

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

JAN 9 2004

Michele A. Schulz
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, North Carolina 27419-8300

Subject: Abound® Fungicide
EPA Registration Number 100-1098
Your label amendment application dated March 28, 2003;
the version e-mailed on December 4, 2003

Dear Ms. Schulz,

We amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Make the following changes to the label:

a. In the first bulleted item following "Users should:" in the "User Safety Recommendations" section add the following sentence, "Wash thoroughly with soap and water after handling."

b. A plantback interval (PBI) of 36 days must be added for Leafy Vegetables (Except Brassica) group; Brassica, Leafy Greens subgroup; Vegetables, Root subgroup; Vegetables (Tuberous and Corm) subgroup; and Vegetables, Leaves of Root and Tuber group in the directions for use.

c. A PBI of 12 months must be added for Wheat/Triticale and Barley in the directions for use.

2. Submit, by no later than two (2) years after the date of this letter, the following studies in support of all crops on the label which are rotated: 1) one additional field trial, conducted at 2.0 lb. active ingredient per acre per season, for the rotational crop Wheat at a PBI of 120 days and 2) one additional field trial, conducted at 2.0 lb. active ingredient per acre per

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season, for the rotational crop Wheat at a PBI of 12 months. If residues occur at the 12-month PBI, residue data to support rotational crop tolerances will be needed or else a shorter PBI at which residues occur could be proposed if residue data to support rotational crop tolerances for that PBI are provided.

3. Submit one copy of your final printed label before you release product bearing this amended labeling for shipment.

If you have any questions about this letter, please contact John Bazuin at (703)305-7381.

Sincerely yours,

/s/

Cynthia Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Attachments: Label stamped "ACCEPTED with COMMENTS"
Health Effects Division Residue Chemistry reviews,
Occupational and Residential Risk Assessment,
and Human Health Risk Assessment
Environmental Fate and Effects Division Aquatic
Exposure Assessment

ABOUND® Flowable
Fungicide

Broad spectrum fungicide for control of plant diseases

Active Ingredient:

| | |
|---|--------|
| Azoxystrobin: methyl (E)-2-[2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate* | 22.9% |
| Other Ingredients: | 77.1% |
| Total: | 100.0% |

Contains 2.08 lbs. of active ingredient per gallon
*IUPAC

EPA REG NO. 100-1098
EPA EST.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

Reformulation is prohibited. See individual container labels for repackaging limitations.

Product of the United Kingdom

SCP 100-XXXX

Net Weight / U.S. Standard Measure

ACCEPTED
with COMMENTS
in EPA Letter Dated:
JAN 9 2004

Office of the Federal Insecticide,
Fungicide, and Rodenticide
Director, Office of Pesticide
Registration, EPA, Washington, DC

100-1098

| FIRST AID | |
|--|--|
| If on skin or Clothing | -Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center or doctor for treatment advice. |
| Have the product container or label with you when calling a poison control center or doctor or going for treatment. | |
| HOTLINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call 1-800-888-8372 | |

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

HARMFUL IF ABSORBED THROUGH SKIN. Avoid contact with eyes, skin, or clothing. Wear long-sleeved shirt and long pants, socks and shoes and chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

User Safety Requirements

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

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 breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin has degradation products which have properties similar to chemicals which are known to leach through soil to ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. 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. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Notify State and/or Federal authorities and Syngenta immediately if you observe any adverse environmental effects due to use of this product.

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CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, INC. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

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

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination test on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Syngenta, no claims are made to guarantee germination of carry-over seed.

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

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Use of ABOUND Flowable Fungicide through airblast application equipment on grapes is prohibited in the following townships and boroughs of Erie County, Pennsylvania:

North East, Harborcreek, Lawrence Park, Erie, Presque Isle, MillCreek, Fairview, Girard and Springfield.

This prohibition is intended to help eliminate phytotoxicity problems with apples observed in this geographic location.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USES

Commercial turf farm use (Not for use in California)

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

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

- Coveralls
- Chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber.
- Shoes plus socks

NON-AGRICULTURAL USES

Golf Courses (Not for use in California)

For use to control diseases on turf on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

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. The area being treated must be vacated by unprotected persons.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Do not allow entry into treatment area until area that was treated with ABOUND® Flowable is dry.

STORAGE AND DISPOSAL

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

STORAGE: Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Plastic Containers: Triple rinse (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or alternatives allowed by State and local authorities.

FOR BULK AND MINIBULK CONTAINERS:

CONTAINER DISPOSAL: Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

CONTAINER PRECAUTIONS: Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.

REFILL ONLY WITH ABOUND® FLOWABLE. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than ABOUND Flowable will result in contamination and may weaken container. After filling and before transporting, check for leaks. Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

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GENERAL INFORMATION

ABOUND Flowable Fungicide is a broad spectrum, preventative fungicide with systemic and curative properties recommended for the control of many important plant diseases. ABOUND Flowable may be applied as a foliar spray in alternating spray programs or in tank mixes with other registered, crop protection products. All applications should be made according to the use directions that follow.

GENERAL USE PRECAUTIONS

Do not graze or feed clippings from treated turf areas to animals. Do not plant the following crops for a period of 12 months (unless an azoxystrobin product is registered for use on that crop): sorghum, buckwheat, millet, oats, rye, wild rice, non-grass animal feeds (alfalfa, clover), spices and sugarcane. Azoxystrobin is registered for use on all other rotated crops and all other crops may be planted immediately after the last treatment.

Do not use for disease control in food crops grown in greenhouses. Use for disease control in greenhouses for non-agricultural uses on grass, turf or ornamental plants (listed on this label) are permitted.

ATTENTION

ABOUND Flowable is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit).

DO NOT spray ABOUND Flowable where spray drift may reach apple trees.

DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

DO NOT use spray equipment which has been previously used to apply ABOUND Flowable to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

ABOUND Flowable Fungicide has demonstrated some phytotoxic effects when mixed with products that are formulated as EC's. These effects are enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application. In addition, adjuvants that contain some form of silicone have also contributed to phytotoxicity.

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INTEGRATED PEST (DISEASE) MANAGEMENT

ABOUND Flowable should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. The SPECIFIC USE DIRECTIONS section in this label identifies specific IPM recommendations for each crop. Consult your local agricultural and turf authorities for additional IPM strategies established for your area. ABOUND Flowable may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

RESISTANCE MANAGEMENT

A disease management program that includes alternation or tankmixes between ABOUND Flowable and other labeled fungicides that have a different mode of action is essential to prevent pathogen populations from developing resistance to ABOUND Flowable. ABOUND Flowable should not be alternated or tankmixed with fungicides to which resistance has already developed.

Continual use of ABOUND Flowable may allow less sensitive strains of pathogens to increase in the population and reduce the efficacy of ABOUND Flowable. Since ABOUND Flowable is a strobilurin fungicide, avoid alternation with other strobilurins, such as kresoxim-methyl, pyraclostrobin and trifloxystrobin. Use of ABOUND in greenhouses will enhance the potential for fungicide resistance development.

Since pathogens differ in their potential to develop resistance to fungicides, the SPECIFIC USE DIRECTIONS section in this label provides resistance management strategies specific for each crop and disease. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. ABOUND Flowable is not cross resistant with other classes of fungicides which have different modes of action.

SPRAYING/MIXING

ABOUND Flowable may be applied with all types of spray equipment commonly used for making ground and aerial applications. Do not apply ABOUND Flowable through any type of ultra low volume (ULV) spray system. Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, highly susceptible varieties, or when environmental conditions conducive to disease exist.

For ground applications, apply ABOUND Flowable in sufficient water volume for adequate coverage and canopy penetration. For aerial applications to non-orchard crops, apply ABOUND Flowable in a minimum of five gallons of water per acre. For aerial applications in orchard crops, apply ABOUND Flowable in a minimum of ten gallons of water per acre. Where feasible ground application should be used because it provides better canopy penetration and coverage.

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To prepare spray solution, partially fill the spray tank with clean water and begin agitation. Add the specified amount of ABOUND Flowable to the tank, allowing time for good dispersion, then add an adjuvant, if recommended. If tankmixes are required, product should be added to the spray tank in the following order: ABOUND Flowable, other WG or dry flowable formulations, wettable powders and flowable (aqueous suspensions) products. Finish filling the tank to the desired volume to obtain the proper spray concentration. Maintain agitation throughout the spraying operation. Do not allow spray mixture to stand overnight or for prolonged periods. Make up only the amount of spray required for immediate use. Sprayers should be thoroughly cleaned immediately after application.

ABOUND Flowable is compatible with many commonly used fungicides, liquid fertilizers, herbicides, insecticides and biological control products. If tank mixes are desired, observe all directions, precautions, and limitations on labeling of all products used. Consult compatibility charts or your local or State agricultural or turf authorities for compatibility information.

ABOUND Flowable Fungicide is incompatible with many fertilizers when low water volumes are used for in-furrow applications. Cold temperatures and water quality exacerbate these compatibility problems. Conduct a physical compatibility test as described in the paragraph below before making a field application.

Do not combine ABOUND Flowable in the spray tank with pesticides, surfactants or fertilizers, unless compatibility charts or your own prior use has shown that the combination is physically compatible, effective and non-injurious under your conditions of use. If physical compatibility is unknown, the following procedure should be followed: Pour the recommended proportions of the products into a suitable container of water, mix thoroughly and allow to stand at least twenty (20) minutes. If the combination remains mixed or can be re-mixed readily, the mixture is considered physically compatible.

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SPRAY DRIFT MANAGEMENT

ATTENTION

ABOUND Flowable is extremely phytotoxic to certain apple varieties.

AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit).

DO NOT spray ABOUND Flowable where spray drift may reach apple trees.

DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.

DO NOT use spray equipment which has been previously used to apply ABOUND Flowable to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat.

APPLICATION INSTRUCTIONS

Apply ABOUND Fungicide at rates and timings as described in this label.

Directions for Use Through Sprinkler and Drip Chemigation Systems:

Spray Preparation: Chemical tank and injector system should be thoroughly cleaned. Flush system with clean water.

Use Precautions for Sprinkler and Drip Irrigation Applications

Drip Irrigation: ABOUND Fungicide may be applied through drip irrigation systems for soil-borne disease control. The soil should have adequate moisture capacity prior to drip application.

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

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Sprinkler Irrigation: Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system except as specified on this label.

Apply with center pivot or continuous-move equipment distributing 1/2 acre-inch or less during treatment. In general, use the least amount of water required for proper distribution and coverage. If stationary systems (solid set, handlines or wheel lines other than continuous-move) are used, this product should be injected into no more than the last 20-30 minutes of the set. Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment. Plant injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform treated water. Thorough coverage of foliage is required for good control. Good agitation should be maintained during the entire application period.

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

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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

Specific Instructions for Public Water Systems:

1. "Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year."
2. "Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe."
3. "The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump."
4. "The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down."
5. "The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected."
6. "Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock."
7. "Do not apply when wind speed favors drift beyond the area intended for treatment."

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SOILBORNE/SEEDLING DISEASE CONTROL

ABOUND can provide control of many soilborne diseases if applied early in the growing season. Specific applications for soilborne diseases include in-furrow applications and banded applications applied over the row, either shortly after plant emergence or during herbicide applications or cultivation. These applications will provide control of pre- or post-emergence damping off and diseases that infect plants at the soil-plant interface. The use of either type of application depends on the cultural practices in the region. In some locations, one type of application may provide better disease control than the other, depending on the timing of the disease epidemic. Seedling diseases are generally controlled by in-furrow applications while banded applications are more effective against soilborne diseases that develop later in the season. Consult your local expert to get some guidance regarding application type.

For banded applications, apply ABOUND prior to infection as a directed spray to the soil, using single or multiple nozzles, adjusted to provide thorough coverage of the lower stems and the soil surface surrounding the plants. Band width should be limited to 7 inches or less. Apply ABOUND at a rate of 0.4-0.8 fl. oz. product (0.1-0.2 oz. a.i.)/1000 row feet (for banded applications on 22-inch rows the maximum application rate is 0.7 fl. oz./1000 row feet). These applications come into contact with the foliage and are counted as foliar applications when considering resistance management. They may be applied during cultivation or hilling operations to provide soil incorporation.

For in-furrow applications, apply ABOUND as an in-furrow spray in 5-15 gallons of water at planting. Mount the spray nozzle so the spray is directed into the furrow just before the seed are covered. Use the higher rate when the weather conditions are expected to be conducive for disease development, if the field has a history of Pythium problems, or if minimum/low till programs are in place.

IN-FURROW APPLICATION RATES

| RATE PER 1000 ROW FEET | | PRODUCT PER ACRE (fl. oz.) | | | | | | |
|------------------------|----------|----------------------------|----------|----------|----------|----------|----------|----------|
| fl. Oz. product | oz. a.i. | 22" rows | 30" rows | 32" rows | 34" rows | 36" rows | 38" rows | 40" rows |
| 0.4 | 0.1 | 9.5 | 7.0 | 6.5 | 6.1 | 5.8 | 5.5 | 5.2 |
| 0.6 | 0.15 | 14.3 | 10.5 | 9.8 | 9.2 | 8.7 | 8.3 | 7.8 |

40" = 13,068 row ft, 38" = 13,754 row ft, 36" = 14,520 row ft, 34" = 15,374 row ft, 32" = 16,315 row ft, 30" = 17,424 row ft, and 22" = 23,760 row ft/Acre

DIRECTIONS for Use

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|---|--|---|
| Almonds | Alternaria leaf and fruit spot <i>(Alternaria alternata)</i> Anthracnose <i>(Colletotrichum acutatum)</i> Leaf Blight <i>(Seimatosporium lichenicola)</i> Leaf rust <i>(Tranzschelia discolor)</i> Scab <i>(Cladosporium carpophilum)</i> Shothole <i>(Wilsonomyces carpophilus)</i> | 6.2 - 15.4 (0.10 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season following the resistance management guidelines. Applications may be made by ground, air (minimum 15 gpa) or chemigation. ABOUND may be applied by air only at growth stages prior to and including 5 weeks after petal fall. An adjuvant may be added at recommended rates ..</p> <p>For anthracnose, scab and shothole begin applications prior to disease development and continue at 7-14 day intervals throughout the season.</p> |
| | Brown Rot Blossom Blight <i>(Monilinia laxa, M. fructicola)</i> | 12.3-15.4 (0.20-0.25) | For blossom blight begin applications at early bloom and continue through petal fall. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year. |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts product/acre/season (1.5 lbs. a.i./A). Do not apply within 28 days of harvest.</p> | | | |

17/1/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|--|--|---|
| Artichoke, globe | Ramularia leaf spot (<i>Ramularia cynarae</i>) | 11.0-15.4 (0.18-0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential sprays of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND per acre per crop year.</p> <p>Application Directions: Begin applications prior to or in the early stages of disease development, and continue as needed throughout the season at a 2-3 week interval, up to and including the day of harvest. Do not apply at less than 7-day intervals. Applications may be made by ground, air or chemigation. For ground applications, apply in 50-200 gallons of water per acre to obtain coverage without excessive runoff. For aerial applications apply in a minimum of 5 gallons of water per acre. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts (1.5 lb active ingredient) per acre per season. May be applied the day of harvest (0 day PHI)</p> | | | |
| Asparagus | Stemphyllium purple spot (<i>Stemphyllium vesicarium</i>) | 6.2-15.4 (0.1-0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential sprays of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND per acre per crop year.</p> <p>Application Directions: : ABOUND applications should begin prior to disease development and continue throughout the season on a 7-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre by ground, and minimum of 3 gallons per acre by air. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts (1.5 lb active ingredient) per acre per season. Do not apply within 100 days of harvest (100 day PHI).</p> | | | |

18/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|---|--|--|
| Bananas Plantains | Black Sigatoka <i>(Mycosphaerella fijiensis)</i> Yellow Sigatoka <i>(Mycosphaerella musicola)</i> | 5.5 - 8.3 (0.09 - 0.135) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes canopy management through removal of suckers, proper plant spacing, selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, and good surface water drainage.</p> <p>Resistance Management: Do not apply more than two (2) sequential applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than eight (8) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season every 12-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Post Harvest Applications: Crown Rot/Crown Mold <i>(Colletotrichum musae,</i> <i>Fusarium pallidoroseum,</i> <i>Acremonium spp.,</i> <i>Ceratocystis paradoxa,</i> <i>Glomerella cingulata),</i> <i>Penicillium spp.</i> | 200-400 ppm solution | Apply ABOUND as a single application of a 200-400 ppm solution to achieve good coverage. The application may be made as a spray, dip or may be painted onto the cut ends of the bananas. Application of the 200 ppm rate is appropriate for short distance transportation (e.g. within the USA), when a longer time in transport is expected (export) use the 300-400 ppm rate. If alum (1% w/v) is added to the spray solution stir the suspension frequently as sedimentation and flocculation may occur. Addition of a Non Ionic Surfactant (0.1% v/v) may improve the compatibility of this mixture. |
| <p>Specific Use Restrictions: Do not apply more than 2.08 quarts product/acre/season (1.08 lbs. a.i./A). May be applied the day of harvest.</p> | | | |

19/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|--|
| Barley | Kernel Blight (<i>Alternaria spp.</i>) Leaf Rust (<i>Puccinia hordei</i>) Net blotch (<i>Pyrenophora teres</i>) Barley Stripe (<i>Pyrenophora graminea</i>) Powdery Mildew (<i>Erysiphe graminis f. sp. hordei</i>) Stagonospora blotch (<i>Stagonospora nodorum</i>) | 6.2 - 12.3 (0.1 - 0.2) 9.2 - 12.3 (0.15 - 0.2) 12.3 (0.2) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes proper selection of varieties with disease tolerance, proper timing and placement of irrigation, removal of plant debris in which inoculum overwinters, plant residue management, and crop rotation.</p> <p>Resistance Management: Do not make more than two foliar applications of ABOUND or other strobilurins fungicides per acre per year.</p> <p>Application Directions: ABOUND should be applied prior to disease development from jointing (Feekes 6 or Zadok's 31) up to late head emergence (Feekes 10.5 or Zadok's 59). Applications may be made by ground, air or chemigation. A crop oil concentrate adjuvant may be added at 1.0% V/V to optimize efficacy.</p> |
| <p>Specific Use Restrictions: Do not apply until after forage stage (Feekes 6 or Zadok's 31). Do not apply later than Feekes growth stage 10.5 (Zadok's growth stage 59). Do not harvest treated barley for forage. Do not apply within 14 days of harvest for hay. Do not apply within 45 days of harvest for grain and straw. Do not apply more than 0.77 quarts product/acre/season (0.4 lb a.i./A).</p> | | | |
| Berries, Bushberry subgroup: Blueberry Currant Elderberry Gooseberry Huckleberry Including all cultivars and/or hybrids of these Lingonberry Juneberry Salal | Botryosphaeria canker (<i>Botryosphaeria spp.</i>) Powdery mildew (<i>Sphaerotheca spp.</i>) Septoria blight (<i>Septoria spp.</i>) Mummyberry (<i>Vaccinium spp.</i>) Alternaria Fruit Rot (<i>Alternaria spp.</i>) Phomopsis stem canker (<i>Phomopsis vaccinif.</i>) Anthracnose fruit rot (<i>Colletotrichum gloeosporoides</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurin before alternating with a fungicide that has a different mode of action. Do not make more than three (3) applications of ABOUND or other strobilurin fungicide per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 1.44 quarts (0.75 lb active ingredient) per acre per season. May be applied the day of harvest.</p> | | | |

20/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|---|
| <p>Berries, Caneberry subgroup:</p> <p>blackberry, bingleberry, boysenberry, dewberry, lowberry, marionberry, olallieberry, youngberry, loganberry, red and black raspberry, Including all cultivars and/or hybrids of these</p> | <p>Botryosphaeria canker (<i>Botryosphaeria dothidea</i>) Anthracnose (<i>Spaceloma necator</i>) (<i>Elsinoe veneta</i>) Powdery mildew (<i>Sphaerotheca macularis</i>) Leaf spot (<i>Septoria rubi</i>) (<i>Sphaerulina rubi</i>) Colletotrichum rot (<i>Colletotrichum gloeosporioides</i>) Spur blight (<i>Didymella appianata</i>) Rosette or double blossom of blackberries (<i>Cercospora rubi</i>)</p> | <p>6.2-15.4 (0.1-0.25)</p> | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurins before alternating to a fungicide that has a different mode of action. Do not make more than 6 applications of ABOUND or other strobilurin fungicide per season</p> <p>Application Directions: Begin applications at onset of disease and continue as required until harvest. Make applications on a 7-14 day schedule. Use a minimum water volume of 10 gal per acre by ground and a minimum of 3 gal by air.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts product (1.5 lb ai) per acre per season. May be applied the day of harvest.</p> | | | |
| <p>Brassica Head and Stem subgroup:</p> <p>broccoli, Chinese broccoli [gai lon], brussels sprouts, cabbage, Chinese cabbage [napa], Chinese mustard cabbage [gai choy], cauliflower, cavalo broccolo, -kohlrabi Including all cultivars and/or hybrids of these</p> | <p>Alternaria leaf spot (<i>Alternaria spp.</i>)</p> <p>Downy mildew (<i>Peronospora parasitica</i>)</p> | <p>6.2-15.4 (0.1-0.25)</p> | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential sprays of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Use a minimum of 10 gallons of water per acre by ground, and minimum of 3 gallons per acre by air.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts (1.5) lb active ingredient per acre per season. May be applied the day of harvest (0 day PHI)</p> | | | |

21/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Brassica Leafy Greens subgroup: Broccoli raab Cabbage, Chinese Collards Kale Mizuna Mustard greens Mustard spinach Rape greens Including all cultivars and/or hybrids of these | White rust <i>(Albugo candida)</i> Black spot <i>(Alternaria spp)</i> Cercospora leaf spot <i>(Cercospora spp)</i> | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than three (3) foliar applications of ABOUND or other strobilurin fungicide per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Soilborne Diseases Seedling root rot, basal stem rot <i>(Rhizoctonia solani)</i> | 0.4-0.8 fl oz/1000 row feet | <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> |
| <p>Specific Use Restrictions: Do not apply more than 1.44 quarts (0.75 lb active ingredient) per acre per season. May be applied the day of harvest.</p> | | | |

00/10/20

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Bulb Vegetables Garlic Leek Onion, bulb Onion, green Welsh onion Shallot | Foliar Diseases Cladosporium leaf blotch <i>(Cladosporium allii)</i> Purple blotch <i>(Alternaria porri)</i> Rust <i>(Puccinia allii)</i> White rot <i>(Sclerotium cepivorum)</i> | 6.2 - 12.3 (0.1 - 0.20) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: For downy mildew control, do not make more than one application of ABOUND before alternating with fungicides that have a different mode of action. Make preventative applications on a 5-7 day schedule. For all other diseases, ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. If applications are made by air, the higher rates should be used for adequate control. An adjuvant may be added at recommended rates.</p> <p>Mixtures of ABOUND with insecticides and silicone adjuvants should be tested for crop safety before application to the crop.</p> <p>For soilborne/seedling disease control, see directions under GENERAL INFORMATION section. If the application is an in-furrow application, the spray should be made just prior to seed placement so that the majority of the chemical is under the seed. This will reduce the potential for phytotoxicity, especially if fertilizer is added to the application.</p> |
| | Downy mildew <i>(Peronospora destructor)</i> Botrytis leaf blight <i>(Botrytis aclada)</i> | 9.2 - 15.4 (0.15 - 0.25) | |
| | Soilborne Diseases Rhizoctonia damping-off <i>(Rhizoctonia solani)</i> | 0.4-0.8 fl oz/1000 row feet | |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts of product/crop/acre/season (1.5 lbs. a.i./A). May be applied the day of harvest.</p> | | | |

23/600

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|--|--|--|
| Canola | Blackleg (<i>Leptosphaeria maculans</i>) Alternaria blackspot (<i>Alternaria spp</i>) Sclerotinia stem rot (<i>Sclerotinia sclerotiorum</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, certified seed, seed treatment and crop rotation.</p> <p>Resistance Management: Do not make more than three (3) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: For blackleg, ABOUND applications should be made at the 2-4 leaf stage. For Alternaria or Sclerotinia, 9.2-15.4 fl oz product/A should be applied at 10-25% flowering (3-7 days following first flower). Use the higher rate under heavy disease pressure or when conditions are favorable for disease. For control of Alternaria alone, 8.0 fl oz product/A may be applied at pod stage (approximately 95% petal fall). Applications may be made by ground, air or chemigation.</p> |
| <p>Specific Use Restrictions: Do not make applications later than 95% petal fall (pod stage). Do not make more than three applications Do not apply more than 27 fl oz product per year or 0.45 lb ai/A per year.</p> | | | |
| Carrots | Early blight (<i>Cercospora carotae</i>) Late blight (<i>Alternaria dauci</i>) White mold (<i>Sclerotium rolfsii</i>) For additional diseases, see Vegetables, root, subgroup | 9.2 - 20.3 (0.15-0.33) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Soilborne Diseases Rhizoctonia root rot (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 3.75 quarts of product/crop/acre/season (2.0 lbs. a.i./A). May be applied the day of harvest.</p> | | | |

24/50

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|--|
| Celery | Early blight (<i>Cercospora apii</i>) Late blight (<i>Septoria apicola</i>) For additional diseases, see Leafy Vegetables | 9.2-15.4 (0.15 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Soilborne Diseases Rhizoctonia root rot (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| Specific Use Restrictions: Do not apply more than 2.88 quarts of product/crop/acre/season (1.5 lbs. a.i./A). May be applied the day of harvest. | | | |
| Christmas Trees | Diplodia tip blight (<i>Diplodia pinea</i>) Lophodermium needlecast (<i>Lophodermium pinastri</i>) Swiss needlecast (<i>Phaeocryptopus gaumannii</i>) | 6.2 - 15.4 (0.10 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance and removal of plant debris in which inoculum may overwinter.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than eight (8) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season at 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| Specific use Restrictions: Do not apply more than 3.75 quarts product/acre/season (2.0 lbs. a.i./A). | | | |
| Cilantro | See Leafy Vegetables - coriander leaves | | |

25/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Citrus Fruit Calamondin Citron Citrus hybrids Grapefruit Kumquat Lemon Lime Mandarin Orange (sour and sweet) Pummelo Satsuma mandarin Tangerine Including all cultivars and/or hybrids of these | Greasy spot <i>(Mycosphaerella citri)</i> Melanose <i>(Diaporthe citri)</i> Scab <i>(Elsinoe fawcettii)</i> Albinism <i>(Alternaria alternata pv citri)</i> Post bloom fruit drop (PFD) <i>(Colletotrichum acutatum)</i> Alternaria leaf and fruit spot <i>(Alternaria citri)</i> | 12.3 - 15.4 (0.2 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, and proper timing of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Under conditions that favor severe disease epidemics, the higher application rates should be used. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>Do not use ABOUND in citrus plant propagation nurseries.</p> |
| <p>Specific use Restrictions: Do not use ABOUND in citrus plant propagation nurseries. Do not apply more than 2.88 quarts product/acre/season (1.5 lbs. a.i./A). May be applied the day of harvest.</p> | | | |

26/100

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|---|--|--|
| Corn Field Pop Sweet (Includes Seed Production) | Rust (<i>Puccinia sorghi</i>) | 8.2 - 9.2 (0.10 - 0.15) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation, and water management practices.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than eight (8) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: For gray leaf spot, apply ABOUND at the onset of disease. A second application may be required 14 days later if disease pressure persists. For all other diseases, ABOUND applications should begin prior to disease development and may continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> |
| | Anthracnose leaf blight (<i>Colletotrichum graminicola</i>) Gray leaf spot (<i>Cercospora sorghi</i>) Northern corn leaf blight (<i>Setosphaeria turcica</i>) Northern corn leaf spot (<i>Cochliobolus carbonum</i>) Southern corn leaf blight (<i>Cochliobolus heterostrophus</i>) Eye spot (<i>Aureobasidium zeae</i>) | 9.2 - 15.4 (0.15 - 0.25) | |
| | Soilborne Diseases Rhizoctonia root and stalk rot (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | |
| <p>Specific Use Restrictions: Do not apply more than 3.75 quarts of product/crop/acre/season (2.0 lbs. a.i./A). Do not apply within 7 days of harvest.</p> | | | |
| Cotton | Rhizoctonia seedling blight (<i>Rhizoctonia solani</i>) Pythium seedling blight (<i>Pythium aphanidermatum</i>) | In-Furrow 0.4 - 0.8 fl oz product per 1000 row feet (0.1 - 0.2 oz a.i. per 1000 row feet) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper water management.</p> <p>Application Directions: Apply ABOUND as an in-furrow spray in 5-15 gallons of water at planting. Mount the spray nozzle so the spray is directed into the furrow just before the seed are covered. Use the higher rate when the weather conditions are expected to be conducive for disease development, if the field has a history of Pythium problems, or if minimum/low till programs are in place.</p> <p>See GENERAL INFORMATION section for table illustrating total fluid ounces per acre with various row spacings.</p> |
| <p>Specific Use Restrictions: Make only one application per use season.</p> | | | |

27/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|--|
| Cranberry | Cottonball <i>(Monilla oxycocci)</i> Lophodermium twig blight <i>(Lophodermium spp.)</i> Fruit rots <i>(Phylospora vaccinii)</i> <i>(Glomerella cingulata)</i> <i>(Coleophoma empetri)</i> | 6.2-15.4 (0.1-0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper water management.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: Begin applications at 5-10% bloom for fruit rot, cottonball, and twig blight. Continue applications on a 7-14 day schedule if conditions are favorable for disease development. Applications may be made by ground, chemigation or air.</p> |
| <p>Specific Use Restrictions: May be applied up to three days prior to harvest (3-day PHI). Do not apply more than 2.88 quarts product (1.5 lb ai) per acre per season. Do not treat cranberry fields used for aquaculture of fish and crustacea. Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat. Applicators should use care in making applications near non-target aquatic habitats. Do not apply to flooded crop. Do not allow release of irrigation or flood water to non-target aquatic habitat for at least 14 days after the last application.</p> | | | |

28/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Cucurbits Cantaloupe Chayote Chinese-waxgourd Cucumber Gourds Honeydew Melons <i>Momordica</i> spp. (bitter melon, balsam apple) Muskmelon Watermelon Pumpkin Squash Zucchini Including cultivars and/or hybrids of these | Anthracnose (<i>Colletotrichum lagenarium</i>) Belly Rot (<i>Rhizoctonia solani</i>) Downy Mildew (<i>Pseudoperonospora cubensis</i>) Gummy Stem Blight (<i>Didymella bryoniae</i>) Leaf spots (<i>Alternaria</i> spp., <i>Cercospora</i> spp.) Myrothecium canker (<i>Myrothecium roridum</i>) Powdery Mildew (<i>Sphaerotheca fuliginea</i> , <i>Erysiphe cichoracearum</i>) | 6.2 - 15.4 (0.10 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than one sequential foliar application of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: Make preventative applications on a 5-7 day schedule. For belly rot control, the first application should be made at the 1-3 leaf crop stage with a second application just prior to vine tip over or 10-14 days later whichever occurs first. For all other diseases, ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>ABOUND should not be tank mixed with COC, MSO or silicon adjuvants. ABOUND should not be tank mixed with Malathion, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-PEDE® or Botran®.</p> |
| | Soilborne diseases Rhizoctonia root rot (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts of product/crop/acre/season (1.5 lbs. a.i./A). Do not apply within 1 day of harvest.</p> | | | |

2/1/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--------------------------------|---|--|--|
| Grapes Including Muscadines | Downy Mildew (<i>Plasmopara viticola</i>) Phomopsis Cane and Leaf Spot (<i>Phomopsis viticola</i>) Powdery Mildew (<i>Uncinula necator</i>) Black Rot (<i>Guignardia bidwellii</i>) Suppression: Botrytis bunch rot (<i>Botrytis cinerea</i>) | 9.8 - 15.4 (0.16 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes canopy management through pruning and thinning, proper selection of varieties with disease tolerance, proper timing and placement of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. For wine and table grapes do not make more than four applications of ABOUND or other strobilurins per acre per year. For all other types of grapes do not make more than three (3) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season every 10-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>Do not apply more than 2.88 quarts product/acre/season (1.5 lbs. a.i./A). Do not apply within 14 days of harvest.</p> <p style="text-align: center;">ATTENTION</p> <p>ABOUND is extremely phytotoxic to certain apple varieties.</p> <p>AVOID SPRAY DRIFT. Extreme care must be used to prevent injury to apple trees (and apple fruit).</p> <p>DO NOT spray ABOUND where spray drift may reach apple trees.</p> <p>DO NOT spray when conditions favor drift beyond area intended for application. Conditions which may contribute to drift include thermal inversion, wind speed and direction, sprayer nozzle/pressure combinations, spray droplet size, etc. Contact your State extension agent for spray drift prevention guidelines in your area.</p> <p>DO NOT use spray equipment which has been previously used to apply ABOUND to spray apple trees. Even trace amounts can cause unacceptable phytotoxicity to certain apple and crabapple varieties.</p> <p>AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.</p> |

34/100

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Grasses (grown for seed) | Rust (<i>Puccinia spp</i>) Powdery mildew (<i>Erysiphe graminis</i>) Ergot Stem Diseases | 6.2 – 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation, crop rotation, and fertility.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than two (2) applications of ABOUND per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 10-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 1.44 quarts (0.75 lb active ingredient) per acre per season. Do not feed treated straw, seed, or screenings to livestock. May be applied up to 8 days prior to harvest (swathing).</p> | | | |

31/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|--|
| Herbs (except chives) Angelica Balm Basil Borage Bumet Camomile Catnip Chervil, dried leaves Clary Coriander, leaves (cilantro) Costmary, Culantro, leaves Curry, leaves Dillweed, Horehound Hyssop Lavender Lemongrass Lovage, leaves Marigold Marjoram Nasturtium Parsley, dried leaves Pennyroyal Rosemary Rue Sage Savory, summer Sweet bay Tansy Tarragon Thyme Wintergreen Woodruff Wormwood | Corynespora blight <i>(Corynespora cassicola)</i> Dill blight <i>(Cercosporidium punctum)</i> Phoma blight <i>(Passalora puncta)</i> | 6.0-15.4 (0.1-0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential sprays of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin at the onset of disease development and continue throughout the season on a 7 day schedule, following the resistance management guidelines. Applications may be made by ground only. An adjuvant may be added at recommended rates. Use a minimum of 30 gallons of water per acre.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts (1.5 lb active ingredient) per acre per season. May be applied the day of harvest (0 day PHI)</p> | | | |

32/100

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|--|---|--|
| <p>Leafy Vegetables (except brassica)</p> <p>Amaranth Arugula Cardoon Celery Celtuce Chervil Chrysanthemum-edible Coriander, leaves (Cilantro) Corn salad Cress Dandelion Dock, Endive Fennel Lettuce, head and leaf Orach Parsley Purslane Radicchio Rhubarb Spinach Swiss Chard Including cultivars and/or hybrids of these</p> | <p>Foliar Diseases <i>Alternaria</i> leaf spot (<i>Alternaria sonchi</i>, <i>A. spp</i>) <i>Cercospora</i> leaf spot (<i>Cercospora spp</i>) Anthracnose (<i>Microdochium panattonianum</i>, <i>Colletotrichum dematium dematium</i>) <i>Septoria</i> leaf spot (<i>Septoria petroselini</i>) White rust (<i>Aibugo occidentalis</i>)</p> <p>Downy mildew (<i>Bremia lactucae</i>)</p> <p>Powdery mildew (<i>Eyrisiphe cichoracearum</i>)</p> <p>Soilborne Diseases Webb blight, Bottom rot, Crater rot, Root rot (<i>Rhizoctonia solani</i>)</p> | <p>6.2 - 15.4 (0.1 - 0.25)</p> <p>12.3-15.4 (0.2-0.25)</p> <p>0.4-0.8 fl oz/1000 row feet</p> | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per crop per acre per year.</p> <p>Application Directions: Make preventative applications on a 5-7 day schedule. For all other diseases, ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>ATTENTION: Applications of ABOUND to leafy vegetable foliage have contributed to phytotoxicity under certain circumstances. Proceed with caution with regard to tankmixes and adjuvants when treating all leafy vegetables with ABOUND. ABOUND must not be tank mixed on leaf lettuce with AMBUSH WP, Pounce WP, Alette, Warrior® with Zeon™ Technology, or another product that may increase the penetration of ABOUND into the leaf surface, such as, but not limited to silicone wetters.</p> <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts of product/crop/acre/season (1.5 lbs. a.i./A). May be applied the day of harvest.</p> | | | |

53/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| <p>Legume Vegetables, dry and succulent : <u>Bean (<i>Lupinus spp.</i>)</u> (includes grain lupin, sweet lupin, white lupin, and white sweet lupin), <u>Bean (<i>Phaseolus spp.</i>)</u> (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), <u>Bean (<i>Vigna spp.</i>)</u> (includes adzuki bean, asparagus bean, blackeyed pea, cowpea, catjang, Chinese longbean, , Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), <u>Broad bean (fava bean) (<i>Vicia faba</i>)</u>, <u>Chickpea (garbanzo bean) (<i>Cicer arietinum</i>)</u>, <u>Guar (<i>Cyamopsis tetragonoloba</i>)</u> <u>Jackbean (<i>Canavalia ensiformis</i>)</u> <u>Lablab bean (hyacinth bean) (<i>Labiab purpureus</i>)</u>, <u>Lentil (<i>Lens esculenta</i>)</u> <u>Pea (<i>Pisum spp.</i>)</u> (includes dwarf pea, edible-pod pea, English pea, , garden pea, green pea, field pea, snow pea, sugar snap pea), <u>Pigeon pea (<i>Cajanus cajan</i>)</u>, <u>Sword bean (<i>Canavalia gladiata</i>)</u></p> | <p>Bean rust (<i>Uromyces appendiculatus</i>)</p> | <p>6.2 (0.10)</p> | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, proper timing and placement of irrigation, crop rotation and crop residue management.</p> <p>Resistance Management: Do not apply more than three sequential foliar applications of ABOUND or other strobilurin before alternating with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Use the higher rates under severe disease pressure. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. For rust, use of a non-ionic surfactant is recommended.</p> <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> |
| | <p>Anthracnose (<i>Colletotrichum lindemuthianum</i>) Alternaria leaf spot (<i>Alternaria alternata</i>) Ascochyta leaf spot (<i>Ascochyta phaseolorum</i>) Rust (<i>Phakopsora spp.</i>) Southern blight (<i>Sclerotium rolfsii</i>) Web blight (<i>Rhizoctonia solani</i>) Ascochyta blight (<i>Mycosphaerella pinodes</i>) Ascochyta leaf and pod spot (<i>Ascochyta spp</i>) Alternaria blight (<i>Alternaria spp</i>)</p> | <p>6.2-15.4 (0.10-0.25)</p> | |
| | <p>Soilborne diseases Rhizoctonia root rot (<i>Rhizoctonia solani</i>)</p> | <p>0.4-0.8 fl oz/1000 row feet</p> | |
| | <p>Specific Use Restrictions: Do not apply more than 2.88 quarts product/acre/season (1.5 lb ai/A). Not for use on Austrian Winter Peas or any other field pea cultivars intended for livestock feeding only. Not for use on any cowpea cultivars intended for livestock feeding only. For use on soybeans please refer to the soybean crop directions for use. May be applied the day of harvest.</p> | | |

34/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|---|--|--|
| Mint (Fresh) (For processing into mint oil) | Rust (<i>Puccinia menthae</i>) Powdery mildew (<i>Erysiphe spp</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than three (3) foliar applications of ABOUND or other strobilurin fungicides per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-10 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Soilborne Diseases Seedling root rot, basal stem rot (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 1.44 quarts (0.75 lb active ingredient) per acre per season. For fresh mint may be applied the day of harvest. For processed mint do not apply within 7 days prior to harvest.</p> | | | |

35/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|--|
| Peanuts | Soil-borne diseases – early season (in-furrow application) Aspergillus crown rot (<i>Aspergillus niger</i>) Pythium damping off (<i>Pythium</i> spp.) Stem Rot/White mold suppression (<i>Sclerotium rolfsii</i>) | 0.4-0.8 fl oz/ 1000 row feet | Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, proper timing and placement of irrigation, crop rotation and crop residue management. Resistance Management: For control of peanut diseases do not make more than two foliar applications of ABOUND or other strobilurin fungicides per acre per year. Application Directions: Apply ABOUND in-furrow at planting for control of various seed/seedling diseases including early season suppression of stem rot. See directions and rates under GENERAL INFORMATION section. |
| | Soil-borne diseases – mid-late season Rhizoctonia peg and pod rot (<i>Rhizoctonia solani</i>) Stem Rot/White Mold (<i>Sclerotium rolfsii</i>) Suppression only Pythium Pod rot (<i>Pythium myriotylum</i>) Cythindrocladium black rot – (<i>Cythindrocladium crotalariae</i>) | 12.3-24.6 (0.2-0.4) | ABOUND should be applied at approximately 60 and 90 days after planting as a foliar application. This application regime may be applied earlier in the season if environmental conditions favor disease development. These two applications of ABOUND will provide protection against the soil borne diseases and will also provide control of the foliar diseases listed for a 10-14 day period after each spray. Under heavy disease pressure and/or where there is high rainfall and/or irrigation, use 18.3- 24.6 oz/A. For light disease pressure and dry environmental conditions (non-irrigated, low rainfall), use 12.3-24.6 oz/A. For control of Pythium, a rate of 24.6 fl oz/A is required. Additional applications of other fungicides on a leaf spot application schedule will be required to provide season-long disease control of the leaf spot diseases. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. |
| | Foliar diseases Early leaf spot (<i>Cercospora arachidicola</i>) Late leaf spot (<i>Cercosporidium personatum</i>) Rust (<i>Puccinia arachidis</i>) Web blotch (<i>Phoma arachidicola</i>) | 6.2-18.3 (0.1-0.3) | For foliar disease control only, a lower rate of ABOUND may be applied on a 10-14 day interval. Make no more than two sequential applications before alternating to a fungicide with a different mode of action. |
| Specific Use Restrictions: Do not apply more than 1.54 quarts of product/acre/season (0.8 lb a.i./acre/season). Do not apply within 14 days of harvest. | | | |

36/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|---|
| Pecans | Anthracnose (<i>Glomerella cingulata</i>) Scab (<i>Cladosporium caryigenum</i>) | 6.2 - 12.3 (0.10 - 0.20) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with tolerance to disease and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.31 quarts product/acre/season (1.2 lbs. a.i./A). Do not apply within 45 days of harvest.</p> | | | |
| Pepper Bell Pepper Non-Bell Pepper Sweet Non-Bell Pepper Eggplant Okra | Powdery mildew (<i>Sphaerotheca spp</i>) Anthracnose (<i>Colletotrichum spp</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of ABOUND or other strobilurin fungicide per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| Soilborne diseases Rhizoctonia seedling rot (<i>Rhizoctonia solani</i>) | | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 1.92 quarts (1.0 lb active ingredient) per acre per season. May be applied the day of harvest.</p> | | | |

37/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|--|
| Pistachios | Alternaria Late Blight <i>(Alternaria alternata)</i> Botryosphaeria panicle and shoot blight <i>(Botryosphaeria dothidea)</i> Septoria leaf spot <i>(Septoria pistaciarum)</i> | 6.2 - 15.4 (0.10 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts product/acre/season (1.5 lbs. a.i./A). Do not apply within 7 days of harvest.</p> | | | |

38/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Potatoes | Early Blight <i>(Alternaria solani)</i> Late Blight <i>(Phytophthora infestans)</i> Black dot <i>(Colletotrichum coccodes)</i> Powdery mildew <i>(Erysiphe cichoracearum)</i> | 6.2 - 20.3 (0.1 - 0.33) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes removal of plant debris, in which inoculum overwinters, selection of varieties with tolerance to disease, clean certified seed, seedpiece treatment, and disease forecasting.</p> <p>Resistance Management: Do not make more than one foliar application of ABOUND or other strobilurins before alternation with fungicides that have a different mode of action, such as BRAVO. Make applications on a 5-7 day schedule. Do not alternate or tank-mix with fungicides to which resistance has developed. Do not make more than six (6) foliar applications ABOUND or other strobilurin fungicides per year.</p> <p>Application Directions: For both early and late blight, maintain the alternation program described above.</p> <p>Early blight - For a 7-day application schedule use ABOUND 6.2 fl. oz. product/A, if the interval is increased to 14 days use the 12.3 fl. oz. product/A rate.</p> <p>Late blight - Apply ABOUND at 12.3 fl oz product/A on a 7-day schedule. Initiate late blight applications in a preventative schedule prior to disease development according to local practices. If late blight symptoms develop or conditions favor disease, switch immediately to the alternate non-strobilurin fungicide, use a 5-day schedule.</p> <p>For all other diseases, ABOUND applications should begin prior to disease development and continue throughout the season every 7-14 days following the resistance management guidelines. Use the high rate and the shorter interval if disease epidemics are severe. Applications may be made by ground, air or chemigation. Addition of a spreader/sticker may improve coverage.</p> |
| | Soilborne Diseases Black scurf <i>(Rhizoctonia solani)</i> Silver scurf <i>(Helminthosporium solani)</i> | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 3.75 quarts product/acre/season (2.0 lbs. a.i./A). Do not apply within 14 days of harvest.</p> | | | |

59/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|------|--|--|---|
| Rice | Sheath/Stem Diseases Sheath Blight <i>(Rhizoctonia solani)</i> | 6.2 - 18.5 (0.10 - 0.30) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation, and sound water management practices.</p> <p>Resistance Management: When ABOUND is being applied for panicle blast on continuous rice acreage (no rotation to other crops) no more than two sequential foliar applications of ABOUND or other strobilurins should be made over multiple years before alternating with a fungicide with a different mode of action. Do not make more than three (3) foliar applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND should be applied prior to disease development. Applications may be made by ground, air or chemigation. For aerial application, volumes should be 5-10 GPA. An adjuvant may be added at recommended rates .</p> <p>For sheath blight control, application rates may vary from 9.2 to 12.3 fl. oz./A depending on the growth stage of the rice and the severity of the disease. Consult with your local extension personnel or Syngenta representative for the Syngenta Technical Bulletin on sheath blight control.</p> <p>For other stem/sheath diseases including sheath blight, stem rot, black sheath rot, aggregate sheath spot and sheath spot apply when disease is less than 4 inches above water line usually between panicle differentiation (PD) +5 days to PD+10 days or at initial sign of disease. Under heavy disease pressure and conditions favorable for disease development, a second application may be applied. For foliar and panicle diseases, apply ABOUND prior to disease development. ABOUND must be applied as a preventative treatment for blast control and applied prior to favorable conditions for blast development. For panicle blast an application should be applied at mid-boot to boot-split but prior to full head emergence. A second application should be applied when panicles are approximately 60-90% emerged from the boot (7-14 days later).</p> |
| | Aggregate Sheath Spot <i>(Rhizoctonia oryzae-sativae)</i> Black Sheath Rot <i>(Gaeumannomyces graminis var. graminis)</i> Sheath Spot <i>(Rhizoctonia oryzae)</i> Stem Rot <i>(Sclerotium oryzae)</i> | 9.3 - 18.5 (0.15 - 0.30) | |
| | Foliar Diseases Brown Leaf spot <i>(Cochliobolus miyabeanus)</i> Leaf Smut <i>(Entyloma oryzae)</i> Narrow Brown Leaf spot <i>(Cercospora oryzae)</i> | | |
| | Panicle Diseases Kernel Smut <i>(Neovossia barclayana)</i> Panicle Blast <i>(Pyricularia grisea)</i> | | |
| | <p>Specific Use Restrictions: Do not treat rice fields used for aquaculture of fish and crustacea. Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat. Applicators should use care in making applications near non-target aquatic habitats.</p> <p>Do not apply more than 1.34 quarts of product/acre/season (0.7 lb. a.i./A).</p> <p>Do not apply within 28 days of harvest.</p> <p>Do not allow release of irrigation or flood water for at least 14 days after the last application.</p> | | |

4/6/09

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|--|
| Soybeans | Aerial blight (<i>Rhizoctonia solani</i>) Rust (<i>Phakopsora</i> spp.) | 6.2 - 15.4 (0.1 - 0.25) | Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, optimum plant populations, proper fertilization, plant residue management, crop rotation and proper timing and placement of irrigation. |
| | Anthracnose (<i>Colletotrichum truncatum</i>) Alternaria leaf spot (<i>Alternaria</i> spp) Brown spot (<i>Septoria glycines</i>) Cercospora blight and leaf spot (<i>Cercospora kikuchii</i>) Frogeye leafspot (<i>Cercospora sojina</i>) Pod and Stem blight (<i>Diaporthe phaseolorum</i>) | 12.3 - 15.4 (0.2 - 0.25) | Resistance Management: No more than two foliar applications of ABOUND or other strobilurin fungicides should be made per growing season. Do not alternate or tank mix with fungicides to which resistance has developed in the pathogen population. Application Directions: ABOUND applications should begin prior to disease development. Use the high rates under conditions favorable for severe disease pressure, dense plant canopies, or when susceptible varieties are planted. Contact Extension personnel for local economic thresholds and timings for specific diseases in your area. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates. Use of a non-ionic surfactant with the lower use rate is recommended. |
| | Soilborne Diseases Southern blight (<i>Sclerotium rolfsii</i>) Rhizoctonia solani (<i>Rhizoctonia solani</i>) | 0.4-0.8 fl oz/1000 row feet | For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section. |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts of product/crop/acre/season (1.5 lbs. a.i./A). Do not make more than one application at 15.4 fl. oz. product/acre or 0.25 lb. a.i./A to soybean forage and hay. Do not apply within 14 days of harvest of soybeans (bean). May be applied the day of harvest to soybean forage and hay.</p> | | | |

4/1/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|--|
| Stone Fruits Apricot Cherry, sweet Cherry, tart Nectarine Peach Plum Plumcot Prune | Scab (<i>Cladosporium carpophilum</i>) Alternaria Spot and Fruit Rot (<i>Alternaria alternata</i>) Anthracnose (<i>Colletotrichum prunicola</i> , <i>C. gloeosporioides</i>) Leaf Rust (<i>Tranzschelia discolor</i>) Powdery Mildew (<i>Sphaerotheca pannosa</i> , <i>Podosphaera clandestina</i>) Shot Hole (<i>Wilsonomyces carpophilus</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and pruning to provide sunlight and aeration into the canopy.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not alternate or tank mix with fungicides to which resistance has developed in the pathogen population. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year for all diseases.</p> <p>Application Directions: For brown rot blossom blight, - Begin applications at early bloom and continue through petal fall. For brown rot on fruit, ABOUND may be applied to fruit up to the day of harvest. For scab, begin applications at petal fall and continue at 7-14 day intervals. For all other diseases, begin application at the onset of disease as a protectant fungicide and continue on a 7-14 day schedule. For peaches only, 9.2-15.4 fl oz of ABOUND may be used for scab control.</p> <p>Applications may be made by ground, air or chemigation.</p> |
| | Brown Rot Blossom blight and Fruit rot (<i>Monilinia fructicola</i> , <i>M. laxa</i>) | 12.3 - 15.4 (0.2 - 0.25) | |

Specific Use Restrictions: Do not apply more than 2.88 quarts product/acre/season (1.5 lbs. a.i./A).
 May be applied the day of harvest.

4/2/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|--|--|---|
| Strawberry | Anthracnose <i>(Colletotrichum fragariae)</i> Powdery mildew <i>(Sphaerotheca macularis)</i> Suppression of Botrytis on the foliage <i>(Botrytis cinerea)</i> | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than four (4) foliar applications of ABOUND per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-10 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | Soilborne Diseases Seedling root rot, basal stem rot <i>(Rhizoctonia solani)</i> | 0.4-0.8 fl oz/1000 row feet | <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> <p>For dip applications at transplanting for commercial berry production: For suppression of root and crown rot caused by <i>Colletotrichum</i> spp., mix 5-8 fl oz of ABOUND per 100 gal of water. Dip plants for 2-5 minutes. Plant treated plants as quickly as possible. It is recommended that transplants be washed to remove excess soil prior to dipping. For continued anthracnose control, follow with foliar applications beginning 2-3 weeks after transplant.</p> |
| <p>Specific Use Restrictions: Do not use in plant propagation nurseries. Do not apply more than 1.92 quarts (1.0 lb. active ingredient) per acre per season. May be applied the day of harvest.</p> | | | |

43/66

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|--|--|--|
| Tomatoes | Anthracnose <i>(Colletotrichum coccodes)</i> Black Mold <i>(Alternaria alternata)</i> Buckeye Rot <i>(Phytophthora spp.)</i> Early Blight <i>(Alternaria solani)</i> Powdery Mildew <i>(Oidiopsis sicula)</i> Septoria Leaf spot <i>(Septoria lycopersici)</i> Target spot <i>(Corynespora cassicola)</i> | 5.0 - 6.2 (0.08 - 0.10) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes proper selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, plant residue management, crop rotation and proper timing and placement of irrigation.</p> <p>Resistance Management: When ABOUND is being applied for the control of early blight, Septoria leaf spot and/or anthracnose, no more than two foliar sequential applications of ABOUND or other strobilurins should be made before alternating with a fungicide with a different mode of action. When ABOUND is being applied for the control of late blight, no more than two foliar sequential applications of ABOUND or other strobilurins should be made before alternation with a fungicide with a different mode of action. If late blight should occur during an early blight spray program, switch immediately to the late blight spray program beginning with a fungicide that has a different mode of action. Do not make more than six (6) foliar applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season following the resistance management guidelines. For late blight ABOUND should be applied at 5-7 day interval. For all other tomato diseases ABOUND should be applied on 7-21 day intervals. Applications may be made by ground, air or chemigation.</p> |
| | Late Blight <i>(Phytophthora infestans)</i> | 6.2 (0.10) | |
| <p>Specific Use Restrictions: ABOUND should not be applied until 21 days after transplanting or 35 days after seeding. ABOUND should not be applied within +/-6 days of a postemergence broadcast application of Sencor. Adjuvants should not be used as they may increase the potential for severe phytotoxicity. Do not apply more than 1.15 quarts product/acre/season (0.6 lb. a.i./A). May be applied the day of harvest.</p> | | | |

44/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|--|--|---|
| Triticale | See Wheat | | |
| Tree Nuts Almonds(see specific use instructions) Beechnut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory Macadamia Pecan Walnut Pistachios (see specific use instructions) | Alternaria leaf and fruit spot (<i>Alternaria alternata</i>) Anthracnose (<i>Colletotrichum acutatum</i> , <i>Glomerella cingulata</i>) Late blight (<i>Alternaria alternata</i>) Scab (<i>Cladosporium carpophilum</i>) Septoria leaf spot (<i>Septoria pistaciarum</i>) Shothole (<i>Wilsonomyces carpophilus</i>) Eastern filbert blight (<i>Anisogramma anomale</i>) | 6.2 - 12.3 (0.10 - 0.20) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters and proper timing and placement of irrigation.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternation with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> <p>For all other diseases begin applications prior to disease development and continue at 7-21 day intervals throughout the season.</p> |
| | Blossom Blight (<i>Monilinia laxa</i> , <i>M. fructicola</i>) | 12.3 (0.20) | For blossom blight begin applications at early bloom and continue through petal fall. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per year. |
| <p>Specific Use Restrictions: Do not apply more than 2.31 quarts product/acre/season (1.2 lbs. a.i./A). Do not apply within 45 days of harvest.</p> | | | |

45/60

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|---|---|--|--|
| <p>Tropical Fruit</p> <ul style="list-style-type: none"> Acerola Atemoya Avocado Biriba Canistel Cherimoya Custard apple Feijoa Guava Ilama Jaboticaba Jackfruit Longan Loquat Lychee Mango Papaya Passionfruit Pawpaw Persimmon Pulasan Pummello Rambutan Sapodilla Sapote, black Sapote, mamey Sapote, white Soursop Star apple Starfruit Sugar apple Spanish lime Tamarind Uniq fruit | <p>Anthracnose (<i>Colletotrichum spp</i>)</p> <p>Rust (<i>Puccinia spp</i>)</p> <p>Cercospora leaf spot (<i>Cercospora spp</i>)</p> <p>Powdery Mildew (<i>Erysiphe spp.</i>)</p> | <p>6.2 - 15.4 (0.1 - 0.25)</p> | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, proper timing of irrigation and removal of plant debris in which inoculum overwinters.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than six (6) applications of ABOUND or other strobilurin fungicides per acre per crop year.</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 10-14 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| | <p>Soilborne Diseases</p> <p>Seedling root rot, basal stem rot (<i>Rhizoctonia solani</i>)</p> | <p>0.4-0.8 fl oz/1000 row feet</p> | <p>For soilborne/seedling disease control, see directions and rates under GENERAL INFORMATION section.</p> |
| <p>Specific Use Restrictions: Do not apply more than 2.88 quarts (1.5 lbs. active ingredient) per acre per season. May be applied the day of harvest.</p> | | | |

4/1/00

| Crop | Target Diseases | Use Rate fl. oz. product/A (lbs. a.i./A) | Remarks |
|--|---|--|--|
| Watercress | Cercospora leaf spot (<i>Cercospora spp</i>) | 6.2 - 15.4 (0.1 - 0.25) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes varieties with disease tolerance, insect control and proper fertilization.</p> <p>Resistance Management: Do not apply more than two sequential foliar applications of ABOUND or other strobilurins before alternating with a fungicide that has a different mode of action. Do not make more than three (3) foliar applications of ABOUND or other strobilurin fungicides per acre per cutting (2 cuttings per year).</p> <p>Application Directions: ABOUND applications should begin prior to disease development and continue throughout the season on a 7-10 day schedule, following the resistance management guidelines. Applications may be made by ground, air or chemigation. An adjuvant may be added at recommended rates.</p> |
| <p>Specific Use Restrictions: Do not apply more than 1.44 quarts per cutting. Do not apply more than 2.88 quarts (1.5 lbs. active ingredient) per acre per season. May be applied up to 7 days prior to harvest.</p> | | | |
| Wheat Triticale | Leaf Rust (<i>Puccinia recondita</i> f.sp. <i>tritici</i>) Stripe Rust (<i>Puccinia striiformis</i>) Stem Rust (<i>Puccinia graminis</i>) Septoria Leaf and Glume Blotch (<i>Septoria tritici</i> , <i>Septoria nodorum</i>) Tan Spot (<i>Pyrenophora tritici- repentis</i>) | 4.0 - 12.3 (0.07 - 0.20) | <p>Integrated Pest (Disease) Management: ABOUND should be integrated into an overall disease management strategy that includes proper selection of varieties with disease tolerance, proper timing and placement of irrigation, removal of plant debris in which inoculum overwinters, plant residue management, and crop rotation.</p> <p>Resistance Management: Do not make more than two foliar applications of ABOUND or other strobilurin fungicides per acre per year.</p> <p>Application Directions: ABOUND should be applied prior to disease development from jointing (Feekes 6 or Zadok's 31) up to late head emergence (Feekes 10.5 or Zadok's 59). Applications may be made by ground, air or chemigation. A crop oil concentrate adjuvant may be added at 1.0% V/V to optimize efficacy.</p> |
| | Powdery Mildew (<i>Erysiphe graminis</i>) | 7.7-10.8 (0.125-0.175) | |
| <p>Specific Use Restrictions: Do not apply until after forage stage (Feekes 6 or Zadok's 31). Do not apply later than Feekes growth stage 10.5 (Zadok's growth stage 59). Do not harvest treated wheat for forage. Do not apply more than 0.77 quarts product/acre/season (0.4 lb. a.i./A). Do not apply within 14 days of harvest for hay. Do not apply within 45 days of harvest for grain and straw.</p> | | | |

09/00

ABOUND Flowable Fungicide Rate Conversion Chart

| Fluid Ounces Product/A | Lb. a.i./A | Treated Acres/Gal Product |
|------------------------|------------|---------------------------|
| 4 | 0.07 | 32 |
| 5.0 | 0.08 | 25.6 |
| 5.5 | 0.09 | 23.2 |
| 6.2 | 0.10 | 21.3 |
| 7 | 0.11 | 18.3 |
| 8.3 | 0.135 | 15.4 |
| 9.2 | 0.15 | 14.2 |
| 9.8 | 0.16 | 13.0 |
| 11 | 0.18 | 11.6 |
| 12.3 | 0.20 | 10.4 |
| 13 | 0.21 | 9.8 |
| 14 | 0.23 | 9.1 |
| 15 | 0.24 | 8.5 |
| 15.4 | 0.25 | 8.3 |
| 17 | 0.28 | 7.5 |
| 18 | 0.29 | 7.1 |
| 18.3 | 0.3 | 6.9 |
| 20.3 | 0.33 | 6.4 |
| 24.6 | 0.4 | 5.2 |

Amount of ABOUND Flowable Fungicide to Mix 100 Gallons for Post-Harvest Applications

| ABOUND Flowable Use Rate | 100.0 gals Spray Solution |
|--------------------------|---------------------------|
| 200 ppm | 10.6 fl. oz. |
| 300 ppm | 15.4 fl. oz. |
| 400 ppm | 20.8 fl. oz. |

TURF:

Golf Course turf (Not for use in California)

Commercial Turf farms (Not for use in California) ABOUND Flowable Fungicide is recommended for control of anthracnose, brown patch, cool weather brown patch (yellow patch), Fusarium patch, gray leaf spot, gray snow mold (Typhula blight), leafspot, melting out, necrotic ring spot, pink patch, pink snow mold, Pythium blight, Pythium root rot, red thread, Rhizoctonia large patch, southern blight, spring dead spot, summer patch, take-all patch, and Zoysia patch on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management: Sound turf management resulting in healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease. Immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. ABOUND Flowable should be applied in a tank mix or alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not apply more than two sequential ABOUND Flowable applications for *Pythium* spp. control. For all other diseases when *Pythium* spp. is not present, do not apply more than three sequential applications of ABOUND.

Application Directions: ABOUND should be applied prior to disease development. Mix ABOUND Flowable with the required amount of water and apply as a dilute spray application in 2-4 gallons of water per 1000 square feet (87-174 gallons per acre). Repeat applications at specified intervals for as long as required. For spot treatments, use 0.4 fl. oz. ABOUND per 1 to 2 gallons of water. Do not apply more than 9.6 quarts product/acre/year (7.1 fl. oz. product/1000 square feet/year). Applications may be made by ground only.

Rate Ranges: Use the shortest specified application interval and/or use the higher specified rate when prolonged favorable disease conditions exist.

Dollar Spot: ABOUND Flowable Fungicide does not control dollar spot. ABOUND Flowable Fungicide is compatible in tank mixes with many other fungicides that control dollar spot. Always tank mix ABOUND Flowable Fungicide with another fungicide that controls dollar spot when this disease is present. Follow directions under TANKMIXES/COMPATIBILITY above.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

| Target Diseases | Use Rate (fl. oz. product per 1000 sq. ft.) | Application Interval (days) | Remarks* |
|---|---|-----------------------------------|--|
| Anthracnose (<i>Colletotrichum graminicola</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Brown Patch (<i>Rhizoctonia solani</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Cool Weather Brown Patch Yellow Patch (<i>Rhizoctonia cerealis</i>) | 0.38-0.77 | 28 | Make one or two applications in fall or when conditions are favorable for disease development. |
| Fusarium Patch (<i>Microdochium nivale</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |

| Target Diseases | Use Rate (fl. oz. product per 1000 sq. ft.) | Application Interval (days) | Remarks* |
|--|---|-----------------------------------|---|
| Gray Leaf Spot (<i>Pyricularia grisea</i>) | 0.38-0.77 | 14-28 | Begin applications before disease is present and continue applications while conditions are favorable for disease development. |
| Gray Snow Mold Typhula blight (<i>Typhula incarnata</i> , <i>T. ishikariensis</i>) | 1.35 0.77 | single application 14 | Make a single application of 1.35 fl. oz. or two applications of 0.77 spaced 14 days apart in late fall just before snow cover. Tank mixing with another snow mold fungicide may enhance control under severe disease pressure. |
| Leafspot (<i>Bipolaris sorokiniana</i>) | 0.38-0.77 | 14-21 | Apply when conditions are favorable for disease development. |
| Melting Out (<i>Drechslera poae</i>) | 0.38-0.77 | 14-21 | Apply when conditions are favorable for disease development |
| Necrotic Ring Spot (<i>Leptosphaeria korrae</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Pink Patch (<i>Limonomyses roseipellis</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Pink Snow Mold (<i>Microdochium nivale</i>) | 1.35 0.77 | single application 14 | Make a single application of 1.35 fl. oz. or two applications of 0.77 spaced 14 days apart in late fall just before snow cover. Tank mixing with another snow mold fungicide may enhance control under severe disease pressure. |

| Target Diseases | Use Rate (fl. oz. product per 1000 sq. ft.) | Application Interval (days) | Remarks* |
|---|---|-----------------------------------|--|
| Pythium Blight Pythium Root Rot (<i>Pythium aphanidermatum</i> , <i>Pythium</i> spp.) | 0.38-0.77 | 10-14 | Begin applications before disease is present. During periods of prolonged favorable conditions, treat on the 10 day application interval. For use on newly seeded as well as established turf. |
| Red Thread (<i>Laetisaria fuciformis</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Rhizoctonia Large Patch (<i>Rhizoctonia solani</i>) | 0.38-0.77 | 28 | Make one or two applications in fall or when conditions are favorable for disease development. |
| Southern Blight (<i>Sclerotium rolfsii</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Spring Dead Spot (<i>Leptosphaeria korrae</i>) or (<i>Gaeumannomyces graminis</i> var. <i>graminis</i>) or (<i>Ophiosphaerella</i> <i>herpotricha</i>) | 0.38-0.77 | 28 | Make one or two applications in fall or when conditions are favorable for disease development. |
| Summer Patch (<i>Magnaporthe poae</i>) | 0.38-0.77 | 14-28 | Apply when conditions are favorable for disease development. |
| Take-all patch (<i>Gaeumannomyces graminis</i> var. <i>avenae</i>) | 0.38-0.77 | 28 | Make two applications, 28 days apart in the spring and two applications 28 days apart in the fall. |
| Zoysia Patch (<i>Rhizoctonia solani</i> and/or <i>Gaeumannomyces</i> <i>incrustana</i>) | 0.38-0.77 | 28 | Make one or two applications in late fall before snow cover or when conditions are favorable for disease development. Do not apply on top of snow. |

Do not apply more than two sequential applications of ABOUND for control of *Pythium* spp. For all other diseases, do not apply more than four sequential applications of ABOUND.

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ABOUND Flowable Fungicide Rate Conversion Chart for Turf

| Fluid Ounces Product Per 1000 Sq. Ft. | Ounces A.I. Per 1000 Sq. Ft. | Fluid Ounces Product Per Acre | Pints of Product Per Acre |
|---------------------------------------|------------------------------|-------------------------------|---------------------------|
| 0.4 | 0.104 | 17.4 | 1.1 |
| 0.5 | 0.130 | 21.8 | 1.4 |
| 0.6 | 0.156 | 26.1 | 1.6 |
| 0.7 | 0.182 | 30.5 | 1.9 |
| 0.77 | 0.200 | 33.5 | 2.1 |
| 1.35 | 0.35 | 58.8 | 3.7 |

Amount of ABOUND Flowable Fungicide to Mix 100 Gallons for Turf Applications

| ABOUND Flowable Use Rate (fl oz) | Spray Volume (gallons/1000 square feet) | | |
|----------------------------------|---|--------------------|--------------------|
| | 2.0 gals (fl. oz.) | 3.0 gals (fl. oz.) | 4.0 gals (fl. oz.) |
| 0.4 | 20 | 13 | 10 |
| 0.5 | 25 | 17 | 13 |
| 0.6 | 30 | 20 | 15 |
| 0.7 | 35 | 23 | 18 |
| 0.77 | 38.5 | 25.7 | 19.3 |
| 1.35 | 67.5 | 45 | 33.75 |

SEED TREATMENT

GENERAL INFORMATION

ABOUND Flowable Fungicide is a broad spectrum, preventative fungicide with systemic and curative properties recommended for the control of many important plant diseases. ABOUND Flowable may be applied in alternating programs or in tank mixes with other registered, crop protection products. All applications should be made according to the use directions that follow. ABOUND Flowable Fungicide may be applied as a seed treatment following the guidelines specified in the SEED TREATMENT TABLE section of this label.

GENERAL USE PRECAUTIONS

Do not graze or feed clippings from treated turf areas to animals. Do not plant the following crops for a period of 12 months (unless an azoxystrobin product is registered for use on that crop): sorghum, buckwheat, millet, oats, rye, wild rice, non-grass animal feeds (alfalfa, clover), spices and sugarcane. Azoxystrobin is registered for use on all other rotated crops and all other crops may be planted immediately after the last treatment.

SEED TREATMENT PRECAUTIONS

To meet U. S. Federal Seed Act requirements, all seed treated with ABOUND Flowable should be labeled:

TREATED SEED:

DO NOT USE FOR FOOD, FEED OR OIL PURPOSES.

Treated with methyl (E)-2-[2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate (ABOUND).

USE PRECAUTION

When using formulations that do not contain dye, a dye used to color the treated seed must be an EPA approved dye. Refer to 40 CFR 153.155(c). All seed treated with an economic poison must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.

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SEED TREATMENT USE INFORMATION

Apply ABOUND Flowable at the recommended rate per 100 pounds of seed, using standard slurry or mist-type seed treatment equipment. Uniform application to seed is necessary to ensure seed safety and best disease protection. Seed should be sound and well cured prior to treatment. Product should be diluted with sufficient water to secure seed coverage. Consult a seed treatment specialist regarding slurry rates recommended for the crop to be treated with ABOUND Flowable.

It is recommended that ABOUND Flowable be combined with a Pythium-active seed treatment product to offer broad spectrum protection against the seed and seedling disease complex (*Rhizoctonia spp.* And *Pythium spp.*)

| Crop | Target Diseases | Use Rate fl oz product/ cwt. seed | Remarks |
|-----------|---|--|--|
| Canola | Seedborne Blackleg (Phoma lingam) Seedling Rhizoctonia Damping-off (Rhizoctonia solani) Alternaria Seedling Blight (Alternaria spp.) | 1.5 | |
| Cucurbits | Seedling Rhizoctonia Damping-off (Rhizoctonia solani) General seed decay fungi | 0.25-1.5 | |
| Peanut | Seedborne disease Rhizoctonia Damping-off (Rhizoctonia solani) | 0.25-1.5 | Suppression only |
| Potato | Black Scurf & Stem Canker (Rhizoctonia solani) Silver Scurf (Helminthosporium solani) | 0.31-1.5 | For suppression of black scurf and stem canker and for protection against silver scurf. |
| Sunflower | Downy mildew (Plasmopora halstedii) | 0.25-1.5 | Apply ABOUND flowable at the recommended rate using standard slurry or mist-type seed treatment equipment. Uniform application to seed is necessary to ensure seed safety and best disease protection. |
| Rice | Seedborne fungi and Early Season Sheath Blight (Rhizoctonia solani) | 0.25-1.5 | For protection against seedborne fungi and early season sheath blight. |
| Tomato | Seed decay and Early Season Rhizoctonia damping-off (Rhizoctonia solani) | 0.25-1.5 | For protection against seed decay and Early Season Rhizoctonia damping-off. |
| Wheat | Seedborne disease common bunt dwarf bunt | 0.25-1.5 | For protection against seedborne disease, common bunt and partial control of dwarf bunt. |

SR/CS

| Crop | Target Diseases | Use Rate fl oz product/ cwt. seed | Remarks |
|------------------|--|--|--|
| Non-Crop Uses | | | |
| Flower Tree Seed | Seedborne disease Rhizoctonia Damping-off (Rhizoctonia solani) | 0.25-1.5 | For early season protection against seedborne disease and Rhizoctonia damping-off. |
| Ornamental Seed | Seedborne disease Rhizoctonia Damping-off (Rhizoctonia solani) | 0.25-1.5 | For early season protection against seedborne disease and Rhizoctonia damping-off. |
| Turfgrass | Seedborne disease Rhizoctonia Damping-off (Rhizoctonia solani) | 0.25-1.5 | For early season protection against seedborne disease and Rhizoctonia damping-off. |

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For non-emergency (e.g., current product information) call
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