting mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

To mix when using with other chemical fungicide or insecticide seed treatments: first add the chemical fungicides or insecticides to the slurry mix with approximately 10% of the required water. Slowly add the TS601 to the slurry until a suspension is obtained. Add the remainder of the water and maintain continuous agitation. Do not store mixed slurries for more than 24 hours.

To mix when using only TS601 seed treatment: Add all of the required water to TS601 and mix until a suspension is obtained. Maintain continuous agitation. Do not store mixed slurries for more than 24 hours.

COMPATIBILITY: Do not combine TS601 in the slurry with pesticides, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective and non-injurious under your use conditions. To ensure compatibility of seed treatment combinations, evaluate them prior to use as follows: Using a suitable container, add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

TS601 is compatible with many commonly used pesticides, but has **not** been fully evaluated with all of these.

APPLICATION INSTRUCTIONS

TS601 as a seed treatment may be applied as a water-based slurry alone or with other registered seed treatment insecticides and fungicides through standard slurry or mist commercial seed treatment equipment. Under moderate to severe ([pathogen][disease]) pressure, for improved performance, increase rates or use TS601 in a program with other registered fungicides for seed treatment.

See application rate tables for more detailed application instructions.

SEED BAG LABEL REQUIREMENTS

The Federal Seed Act requires that bags containing seeds treated with this product shall be labeled with the following information:

- This seed has been treated with *Methylorubrum populi* strain NLS0089.
- Do not use for feed, food or oil purposes. Store away from feed and food stuffs.

User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

[FOR USE AS]PRE-PLANT DIP APPLICATION FOR VEGETATIVELY PROPAGATED CROPS

MIXING AND APPLICATION INSTRUCTIONS

TS601 is a broad spectrum bio[-]fungicide for the prevention and suppression of diseases on labeled crops and non-crops. In [greenhouse] [and] [field] [and] [landscape] settings,

For Cutting and Bare Root Dip Applications: Dip cuttings and bare root transplants in a suspension composed of 2 oz of TS601 per gallon of non-chlorinated water. Do not add any other products to this suspension. After dipping the cuttings or bare root transplants, follow standard practices for planting. Discard suspension after 24 hours.

APPLICATION RATE TABLES

Artichoke - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Alternaria Leaf Blight / Spot /Early Blight[*] *Alternaria spp.* **Charcoal rot[*]** *Macrophomina* spp. **Fusarium Dry Rot[*]** *Fusarium spp.* **Fusarium wilt[*]** *Fusarium* spp. **Gray Mold[*]** *Botrytis cinerea* **Late Blight[*]** *Phytophthora infestans* **Leak[*]** *Pythium spp.* **Pink Rot[*]** *Phytophthora spp.* **Powdery Mildew[*]** *Erysiphe spp., Leveillula taurica* **Rhizoctonia Canker and Black Scurf[*]** *Rhizoctonia solani* **Verticillium Wilt[*]** *Verticillium spp.*	1-10

Asparagus - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Botrytis blight[*] *Botrytis cinerea* **Damping-Off[*]** *Fusarium spp., Phytophthora spp., Pythium spp., Rhizoctonia solani* **Fusarium Root Rot[*]** *Fusarium solani* **Fusarium Wilt[*]** *Fusarium oxysporum f. sp. phaseoli* **Gray Mold[*]** *Botrytis cinerea* **Powdery Mildew[*]** *Erysiphe spp.* **Rust[*]** *Puccinia asparagi* **White Mold[*]** *Sclerotinia sclerotiorum*	1-10

Avocado and Mango - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Glomerella cingulata, Colletotrichum ananas, Colletotrichum gloeosporioides* **Armillaria Crown and Root Rot (Shoestring Rot) [*]** *Armillaria mellea* **Bacterial Canker[*]** *Pseudomonas syringae* **Blossom Blight/ Gray mold[*]** *Botrytis cinerea* **Crown Rot[*]** *Fusarium spp.* **Damping off[*]** *Rhizoctonia spp.* **Fusarium Wilt[*]** *Fusarium oxysporum* **Phytophthora Crown and Root Rot[*]** *Phytophthora spp.* **Powdery mildew[*]** *Erysiphe spp., Oidium spp.* **Scab[*]** *Sphaceloma perseae, Sphaceloma mangiferae, Sphaceloma* spp. **Target spot[*]** *Corynespora cassiicola* **Verticillium Wilt[*]** *Verticillium spp.*	1-10

Bananas and Plantains - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Glomerella cingulata, Colletotrichum ananas, Colletotrichum gloeosporioides* **Armillaria Crown and Root Rot (Shoestring Rot)[*]** *Armillaria mellea* **Bacterial Canker[*]** *Pseudomonas syringae* **Blossom Blight/ Gray mold[*]** *Botrytis cinerea* **Crown Rot[*]** *Fusarium spp.* **Damping off[*]** *Rhizoctonia spp.* **Fusarium Wilt[*]** *Fusarium oxysporum* **Phytophthora Crown and Root Rot[*]** *Phytophthora spp.* **Panama disease[*]** *Fusarium oxysporum* f. sp. *cubense* **Powdery mildew[*]** *Erysiphe spp., Oidium spp.* **Scab[*]** *Sphaceloma perseae, Sphaceloma mangiferae, Sphaceloma* spp. **Sigatoka[*]** *Mycosphaerella fijiensis* **Target spot[*]** *Corynespora cassiicola* **Verticillium Wilt[*]** *Verticillium spp.*	1-10

Berries – Foliar and Soil Application Methods Blueberry, Blackberry, Raspberry, Loganberry, Huckleberry, Gooseberry, Elderberry, Currant, and other berry crops	
Target Diseases	**Rate (oz/acre)**
Alternaria fruit rot[*] *Alternaria tenuissima* **Anthracnose fruit rot[*]** *Colletotrichum gloeosporioides, Colletotrichum acutatum* **Armillaria root rot[*]** *Armillaria* spp. **Bacterial canker[*]** *Pseudomonas* spp. **Bacterial leaf scorch[*]** *Xylella fastidiosa* **Botrytis blight / Gray mold[*]** *Botrytis cinerea* **Downy mildew[*]** *Peronospora sparsa* **Leaf rust[*]** *Pucciniastrum vaccinii* **Mummy berry[*]** *Monilinia vaccinii-corymbosi* **Phomopsis[*]** *Phomopsis vaccinii*	1-10

Phytophthora root rot[*] *Phytophthora* spp. **Powdery mildew[*]** *Microsphaera alni* **Sclerotinia[*]** *Sclerotinia sclerotiorum* **Sooty mold[*]** *Capnodium* spp.*, Fumago* spp.*, Scorias* spp*, Antennariella* spp.*, Aureobasidium* spp.*, Fumiglobus* spp., *and Limacinula* spp. **Verticillium wilt[*]** *Verticillium* spp.	

Berries –Pre-Plant Dip Application Method Blueberry, Blackberry, Raspberry, Loganberry, Huckleberry, Gooseberry, Elderberry, Currant, and other berry crops	
Target Diseases	**Rate (oz/gallon water)**
Alternaria fruit rot[*] *Alternaria tenuissima* **Anthracnose fruit rot[*]** *Colletotrichum gloeosporioides, Colletotrichum acutatum* **Armillaria root rot[*]** *Armillaria* spp. **Bacterial canker[*]** *Pseudomonas* spp. **Bacterial leaf scorch[*]** *Xylella fastidiosa* **Botrytis blight / Gray mold[*]** *Botrytis cinerea* **Downy mildew[*]** *Peronospora sparsa* **Leaf rust[*]** *Pucciniastrum vaccinii* **Mummy berry[*]** *Monilinia vaccinii-corymbosi* **Phomopsis[*]** *Phomopsis vaccinii* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Microsphaera alni* **Sclerotinia[*]** *Sclerotinia sclerotiorum* **Sooty mold[*]** *Capnodium* spp.*, Fumago* spp.*, Scorias* spp*, Antennariella* spp.*, Aureobasidium* spp.*, Fumiglobus* spp., *and Limacinula* spp. **Verticillium wilt[*]** *Verticillium* spp.	2

Brassica Vegetables (Cole Crops) - Foliar and Soil Application Methods Broccoli, Cabbage, Cauliflower, Brussels Sprouts, Collards, Kale, Mustard Greens, Kohlrabi, and other brassica leafy vegetables	
Target Diseases	**Rate (oz/acre)**
Alternaria leaf spot[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum higginsianum* **Black rot[*]** *Xanthomonas campestris pv. campestris* **Blackleg[*]** *Plenodomus lingam and Plenodomus biglobosus* **Cercospora leaf spot[*]** *Cercospora brassicicola* **Cercosporidium[*]***Cercosporidium personatum* **Charcoal rot[*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. nebraskensis **Clubroot[*]** *Plasmodiophora brassicae* **Downy mildew[*]** *Peronospora parasitica, Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pin rot[*]** *Alternaria* spp. **Powdery mildew[*]** *Erysiphe polygoni* **Pseudomonas spp.[*]** **Pythium damping off[*]** *Pythium* spp.	1-10

Rhizoctonia root rot[*] *Rhizoctonia* spp. **Rust[*]** *Albugo candida* **Southern blight[*]** *Sclerotium rolfsii* **Verticillium wilt[*]** *Verticillium* spp.	

Brassica Vegetables (Cole Crops) – Seed Treatment: liquid, dry, and planter box application methods Broccoli, Cabbage, Cauliflower, Brussels Sprouts, Collards, Kale, Mustard Greens, Kohlrabi, and other brassica vegetables	
Target Diseases	**Rate**
Alternaria leaf spot[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum higginsianum* **Black rot[*]** *Xanthomonas campestris pv. campestris* **Blackleg[*]** *Plenodomus lingam and P. biglobosus* **Cercospora leaf spot[*]** *Cercospora brassicicola* **Cercosporidium[*]***Cercosporidium personatum* **Charcoal rot[*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. nebraskensis **Clubroot** *Plasmodiophora brassicae* **Downy mildew[*]** *Peronospora parasitica, Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pin rot[*]** *Alternaria* spp. **Powdery mildew[*]** *Erysiphe polygoni* **Pseudomonas spp.[*]** **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Albugo candida* **Southern blight[*]** *Sclerotium rolfsii* **Verticillium wilt[*]** *Verticillium* spp.	1-10 oz per quantity of seed to plant one acre

Bulb Vegetables – Foliar and Soil Application Methods Onion, Garlic, Shallots, and other bulb vegetables (including those grown for seed production)	
Target Diseases	**Rate (oz/acre)**
Bacterial blight[*] *Xanthomonas* spp. **Botrytis leaf blight[*]** *Botrytis* spp. **Botrytis neck rot[*]** *Botrytis* spp. **Downy mildew[*]** *Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Mushy rot[*]** *Rhizopus* spp. **Onion downy mildew[*]** *Peronospora destructor* **Onion purple blotch[*]** *Alternaria porri* **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot[*]** *Phoma* spp. **Powdery mildew[*]** *Erysiphe* spp., *Leveillula* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia porri* **Verticillium wilt[*]** *Verticillium* spp.	1-10

White rot[*] *Sclerotium cepivorum*	

Bulb Vegetables – Seed Treatment: liquid, dry, and planter box application methods Onion, Garlic, Shallots, and other bulb vegetables (including those grown for seed production)	
Target Diseases	**Rate**
Bacterial blight[*] *Xanthomonas* spp. **Botrytis leaf blight[*]** *Botrytis* spp. **Botrytis neck rot[*]** *Botrytis* spp. **Downy mildew[*]** *Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Onion downy mildew[*]** *Peronospora destructor* **Onion purple blotch[*]** *Alternaria porri* **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot[*]** *Phoma* spp. **Powdery mildew[*]** *Erysiphe* spp., *Leveillula* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia porri* **Verticillium wilt[*]** *Verticillium* spp. **White rot[*]** *Sclerotium cepivorum*	1-10 oz per quantity of seed to plant one acre

Cereal Grains – Foliar and Soil Application Methods Barley, Millets, Oat, Rye, Sorghum, Triticale, and other cereal grain crops	
Target Diseases	**Rate (oz/acre)**
Alternaria Leaf Spot[*] *Alternaria spp.* **Anthracnose[*]** *Colletotrichum graminicola* **Bacterial blight[*]** *Xanthomonas* spp. **Bakanae[*]** *Gibberella fujikuroi* **Blast[*]** *Pyricularia oryzae* **Brown rot, Leaf spots and smuts[*]** *Cercospora* spp., *Entyloma* spp., **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot [*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. *nebraskensis* **Downy mildew[*]** *Pernospora fagopyri, Sclerophthora macrospora* **Tab spot[*]** *Drechlsera* spp. **Fusarium wilt[*]** *Fusarium* spp. **Loose smut[*]** *Ustilago tritici, Ustilago* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe graminis* **Pythium blight[*]** *Pythium* spp. **Pythium damping off[*]** *Pythium* spp. **Ralstonia[*]** *Ralstonia solanacearum* **Rhizoctonia bare patch/ root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia* spp. **Septoria blotch[*]** *Septoria* spp.	1-10

Sheath blight[*] *Thanatephorus cucumeris,* Anamorph: *Rhizoctonia solani, Thanatephorus kernel* **Sheath spot[*]** *Rhizoctonia oryzae* **Smut[*]** *Tilletia barclayana, Tilletia* spp. **Spot blotch[*]** *Cochliobolus* spp. **Stagonospora leaf and glume blotch[*]** *Stagonospora* spp **Stem rot[*]** *Sclerotium oryzae, Magnaporthe* spp. **Take-all [*]***Gaeumannomyces graminis* var. *graminis* **Verticillium wilt[*]** *Verticillium* spp.	

Cereal Grains – Seed Treatment: liquid, dry, and planter box application methods Barley, Millets, Oat, Rye, Sorghum, Triticale, Wheat, and other cereal grain crops	
Target Diseases	**Rate (oz per unit of seed)**
Alternaria Leaf Spot[*] *Alternaria spp.* **Anthracnose[*]** *Colletotrichum graminicola* **Bacterial blight[*]** *Xanthomonas* spp. **Bakanae[*]** *Gibberella fujikuroi* **Blast[*]** *Pyricularia oryzae* **Brown rot, Leaf spots and smuts[*]** *Cercospora* spp., *Entyloma* spp., **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot [*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. *nebraskensis* **Downy mildew[*]** *Pernospora fagopyri, Sclerophthora macrospora* **Tab spot[*]** *Drechlsera* spp. **Fusarium wilt[*]** *Fusarium* spp. **Loose smut[*]** *Ustilago tritici, Ustilago* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe graminis* **Pythium blight[*]** *Pythium* spp. **Pythium damping off[*]** *Pythium* spp. **Ralstonia[*]** *Ralstonia solanacearum* **Rhizoctonia bare patch/ root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia* spp. **Septoria blotch[*]** *Septoria* spp. **Sheath blight[*]** *Thanatephorus cucumeris,* Anamorph: *Rhizoctonia solani, Thanatephorus kernel* **Sheath spot[*]** *Rhizoctonia oryzae* **Smut[*]** *Tilletia barclayana, Tilletia* spp. **Spot blotch[*]** *Cochliobolus* spp. **Stagonospora leaf and glume blotch[*]** *Stagonospora* spp **Stem rot[*]** *Sclerotium oryzae, Magnaporthe* spp. **Take-all [*]***Gaeumannomyces graminis* var. *graminis* **Verticillium wilt[*]** *Verticillium* spp.	0.25 – 2 oz per unit of seed

Citrus Fruit - Foliar and Soil Application Methods Orange, Grapefruit, Lemon, Tangerine, Tangelo, Pummelo, and other citrus fruit	
Target Diseases	**Rate (oz/acre)**
Alternaria leaf spot[*] *Alternaria alternata*	1-10

Anthracnose[*] *Colletotrichum* spp. **Armillaria root rot[*]** *Armillaria* spp. **Botryosphaeria canker[*]** *Botryosphaeria dothidea* **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot [*]** *Macrophomina* spp. **Citrus canker[*]** *Xanthomonas campestris* pv. *citri* **Citrus greening disease[*]***Liberibacter* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. n*ebraskensis* **Fusarium wilt[*]** *Fusarium* spp. **Greasy spot[*]** *Mycosphaerella citri* **Melanose[*]** *Diaporthe citri* **Phytophthora root rot[*]** *Phytophthora* spp. **Post bloom fruit drop[*]** *Colletotrichum acutatum* **Pseudomonas spp.[*]** **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Scab[*]** *Elsinoë fawcettii* **Verticillium wilt[*]** *Verticillium* spp.	

Coffee - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum* spp. **Bacterial Blight[*]** *Pseudomonas syringae* **Botrytis[*]** *Botrytis cineria* **Coffee berry disease[*]** *Colletotrichum coffeanum* **Coffee rust[*]** *Hemileia vastatrix* **Coffee wilt[*]** *Fusarium xylarioides* **Damping off[*]** *Pythium spp., Rhizoctonia spp.* **Verticillium wilt[*]** *Verticillium* spp.	1-10

Corn - Foliar and Soil Application Methods Feed Corn, Field Corn, Fuel Corn, Popcorn, Seed Corn, Silage Corn, Sweet Corn	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum graminicola* **Bacterial leaf streak[*]** *Xanthomonas vasicola, Cochliobolus heterostrophus* **Black root rot[*]** *Thielaviopsis basicola* **Common rust[*]** *Puccinia sorghi* **Corn Smut[*]** *Tilletia barclayana* **Diplodia leaf streak/ ear rot[*]** *Stenocarpella* spp. **Eyespot[*]** *Kabatiella zeae* **Fusarium ear rot[*]** *Fusarium verticillioides* **Fusarium wilt[*]** *Fusarium* spp. **Goss's wilt[*]** *Clavibacter nebraskensis* **Gray leaf spot[*]** *Cercospora zeae-maydis* **Nigrospora ear and cob rot[*]** *Nigrospora oryzae* **Northern leaf blight[*]** *Exserohilum turcicum, Helminthosporium turcicum* **Northern leaf spot[*]** *Cochliobolus carbonum* **Phytophthora root rot[*]** *Phytophthora* spp.	1-10

Pythium damping off[*] *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia* spp. **Southern leaf blight[*]** *Bipolaris maydis, Helminthosporium maydi,* **Southern rust[*]** *Puccinia polysora* **Tar Spot[*]** *Phyllachora maydis* **Verticillium wilt[*]** *Verticillium* spp. **White mold[*]** *Sclerotinia sclerotiorum*	

Corn – Seed Treatment: liquid, dry, and planter box application methods Feed Corn, Field Corn, Fuel Corn, Popcorn, Seed Corn, Silage Corn, Sweet Corn	
Target Diseases	**Rate (oz per unit of seed)**
Anthracnose[*] *Colletotrichum graminicola* **Bacterial leaf streak[*]** *Xanthomonas vasicola, Cochliobolus heterostrophus* **Black root rot[*]** *Thielaviopsis basicola* **Common rust[*]** *Puccinia sorghi* **Corn Smut[*]** *Tilletia barclayana* **Diplodia leaf streak/ ear rot[*]** *Stenocarpella* spp. **Eyespot[*]** *Kabatiella zeae* **Fusarium ear rot[*]** *Fusarium verticillioides* **Fusarium wilt[*]** *Fusarium* spp. **Goss's wilt[*]** *Clavibacter nebraskensis* **Gray leaf spot[*]** *Cercospora zeae-maydis* **Nigrospora ear and cob rot[*]** *Nigrospora oryzae* **Northern leaf blight[*]** *Exserohilum turcicum, Helminthosporium turcicum* **Northern leaf spot[*]** *Cochliobolus carbonum* **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp. **Rust[*]** *Puccinia* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Southern leaf blight[*]** *Bipolaris maydis, Helminthosporium maydi,* **Southern rust[*]** *Puccinia polysora* **Tar Spot[*]** *Phyllachora maydis* **Verticillium wilt[*]** *Verticillium* spp. **White mold[*]** *Sclerotinia sclerotiorum*	0.125-5 oz per unit of seed (80,000 seeds)

Cotton – Foliar and Soil Application Methods Cotton, Short Staple Cotton, Long Staple Cotton, Upland Cotton, Pima Cotton	
Target Diseases	**Rate (oz/acre)**
Areolate mildew[*] *Ramularia gossypii* **Alternaria Leaf Spot[*]** *Alternaria macrospora, Alternaria alternata* **Bacterial blight/ angular leaf spot[*]** *Xanthomonas citri* pv. *malvacearum* **Black root rot[*]** *Thielaviopsis basicola* **Cercospora Leaf Spot[*]** *Cercospora gossypina* **Cotton root rot/ Texas root rot[*]** *Phymatotrichum omnivorum* **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp.	1-10

Rhizoctonia root rot[*] *Rhizoctonia* spp. **Stemphylium leaf spot[*]** *Stemphylium solani* **Target spot[*]** *Corynespora cassiicola* **Verticillium wilt[*]** *Verticillium* spp. **Wet weather/ Ascochyta blight[*]** *Boeremia* (*Phoma) exigua,* teleomorph*: Ascochyta gossypii*	

Cotton – Seed Treatment: liquid, dry, and planter box application methods Cotton, Short Staple Cotton, Long Staple Cotton, Upland Cotton, Pima Cotton	
Target Diseases	**Rate (oz per unit of seed)**
Areolate mildew[*] *Ramularia gossypii* **Alternaria Leaf Spot[*]** *Alternaria macrospora, Alternaria alternata* **Bacterial blight/ angular leaf spot[*]** *Xanthomonas citri* pv*. malvacearum* **Black root rot[*]** *Thielaviopsis basicola* **Cercospora Leaf Spot[*]** *Cercospora gossypina* **Cotton root rot[*]** *Phymatotrichum omnivorum* **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Stemphylium leaf spot[*]** *Stemphylium solani* **Target spot[*]** *Corynespora cassiicola* **Verticillium wilt[*]** *Verticillium* spp. **Wet weather/ Ascochyta blight[*]** *Boeremia* (*Phoma) exigua,* teleomorph*: Ascochyta gossypii*	0.25 - 2 oz per unit of seed (250,000 seeds)

Cucurbit Vegetables – Foliar and Soil Application Methods Cucumber, Cantaloupe, Melon, Muskmelon, Squash, Watermelon, and other cucurbit vegetables	
Target Diseases	**Rate (oz/acre)**
***Acremonium collapse*[*]** *Acremonium* spp. **Alternaria[*]** *Alternaria cucumerina* **Angular leaf spot[*]** *Pseudomonas syringae* pv. *lachrymans* **Anthracnose[*]** *Colletotrichum orbiculare* **Bacterial leaf spot[*]** *Xanthomonas campestris* pv. *cucurbitae* **Bacterial wilt[*]** *Erwinia tracheiphila* **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot[*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. n*ebraskensis* **Downy mildew[*]** *Pseudoperonospora cubensis* **Fusarium wilt[*]** *Fusarium* spp. **Gummy stem blight[*]** *Didymella bryoniae, Phoma cucurbitacearum* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., *Podosphaera xanthii, Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Thielaviopsis root rot[*]** *Thielaviopsis* spp. **Verticillium wilt[*]** *Verticillium* spp.	1-10

Vine decline[*] *Monosporascus cannonballus* **Wet rot[*]** *Choanephora* sp. **White mold[*]** *Sclerotinia sclerotiorum* **White speck[*]** *Plectosporium* sp.	

Cucurbit Vegetables – Seed Treatment: liquid, dry, and planter box application methods Cucumber, Cantaloupe, Melon, Muskmelon, Squash, Watermelon, and other cucurbit vegetables	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Acremonium collapse[*] *Acremonium* spp. **Alternaria[*]** *Alternaria cucumerina* **Angular leaf spot[*]** *Pseudomonas syringae* pv. *lachrymans* **Anthracnose[*]** *Colletotrichum orbiculare* **Bacterial leaf spot[*]** *Xanthomonas campestris* pv *cucurbitae* **Bacterial wilt[*]** *Erwinia tracheiphila* **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot[*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. n*ebraskensis* **Downy mildew[*]** *Pseudoperonospora cubensis* **Fusarium wilt[*]** *Fusarium* spp. **Gummy stem blight[*]** *Didymella bryoniae, Phoma cucurbitacearum* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., *Podosphaera xanthii, Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Thielaviopsis root rot[*]** *Thielaviopsis* spp. **Verticillium wilt[*]** *Verticillium* spp. **Vine decline[*]** *Monosporascus cannonballus* **Wet rot[*]** *Choanephora* sp. **White mold[*]** *Sclerotinia sclerotiorum* **White speck[*]** *Plectosporium* sp.	0.125 – 7 oz per 100 lbs of seed

Forage, Fuel and Fodder Grass – Foliar and Soil Application Methods Alfalfa, Bamboo (Giant, Cane), Bamboo (Southern, Cane), Bahiagrass Pasture: Forage, Hay, Silage Rangeland: Hay, Silage, Straw Savannah: Grass, Straw, Switch, Sudan Grass	
Target Diseases	**Rate (oz/ acre)**
Anthracnose crown and stem rot[*] *Anthracnose* spp. **Aphanomyces root rot[*]** *Aphanomyces euteiches* **Bacterial wilt[*]** *Clavibacter (Corynebacterium) michigananse* subsp. *insidiosum, Clavibacter spp.* **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping-off[*]** *Pythium* spp. **Rhizoctonia root and crown rots, stem canker[*]** *Rhizoctonia* spp. **Sclerotinia crown and stem rot/ White mold[*]** *Sclerotinia* spp. **Spring black stem and leaf spot[*]** *Phoma medicaginis, Phoma spp.*	1-10

Verticillium wilt[*] *Verticillium* spp.	

Forage, Fuel and Fodder – Seed Treatment: liquid, dry, and planter box application methods Grass: Bamboo (Giant, Cane), Bamboo (Southern, Cane), Bahiagrass, Forage, Hay, Straw, Switch grass, Sorghum, Sudan grass Non-grass: Alfalfa, Clover, Kudzu, Lupin, Vetch, and other animal feed non-grass crops	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Anthracnose crown and stem rot[*] *Anthracnose* spp. **Aphanomyces damping-off and root rot[*]** *Aphanomyces euteiches, Aphanomyces spp.* **Bacterial wilt[*]** *Clavibacter (Corynebacterium) michigananse* subsp. *insidiosum, Clavibacter spp.* **Charcoal rot [*]** *Macrophomina* spp. **Fusarium wilt[*]** *Fusarium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping-off[*]** *Pythium* spp. **Rhizoctonia root and crown rots, stem canker[*]** *Rhizoctonia* spp. **Sclerotinia crown and stem rot/ White mold[*]** *Sclerotinia* spp. **Spring black stem and leaf spot[*]** *Phoma medicaginis, Phoma spp.* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	0.125 – 7 oz per 100 lbs of seed

Fruiting Vegetables – Foliar and Soil Application Methods Pepper, Tomato, Eggplant, Ground Cherry, Tomatillo, Okra, and other fruiting vegetables	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum candidum* **Bacterial speck[*]** *Pseudomonas* spp. **Bacterial spot[*]** *Xanthomonas* spp. **Black root rot[*]** *Theilaviopsis basicola* **Buck-eye rot[*]** *Phytophthora parasitica* **Charcoal rot [*]** *Macrophomina* spp. **Downy mildew[*]** *Pseudoperonospora cubensis* **Early blight[*]** *Alternaria solani* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis cinerea* **Late blight[*]** *Phytophthora infestans* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Leveillula taurica, Oidiopsis taurica, Erysiphe* spp., *Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Target spot[*]** *Corynespora cassiicola* **Verticillium wilt[*]** *Verticillium* spp.	1-10

Fruiting Vegetables – Seed Treatment: liquid, dry, and planter box application methods Pepper, Tomato, Eggplant, Ground Cherry, Tomatillo, Okra, and other fruiting vegetables	
Target Diseases	**Rate (oz per 100 lbs of seed)**

Anthracnose[*] *Colletotrichum candidum* **Bacterial speck[*]** *Pseudomonas* spp. **Bacterial spot[*]** *Xanthomonas* spp. **Black root rot[*]** *Theilaviopsis basicola* **Buck-eye rot[*]** *Phytophthora parasitica* **Charcoal rot [*]** *Macrophomina* spp. **Downy mildew[*]** *Pseudoperonospora cubensis* **Early blight[*]** *Alternaria solani* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis cinerea* **Late blight[*]** *Phytophthora infestans* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Leveillula taurica, Oidiopsis taurica, Erysiphe* spp., *Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Target spot[*]** *Corynespora cassiicola* **Verticillium wilt[*]** *Verticillium* spp.	0.125 – 7 oz per 100 lbs of seed

Grape - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Black foot[*] *Phaeomoniella* spp. **Black rot[*]** *Guignardia bidwellii* **Bot canker[*]** *Botryosphaeria spp.* **Botrytis bunch rot[*]** *Botrytis cinerea* **Cercospora leaf spot[*]** *Cercospora vitis* **Crown gall[*]** *Agrobacterium tumefaciens* **Downy mildew[*]** *Plasmopara viticola* **Esca complex/ Petri[*]** *Phaeomoniella chlamydospora, Phaeoacremonium* spp. **Eutypa[*]** *Eutypa lata* **Fusarium wilt[*]** *Fusarium spp.* **Grape anthracnose[*]** *Elsinoë ampelina* **Oak root fungus/Armillaria root rot[*]** *Armillaria mellea* **Phomopsis[*]** *Phomopsis viticola* **Phytophthora crown and root rot [*]** *Phytophthora spp.* **Pierce's disease[*]** *Xylella fastidiosa* **Powdery mildew[*]** *Uncinula necator* **Grapevine Bunch rot[*]** *Pseudomonas spp.* **Root rot[*]** *Pythium spp., Rhizoctonia spp.* **White mold[*]** *Sclerotinia spp.* **Sour rot complex[*]** *Aspergillus niger, Alternaria tenuis, Botrytis cinerea, Cladosporium herbarum, Rhizopus arrhizus, Penicillium* spp., and others	1-10

Grape – Pre-Plant Dip Application Method	
Target Diseases	**Rate (oz/gallon)**
Black foot[*] *Phaeomoniella* spp. **Black rot[*]** *Guignardia bidwellii* **Bot canker[*]** *Botryosphaeria spp.* **Botrytis bunch rot[*]** *Botrytis cinerea* **Cercospora leaf spot[*]** *Cercospora vitis*	2

Crown gall[*] *Agrobacterium tumefaciens* **Downy mildew[*]** *Plasmopara viticola* **Esca complex/ Petri[*]** *Phaeomoniella chlamydospora, Phaeoacremonium* spp. **Eutypa[*]** *Eutypa lata* **Fusarium wilt[*]** *Fusarium spp.* **Grape anthracnose[*]** *Elsinoë ampelina* **Oak root fungus/Armillaria root rot[*]** *Armillaria mellea* **Phomopsis[*]** *Phomopsis viticola* **Phytophthora crown and root rot [*]** *Phytophthora spp.* **Pierce's disease[*]** *Xylella fastidiosa* **Powdery mildew[*]** *Uncinula necator* **Grapevine Bunch rot[*]** *Pseudomonas spp.* **Root rot[*]** *Pythium spp., Rhizoctonia spp.* **White mold[*]** *Sclerotinia spp.* **Sour rot complex[*]** *Aspergillus niger, Alternaria tenuis, Botrytis cinerea, Cladosporium herbarum, Rhizopus arrhizus, Penicillium* spp., and others	

Hemp - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum* spp. **Bacterial blight[*]** *Pseudomonas cannabina* **Brown blight[*]** *Alternaria alternata* **Charcoal rot [*]** *Macrophomina* spp. **Downy mildew[*]** *Pseudoperonospora cannabina* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp. **Hemp canker[*]** *Sclerotinia sclerotiorum* **Hemp leaf spot[*]** *Bipolaris* spp. **Olive leaf spot[*]** *Cercospora cannabis* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Leveillula* spp., *Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp. **White leaf spot[*]** *Phomopsis ganjae* **Xanthomonas leaf spot[*]** *Xanthomonas campestris* **Yellow leaf spot[*]** *Septoria cannabis*	1-10

Hemp - Seed Treatment: liquid, dry, and planter box application methods	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Anthracnose[*] *Colletotrichum* spp. **Bacterial blight[*]** *Pseudomonas cannabina* **Brown blight[*]** *Alternaria alternata* **Charcoal rot [*]** *Macrophomina* spp. **Downy mildew[*]** *Pseudoperonospora cannabina* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp.	0.125 – 7 oz per 100 lbs of seed

Hemp canker[*] *Sclerotinia sclerotiorum* **Hemp leaf spot[*]** *Bipolaris* spp. **Olive leaf spot[*]** *Cercospora cannabis* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Leveillula* spp., *Sphaerotheca* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp. **White leaf spot[*]** *Phomopsis ganjae* **Xanthomonas leaf spot[*]** *Xanthomonas campestris* **Yellow leaf spot[*]** *Septoria cannabis*	

Herbs, Spices, Mint - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum* spp. **Alternaria leaf blight[*]** *Alternaria* spp. **Bacterial diseases[*]** *Xanthomonas* spp., *Pseudomonas* spp. **Botrytis[*]** *Botrytis cineria* **Cercospora[*]** *Cercospora sp.* **Downy mildew[*]** *Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Rust[*]** *Puccinia menthae* **Powdery mildew[*]** *Erysiphe* spp., *Oidium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp. **Verticillium wilt[*]** *Verticillium* spp.	1-10

Hops - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Canker[*] *Fusarium spp.* **Downy mildew[*]** *Peronospora* spp., *Pseudoperonospora humuli* **Gray Mold[*]** *Botrytis cinerea* **Powdery mildew[*]** *Podosphaera macularis* **Verticillium Wilt[*]** *Verticillium spp.*	1-10

Hops – Pre-Plant Dip Application Method	
Target Diseases	**Rate (oz/gallon)**
Canker[*] *Fusarium spp.* **Downy mildew[*]** *Peronospora* spp., *Pseudoperonospora humuli* **Gray Mold[*]** *Botrytis cinerea* **Powdery mildew[*]** *Podosphaera macularis* **Verticillium Wilt[*]** *Verticillium spp.*	2

Kiwi - Foliar and Soil Application Methods Kiwi, passion fruit and other fruiting vines	
Target Diseases	**Rate (oz/acre)**

Bacterial Blight[*] *Pseudomonas spp.* **Botrytis fruit rot[*]** *Botrytis cinerea* **Oak root fungus[*]** *Armillaria mellea* **Phytophthora crown and root rot[*]** *Phytophthora spp.* **Powdery Mildew[*]** *Uncinula necator* **Root rot[*]** *Fusarium spp.*, *Pythium spp.*, *Rhizoctonia spp.* **Sclerotinia[*]** *Sclerotinia sclerotiorum* **Verticillium wilt[*]** *Verticillium spp.*	1-10

Leafy Vegetables– Foliar and Soil Application Methods Lettuce, Celery, Spinach, Parsley, Radicchio, and other leafy vegetables (including those grown for seed production)	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum* spp. **Bacterial blight[*]** *Xanthomonas* spp. **Downy mildew[*]** *Bremia lactucae, Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot/White mold[*]** *Sclerotinia sclerotiorum* **Powdery mildew[*]** *Erysiphe cichoracearum* **Phoma leaf spot and root rot[*]** *Phoma* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia spp.* **Sclerotinia head and leaf drop[*]** *Sclerotinia* spp. **Verticillium wilt[*]** *Verticillium* spp. **White rust[*]** *Albugo occidentalis*	1-10

Leafy Vegetables – Seed Treatment: liquid, dry, and planter box application methods Lettuce, Celery, Spinach, Parsley, Radicchio, and other leafy vegetables (including those grown for seed production)	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Anthracnose[*] *Colletotrichum* spp. **Bacterial blight[*]** *Xanthomonas* spp. **Downy mildew[*]** *Bremia lactucae, Peronospora* spp. **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** Botrytis spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot/White mold[*]** *Sclerotinia sclerotiorum* **Powdery mildew[*]** *Erysiphe cichoracearum* **Phoma leaf spot and root rot[*]** *Phoma* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia spp.* **Sclerotinia head and leaf drop[*]** *Sclerotinia* spp. **Verticillium wilt[*]** *Verticillium* spp.	1 – 10 oz per 100 lbs of seed

White rust[*] *Albugo occidentalis*	

Legume Vegetable Crops (Succulent or Dried) – Foliar and Soil Application Methods Beans, Adzuki Bean, Bean Sprouts, Black Bean, Blue Lake, Broad Bean, Butter Bean, Cacao Bean, Dry Bean, Fava Bean, French Bean, Garden Bean, Green Beans, Kidney Bean, Lima Bean, Mung Bean, Navy Bean, Pea, Pigeon Bean, Pinto Bean, Red Bean, String Bean, Sugar Bean, Snap Beans, Shell Beans, Dry Beans, Garbanzo Beans, Lima Beans, Peas, Chick Peas, Split Peas, Lentils, and other fresh, dry, vine, fuel and forage legume vegetables grown for seed (including those grown for seed or oil production)	
Target Diseases	**Rate (oz/acre)**
Alternaria[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum* spp. **Aphanomyces root rot[*]** *Aphanomyces* spp. **Bacterial blight [*]** *Xanthomonas spp.* **Charcoal rot [*]** *Macrophomina* spp. **Chickpea Ascochyta blight[*]** *Ascochyta rabiei,* teleomorph: *Didymella rabiei* **Damping-off[*]** *Aphanomyces* spp. **Downy mildew[*]** *Peronospora manshurica* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold/Botrytis blight[*]** *Botrytis* spp. **Halo blight [*]** *Pseudomonas spp.* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., M*icrosphaera diffusa* **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]***Puccinia* spp., *Uromyces appendiculatus* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	1-10

Legume Vegetable Crops (Succulent or Dried) – Seed Treatment: liquid, dry, and planter box application methods Beans, Adzuki Bean, Bean Sprouts, Black Bean, Blue Lake, Broad Bean, Butter Bean, Cacao Bean, Dry Bean, Fava Bean, French Bean, Garden Bean, Green Beans, Kidney Bean, Lima Bean, Mung Bean, Navy Bean, Pea, Pigeon Bean, Pinto Bean, Red Bean, String Bean, Sugar Bean, Snap Beans, Shell Beans, Dry Beans, Garbanzo Beans, Lima Beans, Peas, Chick Peas, Split Peas, Lentils, and other fresh, dry, vine, fuel and forage legume vegetables grown for seed (including those grown for seed or oil production)	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Alternaria[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum* spp. **Aphanomyces root rot[*]** *Aphanomyces* spp. **Bacterial blight [*]** *Xanthomonas spp.* **Charcoal rot [*]** *Macrophomina* spp. **Chickpea Ascochyta blight[*]** *Ascochyta rabiei,* teleomorph: *Didymella rabiei* **Damping-off[*]** *Aphanomyces* spp.	0.125-10 oz per 100 lbs of seed

Downy mildew[*] *Peronospora manshurica* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold/Botrytis blight[*]** *Botrytis* spp. **Halo blight [*]** *Pseudomonas spp.* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., M*icrosphaera diffusa* **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]***Puccinia* spp., *Uromyces appendiculatus* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	

Oilseed Crops – Foliar and Soil Application Methods
Canola, Castor, Flax, Rapeseed, Safflower, Sesame, Sunflower, and other oilseed crops (including those grown for seed or oil production)

Target Diseases	Rate (oz/acre)
Alternaria black spot[*] *Alternaria* spp. **Bacterial pustule[*]** *Xanthomonas* spp. **Basal collar rot[*]** *Phytophthora cryptogea* **Blackleg[*]** *Plenodomus lingam and P. biglobosus formerly Leptosphaeria* spp. **Brown spot[*]** *Septoria glycines* **Clubroot[*]** *Plasmodiophora brassicae* **Downy mildew[*]** *Peronospora manshurica, Plasmopara* halstedii, *Plasmopara* spp. **Fusarium root, stem rot and wilt[*]** *Fusarium* spp. **Phoma black stem[*]** *Phoma spp., Phomopsis longicolla* **Phytophthora root rot[*]***Phytophthora sojae* **,** *Phytophthora* spp. **Pod and stem blight[*]** *Diaporthe phaseolorum* var. *sojae,* **Powdery mildew[*]** *Golovinomyces cichoracearum* **Pythium damping off, root and crown rot[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Albugo* spp., *Puccinia* spp., *Uromyces* spp., *Phayospora pachyrizhi* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	1-10

Oilseed Crops – Seed Treatment: liquid, dry, and planter box application methods
Canola Castor, Flax, Rapeseed, Safflower, Sesame, Sunflower, and other oilseed crops (including those grown for seed or oil production)

Target Diseases	Rate (oz per 100 lbs of seed)
Alternaria black spot[*] *Alternaria* spp. **Bacterial pustule[*]** *Xanthomonas* spp. **Basal collar rot[*]** *Phytophthora cryptogea* **Blackleg[*]** *Plenodomus lingam and P. biglobosus formerly Leptosphaeria* spp. **Brown spot[*]** *Septoria glycines* **Clubroot[*]** *Plasmodiophora brassicae* **Downy mildew[*]** *Peronospora manshurica, Plasmopara* halstedii, *Plasmopara* spp. **Fusarium root, stem rot and wilt[*]** *Fusarium* spp. **Phoma black stem[*]** *Phoma spp., Phomopsis longicolla*	0.125-10 oz

Phytophthora root rot[*]*Phytophthora sojae*, *Phytophthora* spp. **Pod and stem blight[*]** *Diaporthe phaseolorum* var. *sojae,* **Powdery mildew[*]** *Golovinomyces cichoracearum* **Pythium damping off, root and crown rot[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Albugo* spp., *Puccinia* spp., *Uromyces* spp., *Phayospora pachyrizhi* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	

Olive (including those grown for oil production) - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Armillaria Root Rot (Oat Root Fungus)[*] *Armillaria mellea* **Botryosphaeria Blight[*]** *Botryosphaeria dothidea* **Fusarium wilt[*]** *Fusarium* spp. **Leaf spot[*]** *Cercospora cladosporioides* **Mycocentrospora[*]** *Mycocentrospora (Cecospora) cladosporioides* **Olive knot[*]** *Pseudomonas savastanoi* **Peacock spot[*]** *Spilocaea oleaginea* **Phytophthora root and crown rot[*]** *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp.	1-10

Ornamentals - Foliar and Soil Application Methods Annuals, Bedding Plants, Conifer production for reforestation, Container Grown Plants, Deciduous Shrubs, Deciduous Trees, Flowering Plants, Foliage Plants, Forestry Seedlings, Perennials, Potted Flowers, Potted Plants, Shrubs, Trees, Tropical Plants	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum* spp. **Aphanomyces root and hypocotyl rot[*]** *Aphanomyces euteiches* **Apple scab[*]** *Ventura inaequalis* **Black root[*]** *Triclaviopsis* spp. **Black spot[*]** *Diplocarpon rosae* **Blossom blight[*]** *Monilinia* spp. **Botrytis[*]** *Botrytis cinerea* **Boxwood blight[*]** *Calonectria pseudonaviculatum* **Cedar apple rust[*]** *Gymnosporangium juniper- virginianae* **Charcoal rot[*]** *Macrophomina phaseolina* **Conifer blight[*]***Sirrococcus conigenus, Dothistroma spp., Mycosphaerella dearnessii* **Crown gall[*]** *Agrobacterium tumefaciens* **Cylindrocladium[*]** *Cylindrocladium* spp. **Damping-off[*]** *Fusarium spp., Phytophthora spp., Pythium spp., Rhizoctonia solani* **Diploida shoot blight/Sphaeropsis tip blight[*]** *Diplodia spp., Sphaeropsis spp.* **Downy mildew[*]** *Peronospora* spp., *Plasmopara* spp., and *Bremia* spp. **Fusarium root rot[*]** *Fusarium solani* **Fusarium wilt[*]** *Fusarium* spp.	1-10

Gray mold[*] *Botrytis cinerea* **Leaf spots[*]** *Alternaria* spp, *Cercospora* spp., *Cylindrocladium* spp., **Myrothecium[*]** *Myrothecium* spp. **Powdery mildew[*]** *Erysiphe* spp., *Golovinomyces* spp, *Microsphaera* spp., *Oidium* spp., *Podosphaera* spp., *Sphaerotheca* spp. **Rusts[*]** *Puccinia* spp., *Uromyces* spp. **Pythium damping off[*]** *Pythium* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Coleosporium* spp., *Gymnosporangium* spp., *Phragmidium* spp., *Puccinia* spp. **Scab[*]** *Cladosporium* spp., *Sphaceloma, Venturia inaequalis* ***Septoria leaf spot*[*]** *Septoria* spp. **Verticillium wilt[*]** *Verticillium* spp. **White mold[*]** *Sclerotinia sclerotiorum*	

Papaya, Pineapple - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Glomerella cingulata, Colletotrichum ananas* **Armillaria Crown and Root Rot (Shoestring Rot) [*]** *Armillaria mellea* **Bacterial Canker[*]** *Pseudomonas syringae* **Blossom Blight/ Gray mold[*]** *Botrytis cinerea* **Crown Rot[*]** *Fusarium spp.* **Damping off[*]** *Rhizoctonia spp.* **Fusarium Wilt[*]** *Fusarium oxysporum* **Phytophthora Crown and Root Rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe spp., Oidium spp.* **Target spot[*]** *Corynespora cassiicola* **Verticillium Wilt[*]** *Verticillium spp.*	1-10

Peanut (including those grown for oil production) - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Aspergillus Crown Rot[*] *Aspergillus* spp. **Black pod[*]** *Theilaviopsis basicola* **Botrytis Blight[*]** *Botrytis spp.* **Charcoal rot[*]** *Macrophomina* spp. **Cylindrocladium Black Rot[*]** *Cylindrocladium crotalariae* **Early leaf spot[*]** *Cercospora* spp., *Cercospora arachidicola* **Fusarium wilt[*]** *Fusarium* spp. **Late leaf spot[*]** *Cercosporidium personatum* **Phymatotrichum Root Rot[*]** *Phymatotrichum omnivorum* **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off and pod rot[*]** *Pythium* spp. **Rhizoctonia root and pod rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia arachidis* **Seed rot[*]** *Rhizopus* spp. **Verticillium wilt[*]** *Verticillium* spp. **Web blotch[*]** *Phoma arachidicola*	1-10

White mold[*] *Sclerotinia sclerotiorum, Sclerotium rolfsii, Sclerotinium* spp.	

Peanut – Seed Treatment: liquid, dry, and planter box application methods	
Target Diseases	**Rate (oz per unit of seed)**
Aspergillus Crown Rot[*] *Aspergillus* spp. **Black pod[*]** *Theilaviopsis basicola* **Botrytis Blight[*]** *Botrytis spp.* **Charcoal rot[*]** *Macrophomina* spp. **Cylindrocladium Black Rot[*]** *Cylindrocladium crotalariae* **Early leaf spot[*]** *Cercospora* spp., *Cercospora arachidicola* **Fusarium wilt[*]** *Fusarium* spp. **Late leaf spot[*]** *Cercosporidium personatum* **Phymatotrichum Root Rot[*]** *Phymatotrichum omnivorum* **Phytophthora root rot[*]** *Phytophthora* spp. **Pythium damping off and pod rot[*]** *Pythium* spp. **Rhizoctonia root and pod rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia arachidis* **Seed rot[*]** *Rhizopus* spp. **Verticillium wilt[*]** *Verticillium* spp. **Web blotch[*]** *Phoma arachidicola* **White mold[*]** *Sclerotinia sclerotiorum, Sclerotium rolfsii, Sclerotinium* spp.	0.25 – 2 oz per unit of seed

Pome Fruit – Foliar and Soil Application Methods Apple, Crabapple, Pear, Quince, Mayhaw, and other pome fruit	
Target Diseases	**Rate (oz/acre)**
Armillaria root rot[*] *Armillaria mellea* **Bacterial blossom blast[*]** *Pseudomonas spp.* **Bitter rot[*]** *Colletotrichum* spp. **Bot rot[*]** *Botryosphaeria dothidea* **Brooks spot[*]** *Mycosphaerella pomi* **Brown rot blossom blight[*]** *Monilinia laxa* **Bull's eye rot[*]** *Neofabraea* spp. **European Canker[*]** *Nectria galligena* **Fire blight[*]** *Erwinia amylovora* **Flyspeck[*]** *Schizothyrium pomi* **Fruit brown rot[*]** *Monilinia fructicola* **Fusarium wilt[*]** *Fusarium* spp. **Papery Bark[*]** *Trametes versicolor* **Phytophthora crown, collar and root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Podosphaera leucotricha* **Pythium root rot[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Gymnosporangium juniperi-virginianae* **Scab[*]** *Venturia* spp.	1-10

Sooty blotch[*] *Gloeodes pomigena* **Verticillium wilt[*]** *Verticillium* spp.	

Pomegranate- Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Glomerella cingulata, Colletotrichum ananas, Colletotrichum gloeosporioides* **Armillaria crown and root rot (Shoestring rot)[*]** *Armillaria mellea* **Bacterial canker[*]** *Pseudomonas syringae* **Blossom blight/ Gray mold[*]** *Botrytis cinerea* **Crown rot[*]** *Fusarium spp.* **Damping off[*]** *Rhizoctonia spp.* **Fusarium wilt[*]** *Fusarium oxysporum* **Heart rot[*]** *Alternaria* spp **Phytophthora crown and root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe spp., Oidium spp.* **Scab[*]** *Sphaceloma perseae, Sphaceloma mangiferae, Sphaceloma* spp. **Target spot[*]** *Corynespora cassiicola* **Verticillium wilt[*]** *Verticillium spp.*	1-10

Root and Tuber Vegetables – Foliar and Soil Application Methods Carrot, Potato, Sweet Potato, Cassava, Beets, Ginger, Horseradish, Radish, Ginseng, Turnip, and other root and tuber vegetables (including those grown for seed production)	
Target Diseases	**Rate (oz/acre)**
Alternaria leaf blight[*] *Alternaria dauci* **Anthracnose fruit rot[*]** *Colletotrichum* spp. **Aphanomyces root rot[*]** *Aphanomyces* spp. **Bacterial leaf blight[*]** *Xanthomonas campestris* **Black leg/bacterial soft rot[*]** *Erwinia carotovora* **Black rot/ Black crown rot[*]** *Alternaria* spp. **Cavity spot[*]** *Pythium* spp. **Charcoal rot[*]** *Macrophomina* spp. **Clubroot[*]** *Plasmodiophora brassicae* **Common scab[*]** *Streptomyces scabiei* **Downy mildew[*]** *Peronospora* spp. **Early blight[*]** *Alternaria solani* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp.	1-10

Late blight[*] *Phytophthora infestans* **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot[*]** *Phytophthora erythroseptica, Phytophthora cryptogea*, *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp. **Pythium damping off, root and tuber rots[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp. **White mold[*]** *Sclerotinia sclerotiorum*	

Root and Tuber Vegetables – Seed Treatment: liquid, dry, and planter box application methods Carrot, Potato, Sweet Potato, Cassava, Beets, Ginger, Horseradish, Radish, Ginseng, Turnip, and other root and tuber vegetables (including those grown for seed production)	
Target Diseases	**Rate (oz/100 lbs of seed pieces)**
Alternaria leaf blight[*] *Alternaria dauci* **Anthracnose fruit rot[*]** *Colletotrichum* spp. **Aphanomyces root rot[*]** *Aphanomyces* spp. **Bacterial leaf blight[*]** *Xanthomonas campestris* **Black leg/bacterial soft rot[*]** *Erwinia carotovora* **Black rot/ Black crown rot[*]** *Alternaria* spp. **Cavity spot[*]** *Pythium* spp. **Charcoal rot[*]** *Macrophomina* spp. **Clubroot[*]** *Plasmodiophora brassicae* **Common scab[*]** *Streptomyces scabiei* **Downy mildew[*]** *Peronospora* spp. **Early blight[*]** *Alternaria solani* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp. **Late blight[*]** *Phytophthora infestans* **Phytophthora root rot[*]** *Phytophthora* spp. **Pink rot[*]** *Phytophthora erythroseptica, Phytophthora cryptogea*, *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp. **Pythium damping off, root and tuber rots[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium* spp. **White mold[*]** *Sclerotinia sclerotiorum*	0.25-10 oz per 100 lbs of seed pieces

Soybean - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/A)**
Alternaria[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum* spp. **Asian soybean rust[*]***Phayospora pachyrhizi* **Bacterial blight [*]** *Xanthomonas axonopodis* pv. *phaseoli* **Brown Spot[*]** *Septoria glycines* **Brown Stem Rot[*]** *Cadophora gregata* **Cercospora leaf blight[*]** *Cercospora kikuchii*	1-10

Charcoal rot [*] *Macrophomina phaseolina* **Downy mildew[*]** *Peronospora manshurica* **Frogeye leaf spot[*]** *Cercospora sojina* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold/Botrytis blight[*]** *Botrytis* spp. **Halo blight [*]** *Pseudomonas syringae* pv. *phaseolicola* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., M*icrosphaera diffusa* **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Soybean Rust[*]** *Phakopsora pachyrhizi* **Sudden Death Syndrome[*]** *Fusarium virguliforme* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	

Soybean – Seed Treatment: liquid, dry, and planter box application methods	
Target Diseases	**Rate (oz per unit of seed)**
Alternaria[*] *Alternaria* spp. **Anthracnose[*]** *Colletotrichum* spp. **Asian soybean rust[*]***Phayospora pachyrhizi* **Bacterial blight [*]** *Xanthomonas axonopodis* pv. *phaseoli* **Brown Spot[*]** *Septoria glycines* **Brown Stem Rot[*]** *Cadophora gregata* **Cercospora leaf blight[*]** *Cercospora kikuchii* **Charcoal rot [*]** *Macrophomina phaseolina* **Downy mildew[*]** *Peronospora manshurica* **Frogeye leaf spot[*]** *Cercospora sojina* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold/Botrytis blight[*]** *Botrytis* spp. **Halo blight [*]** *Pseudomonas syringae* pv. *phaseolicola* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe* spp., M*icrosphaera diffusa* **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Soybean Rust[*]** *Phakopsora pachyrhizi* **Sudden Death Syndrome[*]** *Fusarium virguliforme* **Verticillium wilt[*]** *Verticillium* spp. **White mold/Sclerotinia stem rot[*]** *Sclerotinia sclerotiorum*	0.125-5 oz per unit of seed (140,000 seeds)

Stone Fruits – Foliar and Soil Application Methods Apricot, Cherry, Nectarine, Peach, Plum, Prune, and other stone fruit	
Target Diseases	**Rate (oz/acre)**

Alternaria spot/Fruit rot[*] *Alternaria alternata* **Anthracnose[*]** *Colletotrichum* spp. **Armillaria root rot[*]** *Armillaria mellea* **Bacterial canker[*]** *Pseudomonas syringae pv. morsprunorum, P. syringae* pv. *syringae* **Bacterial leaf spot[*]** *Xanthomonas arboricola* pv. *pruni* **Bot rot[*]** *Botryosphaeria dothidea* **Brown rot blossom blight[*]** *Monilinia laxa* **Crown gall[*]** *Agrobacterium tumefaciens* **Eutypa dieback[*]** *Eutypa lata* **Fire blight[*]** *Erwinia amylovora* **Fruit brown rot[*]** *Monilinia fructicola* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis cinerea* **Peach leaf curl[*]** *Taphrina deformans* **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Sphaerotheca parnnosa, Podosphaera clandestina, Podosphaera* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Rusty spot[*]** *Podosphaera leucotricha* **Scab[*]** *Cladosporium carpophilum* **Shot hole[*]** *Wilsonomyces carpophilus, Blumeriella jaapii, Cercospora* spp. **Verticillium wilt[*]** *Verticillium* spp.	1-10

Strawberry - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Angular leaf spot[*] *Xanthomonas fragariae* **Anthracnose[*]** *Colletotrichum acutatum* **Black root rot[*]** Disease complex **Botrytis[*]** *Botrytis cinerea* **Charcoal rot[*]** *Macrophomina* spp. **Common leaf spot[*]** *Ramularia tulasneii* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp. **Leather rot[*]** *Phytophthora cactorum* **Phytophthora crown rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Sphaerotheca macularis, Erysiphe* spp. **Crown and root rot[*]** *Pythium spp.* **Red stele[*]** *Phytophthora fragariae* **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium dahliae*	1-10

Strawberry – Pre-Plant Dip Application Method	
Target Diseases	**Rate (oz/gallon)**

Angular leaf spot[*] *Xanthomonas fragariae* **Anthracnose[*]** *Colletotrichum acutatum* **Black root rot[*]** Disease complex **Botrytis[*]** *Botrytis cinerea* **Charcoal rot[*]** *Macrophomina* spp. **Common leaf spot[*]** *Ramularia tulasneii* **Fusarium wilt[*]** *Fusarium* spp. **Gray mold[*]** *Botrytis* spp **Leather rot[*]** *Phytophthora cactorum* **Phytophthora crown rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Sphaerotheca macularis, Erysiphe* spp. **Crown and root rot[*]** *Pythium spp.* **Red stele[*]** *Phytophthora fragariae* **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Verticillium wilt[*]** *Verticillium dahliae*	2

Sugarcane - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Brown rust[*]*Puccinia melanocephela* **Brown stripe[*]** *Bipolaris stenospila* **Gumming disease[*]** *Xanthomonas campestris* pv. *vasculorum* **Leaf scald[*]** *Xanthomonas albilineans* **Orange rust[*]** *Puccinia kuehnii* **Phytophthora root rot[*]** *Phytophthora* spp. **Pokkah boeng[*]** *Gibberella fujikuroi* **Pythium root rot[*]** *Pythium* spp. **Ratoon stunt[*]** *Leifsonia xyli* subsp. *xyli* **Red rot[*]** *Colletotrichum falcatum* **Red stripe / Top rot[*]** *Acidovorax avenae* subsp. *avenae* **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Smut[*]** *Sporisorium scitaminea* **Wilt[*]** *Fusarium sacchari*	1-10

Sugar Beet - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Aphanomyces root rot[*] *Aphanomyces cochlioides* **Crown gall[*]** *Agrobacterium tumefaciens* **Fusarium yellows, Fusarium root rot[*]** *Fusarium* spp. **Leaf spot[*]** *Cercospora beticola* **Powdery mildew[*]** *Erysiphe betae, Erysiphe polygoni* **Pythium root rot[*]** *Pythium* spp. **Ramularia leaf spot[*]** *Ramularia* spp. **Rhizoctonia root and crown rot[*]** *Rhizoctonia* spp. **Rust[*]** *Uromyces betae*	1-10

Sugar Beet – Seed Treatment: liquid, dry, and planter box application methods	
Target Diseases	**Rate (oz per 100 lbs of seed)**

Aphanomyces root rot[*] *Aphanomyces cochlioides* **Crown gall[*]** *Agrobacterium tumefaciens* **Fusarium yellows, Fusarium root rot[*]** *Fusarium* spp. **Leaf spot[*]** *Cercospora beticola* **Powdery mildew[*]** *Erysiphe betae, Erysiphe polygoni* **Pythium root rot[*]** *Pythium* spp. **Ramularia leaf spot[*]** *Ramularia* spp. **Rhizoctonia root and crown rot[*]** R*hizoctonia* spp. **Rust[*]** *Uromyces betae*	0.25 – 10 oz per 100 lbs of seed

Tobacco - Foliar and Soil Application Methods	
Target Diseases	**Rate (oz/acre)**
Angular leaf spot[*] *Pseudomonas syringae* pv. *tabaci* **Anthracnose[*]** *Colletotrichum* spp. **Aphanomyces damping off[*]** *Aphanomyces* spp. **Black root rot[*]** *Thielavopsis basicola* **Black shank[*]** *Phytophthora nicotianae* **Blue mold[*]** *Peronospora hyoscyami* **Brown spot[*]** *Alternaria* spp. **Collar rot[*]** *Sclerotinia sclerotiorum* **Frogeye leaf spot[*]** *Cercospora nicotianae* **Fusarium wilt[*]** *Fusarium* spp. **Granville wilt[*]** *Ralstonia solanacearum* **Gray mold[*]** *Botrytis cinerea* **Powdery mildew[*]** *Erysiphe cichoracearum* **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Target spot[*]** *Rhizoctonia solani* **Verticillium wilt[*]** *Verticillium* spp.	1-10

Tree Nuts – Foliar and Soil Application Almond, Pistachio, Pecan, Walnut, Filberts, Chestnut, Cashew, Beechnut, Butternut, Macadamia, and other tree nuts	
Target Diseases	**Rate (oz/acre)**
Alternaria leaf spot[*] *Alternaria alternata* **Anthracnose[*]** *Colletotrichum acutatum* **Armillaria root rot[*]** *Armillaria mellea* **Bacterial canker[*]** *Pseudomonas syringae, Pseudomonas* spp. **Botryosphaeria blight[*]** *Botryosphaeria dothidea* **Brown rot[*]** *Monilinia* spp. **Crown gall[*]** *Agrobacterium tumefaciens* **Eutypa dieback[*]** *Eutypa lata* **Fusarium wilt[*]** *Fusarium* spp. **Green fruit rot/ Jacket rot[*]** *Monilinia fructicola* **Hull rot[*]** *Rhizopus stolonifera* **Leaf scorch[*]** *Xylella fastidiosa* **Pecan scab[*]** *Cladosporium* spp.	1-10

Phytophthora root rot[*] *Phytophthora* spp. **Pythium damping off[*]** *Pythium* spp. **Rhizoctonia root rot[*]** *Rhizoctonia* spp. **Scab[*]** *Cladosporium carpophilum, Fusicladium carpophilum* **Shot hole[*]** *Wilsonomyces carpophilus, Blumeriella jaapii, Cercospora* spp., *Stigmina carpophila* **Stone fruit rust[*]** *Tranzschelia discolor* **Verticillium wilt[*]** *Verticillium* spp. **Walnut blight[*]** *Xanthomonas campestris*	

Turfgrass – Seed Treatment: liquid and dry application methods Bluegrass, Bentgrass, Bermudagrass, Dichondra, Fescue, Orchardgrass, Poa Annua, St. Augustine, Rye grass, Zoysia Mixtures, and other grass or ornamental turf seeds	
Target Diseases	**Rate (oz per 100 lbs of seed)**
Anthracnose[*] *Colletotrichum cereale* **Bacterial wilt[*]** *Xanthomonas translucens* pv. p*oae* **Bacterial decline[*]** *Acidovorax avenae* subsp. *avenae* **Brown patch/ Rhizoctonia Blight[*]** *Rhizoctonia solani* **Bipolaris[*]** *Bipolaris sorokiniana* **Cercospora leaf spot[*]** *Cercospora fusimaculans* **Copper spot[*]** *Gloeocercospora sorghi* **Dollar spot[*]** *Clarireedia jacksonii, Sclerotinia homeocarpa* **Gray leaf spot[*]** *Pyricularia grisea* **Gray snow mold[*]** *Typhula* spp. **Helminthosporium Disease[*]** *Bipolaris spp., Drechslera spp., Exserohilum* spp. **Large patch[*]** *Rhizoctonia solani* **Necrotic ring spot[*]** *Leptosphaeria korrea* **Nigrospora stolon rot[*]** *Nigrospora sphaerica* **Pink snow mold[*]** *Microdochium nivale* **Powdery mildew[*]** *Erysiphe* spp., *Blumeria graminis* **Pythium root rot[*]** *Pythium* spp. **Red thread fungus[*]** *Laetisaria fuciformis* **Rust[*]** *Puccinia* spp. **Snow mold[*]** *Microdochium nivale* **Spring dead spot[*]** *Ophiospharella* spp. **Summer patch[*]** *Magnaporthe poae* **Take-all root rot[*]** *Gaeumannomyces graminis* f.sp. *avenae*	1 – 15 oz per 100 lbs of seed

Turfgrass, including Grass Seed Production Crops - Foliar and Soil Application Methods Bluegrass, Bentgrass, Bermudagrass, Dichondra, Fescue, Orchardgrass, Poa annua, St. Augustine, Rye grass, Zoysia Mixtures, and other grass or ornamental turf	
Target Diseases	**Rate (oz/acre)**
Anthracnose[*] *Colletotrichum cereale* **Bacterial wilt [*]** *Xanthomonas translucens* pv. p*oae* **Bacterial decline[*]** *Acidovorax avenae* subsp. *avenae* **Brown patch/ Rhizoctonia Blight[*]** *Rhizoctonia solani*	1-10

Bipolaris[*] *Bipolaris sorokiniana* **Cercospora leaf spot[*]** *Cercospora fusimaculans* **Copper spot[*]** *Gloeocercospora sorghi* **Dollar spot [*]** *Clarireedia jacksonii, Sclerotinia homeocarpa* **Gray leaf spot[*]** *Pyricularia grisea* **Gray snow mold[*]** *Typhula* spp. **Helminthosporium Disease[*]** *Bipolaris spp., Drechslera spp., Exserohilum* spp. **Large patch[*]** *Rhizoctonia solani* **Necrotic ring spot[*]** *Leptosphaeria korrea* **Nigrospora stolon rot[*]** *Nigrospora sphaerica* **Pink snow mold[*]** *Microdochium nivale* **Powdery mildew[*]** *Erysiphe* spp., *Blumeria graminis* **Pythium root rot[*]** *Pythium* spp. **Red thread fungus[*]** *Laetisaria fuciformis* **Rust[*]** *Puccinia* spp. **Snow mold[*]** *Microdochium nivale* **Spring dead spot[*]** *Ophiospharella* spp. **Summer patch[*]** *Magnaporthe poae* **Take-all root rot[*]** *Gaeumannomyces graminis* f.sp. *avenae*	

Wheat – Seed Treatment: liquid, dry, and planter box application methods	
Target Diseases	**Rate (oz per unit of seed)**
Alternaria leaf spot[*] *Alternaria spp.* **Anthracnose[*]** *Colletotrichum graminicola* **Bacterial blight[*]** *Xanthomonas* spp. **Blast[*]** *Pyricularia oryzae* **Brown rot, Leaf spots and smuts[*]** *Cercospora* spp., *Entyloma* spp., **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot[*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. *nebraskensis* **Downy mildew[*]** *Pernospora fagopyri, Sclerophthora macrospora* **Tab spot[*]** *Drechlsera* spp. **Fusarium wilt[*]** *Fusarium* spp. **Loose smut[*]** *Ustilago tritici, Ustilago* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe graminis* **Pythium blight[*]** *Pythium* spp. **Pythium damping off[*]** *Pythium* spp. **Ralstonia[*]** *Ralstonia solanacearum* **Rhizoctonia bare patch/ root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia* spp. **Septoria blotch[*]** *Septoria* spp. **Sheath blight[*]** *Thanatephorus cucumeris,* Anamorph: *Rhizoctonia solani, Thanatephorus kernel* **Sheath spot[*]** *Rhizoctonia oryzae* **Smut[*]** *Tilletia barclayana, Tilletia* spp.	0.25 – 2 oz per unit of seed

Spot blotch[*] *Cochliobolus* spp. **Stagonospora leaf and glume blotch[*]** *Stagonospora* spp **Stem rot[*]** *Sclerotium oryzae, Magnaporthe* spp. **Take-all [*]***Gaeumannomyces graminis* var. *graminis* **Verticillium wilt[*]** *Verticillium* spp.	

Wheat – Soil and Foliar Application Methods	
Target Diseases	**Rate (oz/A)**
Alternaria leaf spot[*] *Alternaria spp.* **Anthracnose[*]** *Colletotrichum graminicola* **Bacterial blight[*]** *Xanthomonas* spp. **Blast[*]** *Pyricularia oryzae* **Brown rot, Leaf spots and smuts[*]** *Cercospora* spp., *Entyloma* spp., **Cercospora[*]** *Cercospora arachidicola* **Cercosporidium[*]** *Cercosporidium personatum* **Charcoal rot [*]** *Macrophomina* spp. **Clavibacter[*]** *Clavibacter michiganensis* subsp. *nebraskensis* **Downy mildew[*]** *Pernospora fagopyri, Sclerophthora macrospora* **Tab spot[*]** *Drechlsera* spp. **Fusarium wilt[*]** *Fusarium* spp. **Loose smut[*]** *Ustilago tritici, Ustilago* spp. **Phytophthora root rot[*]** *Phytophthora* spp. **Powdery mildew[*]** *Erysiphe graminis* **Pythium blight[*]** *Pythium* spp. **Pythium damping off[*]** *Pythium* spp. **Ralstonia[*]** *Ralstonia solanacearum* **Rhizoctonia bare patch/ root rot[*]** *Rhizoctonia* spp. **Rust[*]** *Puccinia* spp. **Septoria blotch[*]** *Septoria* spp. **Sheath blight[*]** *Thanatephorus cucumeris,* Anamorph: *Rhizoctonia solani, Thanatephorus kernel* **Sheath spot[*]** *Rhizoctonia oryzae* **Smut[*]** *Tilletia barclayana, Tilletia* spp. **Spot blotch[*]** *Cochliobolus* spp. **Stagonospora leaf and glume blotch[*]** *Stagonospora* spp. **Stem rot[*]** *Sclerotium oryzae, Magnaporthe* spp. **Take-all [*]***Gaeumannomyces graminis* var. *graminis* **Verticillium wilt[*]** *Verticillium* spp.	1-10

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. Do not store at temperatures above 78°F (25°C).

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide

disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING:
[For plastic bags] - Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[For fiber drums with liners] - Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling if available or dispose of liner in sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

[For plastic containers with a capacity equal to or less than 50 pounds] - Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

[batch codes are applied to the front panel of every sales unit container]

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IMPORTANT: READ BEFORE USE

Read the Directions for Use, the Conditions, Disclaimer of Warranties, Limitation of Liability, and License set forth below. If the following terms are not acceptable, please return the product immediately for a refund of the purchase price. Otherwise, use by buyer or any other user constitutes acceptance of the following terms.

Conditions: The directions for use of this product are believed to be adequate and must be followed carefully. It is impossible, however, to eliminate all risks inherently associated with the use of this product. Weather or crop conditions; the presence of other materials; the manner of use or application; any use, storage or handling that is contrary to the Directions for Use; and other such factors that are beyond the control of NewLeaf Symbiotics, Inc. (“NLS”) may cause ineffectiveness or other unintended consequences. User assumes all such risks.

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