

45002-4

7/24/2012

1/38



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

NOTIFICATION
JUL 24 2012

Ms Carolyn Miter
Albaugh Inc
P O BOX 2127
Valdosta GA 31604

Subject Notification for Label Change per PRN 98 10 Add Goss s Wilt Disease and correct the application rate typo for corn
Submission date 6/27/2012
Product Name Blue Shield DF
EPA Reg No 45002 4
Decision Number 467183

Dear Registrant

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98 10 dated 6/27/2012 for the above product The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98 10 and finds that the action(s) requested fall within the scope of PRN 98 10 The label submitted with the application has been stamped Notification and will be placed in our records

If you have questions concerning this letter please call Banza Djapao at 703 305 7269 or you may call me at 703 308 9443

Sincerely

A handwritten signature in black ink that reads "Banza Djapao".

Tony Kish
Product Manager 22
Fungicide Branch
Registration Division (7504P)



United States
Environmental Protection Agency
Washington DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide Section I

1 Company/Product Number 45002 4	2 EPA Product Manager T Kish	3 Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4 Company/Product (Name) Blue Shield DF	PM# 22	
5 Name and Address of Applicant (Include ZIP Code) Albaugh Inc P O Box 2127 Valdosta GA 31604 <input type="checkbox"/> Check if this is a new address	6 Expedited Review In accordance with FIFRA Section 3(c)(3) (b)(i) my product is similar or identical in composition and labeling to EPA Reg No _____ Product Name _____	

NOTIFICATION
JUL 24 2012

Section II

<input type="checkbox"/> Amendment Explain below	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> Me Too Application
<input checked="" type="checkbox"/> Notification Explain below	<input checked="" type="checkbox"/> Other Explain below

Explanation Use additional page(s) if necessary (For section I and Section II)

Notification to add Goss's Wilt Disease and correct the application rate typo for corn

This notification is consistent with the provisions of PR Notice 98 10 and EPA regulations at 40 CFR 152 46 and no further changes have been made to the labeling or the confidential statement of formula of this product I understand that it is a violation of 18 U S C Sec 1001 to willfully make any false statement to EPA I further understand that if this notification is not consistent with the terms of PR Notice 98 10 and 40 CFR 152 46 this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA

Section III

1 Material This Product Will Be Packaged In				2 Type of Container	
Child Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
* Certification must be submitted				<input type="checkbox"/> Other (Specify) _____	
3 Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4 Size(s) Retail Container 1 gal 2 5 gal		5 Location of Label Directions <input type="checkbox"/> Attached to container	
6 Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued Stenciled			<input type="checkbox"/> Other _____		

Section IV

1 Contact Point (Complete items directly below for identification of individual to be contacted if necessary to process this application)					
Name Carolyn Miter		Title Registrations Specialist		Telephone No (Include Area Code) 229 244 3288	
Certification I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law					6 Date Application Received (Stamped)
2 Signature <i>Carolyn Miter</i>			3 Title Registrations Specialist		
4 Typed Name Carolyn Miter			5 Date June 27 2012		

7/9

Fed Ex

June 27 2012

Document Processing Desk (NOTIFY)
Mr Tony Kish (PM 22)
Office of Pesticide Programs (7504P)
U S Environmental Protection Agency
One Potomac Yard (South Bldg)
2777 South Crystal Dr
Arlington VA 22202

Re Blue Shield DF
45002 4

Dear Mr Kish

The enclosed notification submission is to add Goss s Wilt Disease and correct the application rate typo for com

Attached are ~~three~~^{two} copies of the label with changes a CD with a label pdf and Form 8570 1

Please do not hesitate to call me if you have any questions or e mail me at carolynm@albaughinc com

Sincerely


Carolyn Miter
Registrations Specialist
229-244 3288

Agri Star[®]
By Albaugh Inc

PREMIER SUPPLIER OF OFF PATENT CROP PROTECTION PRODUCTS
www.albaughinc.com

4/38

NOTIFICATION

JUL 24 2012

BLUE SHIELD DF
FUNGICIDE/BACTERICIDE

ACTIVE INGREDIENT		
Copper Hydroxide*		76.77%
OTHER INGREDIENTS		23.23%
TOTAL		100.00%

(*Metallic Copper Equivalent 50%)

*CAS No 20427 59 2

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

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

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15 20 minutes Remove contact lenses if present after the first 5 minutes then continue rinsing eye Call a poison control center or doctor for treatment advice
IF SWALLOWED	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice Have person sip a glass of water if able to swallow Do not induce vomiting unless told to do so by the poison control center or doctor Do not give anything by mouth to an unconscious person
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> Take off contaminated clothing Rinse skin immediately with plenty of water for 15 20 minutes Call a poison control center or doctor for treatment advice
IF INHALED	<ul style="list-style-type: none"> Move person to fresh air If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible Call a poison control center or doctor for further treatment advice
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1 800 424 9300 for emergency medical treatment information	
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate use of gastric lavage	

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA Reg No 45002 4

EPA Est No 45002 MEX 02

NET CONTENTS

Manufactured For
Albaugh Inc
Ankeny, IA

PRECAUTIONARY STATEMENTS

DANGER

Hazards To Humans And Domestic Animals

Corrosive Causes irreversible eye damage Harmful if swallowed Harmful if absorbed through skin Harmful if inhaled Do not get in eyes or on clothing Avoid contact with skin Avoid breathing dust Wear protective eye wear (goggles safety glasses face shield) long sleeved shirt long pants shoes socks and chemical resistant gloves (such as made out of any waterproof material selection category A)

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical resistant to this product are barrier laminate butyl rubber nitrile rubber neoprene rubber PVC and viton If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart

Mixers, loaders applicators and other handlers must wear the following

- 1 Long sleeved shirt and long pants
- 2 Chemical resistant gloves made of any waterproof material
- 3 Shoes plus socks
- 4 Protective eyewear such as face shield or goggles

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate Do not reuse them Follow manufacturer's instructions for cleaning/maintaining PPE If no such instructions for washables exist use detergent and hot water Keep and wash PPE separately from other laundry

USER SAFETY RECOMMENDATIONS

Users should

- 1 Wash hands before eating drinking chewing gum using tobacco or using the toilet
- 2 Remove clothing/PPE immediately if pesticide gets inside Then wash thoroughly and change into clean clothing
- 3 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

ENGINEERING CONTROL STATEMENT

When handlers use closed systems enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240 (d)(4 6)] the handler PPE requirements may be reduced or modified as specified in the WPS

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff This product has a potential for runoff for several months or more after application Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas

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

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling Do not apply this product in a way that will contact workers or other persons either directly or through drift Only protected handlers may be in the area during application For any requirements specific to your State or Tribe consult the agency responsible for pesticide regulation

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours Notify workers of the application by warning them orally and by posting warning signs at the entrances to treated areas

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

- Coveralls
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

For greenhouse use the restricted entry interval (REI) is 24 hours

For at least seven days following the application of copper containing products in greenhouses

- At least one container or station designed specifically for flushing eyes is available in operating conditions with the WPS required decontamination supplies for workers entering the area treated with copper containing products
- Workers are informed orally in a manner they can understand
 - That residues in the treated area may be highly irritating to their eyes,
 - That they should take precautions such as refraining from rubbing their eyes to keep the residues out of their eyes
 - That if they do get residues in their eyes they should immediately flush their eyes with the eye flush container that is located with the decontamination supplies and
 - How to operate the eye flush container or eye flush station

NON AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow others to enter until sprays have dried

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE Store in a cool secure dry area in original container

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 at the nearest EPA Regional Office for guidance

CONTAINER DISPOSAL Nonrefillable container Do not reuse or refill this container Completely empty bag into application equipment Offer for recycling if available Dispose of empty bag in a sanitary landfill or by incineration or if allowed by State and local authorities, by burning If burned stay out of smoke

PRODUCT INSTRUCTIONS

Blue Shield DF may be applied by Air, or by Dilute or Concentrated Ground Sprayers or Chemigation on crops and at rates given on this label unless specifically prohibited for that crop use. When selecting a use rate for Blue Shield DF do not apply less than the labeled minimum amount. Under heavy disease pressure or when conditions favor such use the higher rate and shorter spray intervals specified for each crop. Use the higher rates for large mature tree crops. The per acre use rate is applicable for both dilute and concentrate spraying.

Sufficient spray volume and spray pressure are essential to thoroughly penetrate the plant canopy and give thorough spray coverage. On crops sensitive to copper fungicides use the higher volumes of spray water per acre. When making a concentrate or aerial application without specific experience it is advisable to test for crop tolerance prior to full scale use.

While volume is important in obtaining full spray coverage other factors such as foliage density, environmental conditions and spray calibrations have a greater impact. Always be sure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within those required by State and local regulatory authorities.

When using adjuvants or other pesticides in combination with this product always observe the precautionary statements on the product's label and required days before harvest. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. Sprays of Blue Shield DF may be applied up to 24 hours preharvest due to REI for Worker Protection Standard. Before mixing with other products in spray tank be sure that products are compatible. If compatibility is in question use the compatibility jar test before mixing a whole tank.

Blue Shield DF should not be applied in spray water having a pH of less than 6.5 as phytotoxicity may result. Use a buffering agent to increase the pH to 6.5-7.0 if your water source is below 6.5. Also avoid using water having a pH of greater than 9.0 as effectiveness may be reduced. Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of Blue Shield DF resulting in possible phytotoxicity or loss of effectiveness.

Agricultural chemicals may perform in an unpredictable manner when tank mixed especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by state/local expert it is advisable to test for compatibility and tolerance to crop injury prior to full scale commercial utilization of a new tank mix or tank mixing should not be undertaken.

This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray cars, houses, lawn furniture or other metal surfaces.

MIXING INSTRUCTIONS FOR SPRAY APPLICATION

Fill the spray tank three fourths to four fifths full with clean water. Start agitation (NOTE: Proper agitation creates a rippling or rolling action on the liquid surface). Add Blue Shield DF at the recommended rate.

Mix thoroughly and then add enough water to fill spray tank. Maintain sufficient agitation during mixing and during application of sprays to ensure a uniform spray mixture. When tank mixing with other products, follow the mixing sequence below: (1) micronutrients and fertilizers (2) wettable powders, dry flowables, and water dispersible granules (3) liquid flowables (4) emulsifiable concentrates and (5) adjuvants. Before adding the second pesticide be sure that the prior product is well mixed and suspended before adding the next ingredient.

MINIMUM RECOMMENDED SPRAY VOLUME IN GALLONS PER ACRE (GPA)

A full dilute spray on tree crops means the maximum amount of spray when uniformly applied that an acre of such trees will hold to the point that excess spray begins to drip off. Thus the dilute spray volume per acre will depend on tree size and leaf surface per acre. The following listed dilute spray volumes is the volume that will generally provide such coverage on average size of full leafed trees. A concentrate spray is a spray applied in less volumes than a dilute. The extent of the concentration varies by equipment used. Thus the following spray volumes for a concentrated spray are the minimum volumes recommended per acre.

Use Blue Shield DF as noted below unless indicated otherwise in the specific crop directions Blue Shield DF is adaptable to spraying from aircraft and ground spraying equipment Depending on the equipment used and the specific crop the volume applied per acre will differ Refer to recommended volumes below

	Aerial (gallons of water/A)	Ground (gallons of water/A)	
		Dilute	Concentrate
Vegetables and Field Crops	3	20	
Small Fruits	5	150	50
Vines	5	150	50
Fruit and Nut Trees*	10	400	50
Citrus	10	800	100 (20 FL)**

*On young fruit trees use a minimum of 1 gallon spray per acre

**Pesticide application equipment such as Curtec or other similar sprayers which are capable of obtaining thorough coverage at low volumes may be used at as low as 20 GPA of spray volume

CHEMIGATION INSTRUCTIONS

Do not apply this product through any irrigation system using aluminum parts or components as damage to the system may occur Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product

Apply this product only through one or more of the following types of systems sprinkler including center pivot lateral move end tow side (wheel) roll traveler big gun solid set or hand move irrigation system(s) which contain no aluminum parts or components Do not apply this product through any other type of irrigation system

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

A Center Pivot Traveler Big Gun Motorized Lateral Move End Tow and Side (Wheel) Roll Irrigation Equipment Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used Fill tank or injection equipment with water Operate system for one complete circle for center pivot or one complete run for the other recommended equipment measuring time required, amount of water injected, and acreage contained in circle or run Mix recommended amount of product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run but continue to operate irrigation system until the product has been cleared from last sprinkler head Spray mixture in the chemical supply tank must be agitated at all times otherwise settling and uneven application may occur

B Solid Set and Hand Move Irrigation Equipment Determine acreage covered by sprinkler Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty five minute period Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle This product can be injected at the beginning or end of the irrigation cycle or as a separate application Stop injection equipment after treatment is completed and continue to operate irrigation system until pesticide is cleared from last sprinkler head

((SAFETY DEVICES

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

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water systems means a system for the provision to the public of piped water for human consumption if such a 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 Chemigation systems connected to public water systems must contain a functional reduced pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction As an option to the RPZ 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 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

For additional instructions on safety precautions refer to statements (2) (3) (4) (6) and (7) in the section on SAFETY DEVICES

POSTING INSTRUCTIONS

Posting of areas to be chemigated is required when any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps businesses day care centers, hospitals in patient clinics nursing homes or any public areas such as schools parks playgrounds or other public facilities not including public roads or when chemigated area is open to the public such as golf courses or retail greenhouses

Posting must conform to the following requirements Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas This sign is in addition to any sign posted to comply with the Worker Protection Standard When there are no usual points of entry signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas The printed side of the sign should face away from the treated area towards the sensitive area The signs shall be printed in English Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared Signs may remain in place indefinitely as long as they are composed of material to prevent deterioration and maintain legibility for the duration of the posting period

All words shall consist of letters at least 2 1/2 inches tall and all letters and the symbol shall be a color which sharply contrasts with their immediate background At the top of the sign shall be the words KEEP OUT followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g. wind direction wind speed, temperature relative humidity)

and the method of application (e.g., ground aerial, airblast chemigation) can influence pesticidal drift the applicator must evaluate all factors and make appropriate adjustments when applying this product

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume when diameter of 300 microns or greater for spinning atomizer nozzles

Wind Speed

Do not apply at wind speeds greater than 15 mph Only apply this product if the wind direction favors on target deposition (approximately 3-10 mph) and there are no sensitive areas within 250 feet downwind

Temperature Inversion

If applying at wind speeds less than 3 mph the applicator must determine if a) conditions of temperature inversion exist or b) stable atmospheric conditions exist at or below nozzle height Do not make applications into areas of temperature inversion or stable atmospheric conditions

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds Where states have more stringent regulations they must be observed

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates

For Aerial Application

- The boom height must not exceed 75% of the wingspan or 90% of the rotor blade diameter
- Release spray at the lowest height consistent with efficacy and flight safety Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety
- When applications are made with a crosswind the swath must be displaced downwind The applicator must compensate for the displacement at the up and downwind edge of the application area by adjusting the path of the wind upwind

For Groundboom Application

- Do not apply with a nozzle height greater than 4 feet above the crop canopy

CROPS

The following specific instructions are based on general application procedures The recommendations of the State Agricultural Extension Service should be closely followed as to timing frequency and number of sprays per season

FROST INJURY PROTECTION

Bacterial Ice nucleation inhibitor Application of Blue Shield DF made to all crops listed on this label at rates and stages of growth indicated on this label at least 24 hours prior to anticipated frost conditions will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola* and *Pseudomonas fluorescens*) and may thereby provide some protection against light frost The degree of frost protection will vary with weather conditions and other factors Not recommended for those geographical areas where weather conditions favor severe frost

ALFALFA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM RETREATMENT INTERVAL	COMMENT
Cercospora & Leptosphaerulina Leaf Spots	1 0 (0 5 lbs of metallic equivalent)	30 Days	Apply 10 to 14 days before each harvest or earlier if disease threatens Apply with ground or aerial equipment Spray injury may occur with sensitive varieties such as Lahontan
RESTRICTIONS Maximum single application rate is 1 0 lb/A (0 5 lbs metallic copper equivalent) Maximum annual application rate is 2 0 lb/A (1 0 lbs metallic copper equivalent)			

ALMONDS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant and Late Dormant to Pink Bud Season Bacterial Blast (Pseudomonas) Coryneum Blight (Shot hole)	8 0 – 16 0 (4 0 8 0 lbs of metallic equivalent)	7	Use at dormant to early pink bud For blast control in sprinkler irrigated orchards or where disease is severe apply 2 4 sprays or as many as required at 1 0 – 3 0 lbs per acre at 2 week post bloom intervals or just before sprinkling Slight leaf injury may occur from post bloom spray
Bloom/Growing Season Coryneum Blight Blossom Brown Rot	3 0 (1 5 lbs of metallic equivalent)	5	Use during the early bloom stage (popcorn) A second application in late dormant before foliage buds swell may be necessary when frequent rainfall occurs To avoid plant injury do not use after full bloom
RESTRICTIONS Maximum single dormant application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent) Maximum single bloom/growing application rate is 3 0 lbs/A (1 5 lbs metallic copper equivalent) Maximum annual application rate is 36 0 lbs/A (18 0 lbs metallic copper equivalent)			

APRICOTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant Late Dormant, Up to Pink Bud Anthracnose Dead Bud (Pseudomonas syringae) Coryneum Blight European Canker	12 0 – 16 0 (6 0 – 8 0 lbs of metallic equivalent)	Only one dormant application allowed per season	Apply before fall rains Use the higher rates when conditions favor disease Use on yellow varieties may cause discoloration To avoid pick before spraying
Bloom Growing Season Coryneum Blight (Shot Hole) Blossom Brown Rot	2 0 – 3 0 (1 0 – 1 5 lbs of metallic equivalent)	5	Apply at popcorn to full bloom as a full cover spray To avoid spray injury do not apply after full bloom
RESTRICTIONS Maximum single dormant application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent) Maximum single bloom/growing application rate is 3 0 lbs/A (1 5 lbs metallic copper equivalent) Maximum annual application rate is 36 0 lbs/A (18 0 lbs metallic copper equivalent)			

AVOCADOS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Blotch Scab	4 0 – 6 3 (2 0 – 3 15 lbs of metallic equivalent)	14	Apply when bloom buds begin to swell Continue application at 14 – 28 day intervals for 5 to 6 applications Use higher rate when conditions favor disease
RESTRICTIONS Maximum single application rate is 6 3 lbs/A (3 15 lbs metallic copper equivalent) Maximum annual application rate is 37 8 lbs/A (18 9 lbs metallic copper equivalent)			

BANANAS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Sigatoka (black and yellow)	2.1 (1.05 lbs of metallic equivalent)	7	Apply by air at 2.1 lbs per acre in 3 gallons of water containing 0.5 gallon agricultural oil Apply on a 7 - 14 day schedule throughout the wet season Apply at 14 - 21 day intervals during dry periods
Black Pitting		7	Dilute in 50 - 100 gallons of water and apply directly to the fruit stem and include the basal portion of the leaf crown Apply during the first and second weeks after emergence
RESTRICTIONS Maximum single application rate is 2.1 lbs/A (1.05 lbs metallic copper equivalent) Maximum annual application rate is 37.8 lbs/A (18.9 lbs metallic copper equivalent)			

BEANS (Dry, Green)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Halo & Common) Brown spot	1.0 - 1.5 (0.5 - 0.75 lbs of metallic equivalent)	7	For protective sprays apply first application when plants are five to six inches high Apply on 7 - 14 day schedule depending on local conditions Use higher rate for more severe disease pressure
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 9.0 lbs/A (4.5 lbs metallic copper equivalent)			

BRAMBLES (Aurora Blackberry Boysen Cascades Chehalems Dewberry Logan, Marion, Raspberry, Santiam, & Thornless Evergreens)

DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose, Leaf & Cane Spot Purple Blotch Yellow Rust	4 0	7	Make fall spray application after harvest
	(2 0 lbs of metallic equivalent)		Apply delayed dormant spray after pruning/training in spring
	2 0	7	Apply when leaf buds begin to open and repeat when flower buds show white NOTE Crop injury may occur if applied to foliage under hot or moist environmental conditions Discontinue applications if injury noted

RESTRICTIONS
 Maximum single application rate is 4 0/A (2 0 lbs metallic copper equivalent)
 Maximum annual application rate is 20 0 lbs/A (10 0 lbs metallic copper equivalent)

BLUEBERRIES

DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Canker	2 0 – 4 2 (1 0 – 2 1 lbs of metallic equivalent)	7	Make first application before the fall rains preferably the first week in October and a second application 4 weeks later Use higher rate when conditions favor disease

RESTRICTIONS
 Maximum single application rate is 4 2/A (2 1 lbs metallic copper equivalent)
 Maximum annual application rate is 16 8/A (8 4 lbs metallic copper equivalent)

CACAO

DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Black Pod	3 0 – 4 5 (1 5 – 2 25 lbs of metallic equivalent)	14	Begin applications at the start of the rainy season and continue while infection conditions persist Sprays should be made as often as 14 – 21 days in high rainfall areas at varying rates per acre depending on disease severity For drier areas where 2 to 4 applications are recommended during critical infection periods and at long intervals use 2 – 4 lbs per acre according to disease incidence and planting density

RESTRICTIONS
 Maximum single application rate is 4 5 lbs/A (2 25 lbs metallic copper equivalent)
 Maximum annual application rate is 31 5 lbs/A (15 75 lbs metallic copper equivalent)

CARAMBOLA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	4 2 (2 1 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
RESTRICTIONS Maximum single application rate is 4 2 lbs/A (2 1 lbs metallic copper equivalent) Maximum annual application rate is 21 0 lbs/A (10 5 lbs metallic copper equivalent)			

CARROTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Carrot Blight (Cercospora)	2 0 (1 0 lbs of metallic equivalent)	7	Begin application when disease first threatens and repeat at 7 to 14 day intervals as needed depending on disease severity
RESTRICTIONS Maximum single application rate is 2 0 lbs/A (1 0 lbs metallic copper equivalent) Maximum annual application rate is 10 0/A (5 0 lbs metallic copper equivalent)			

CELERY & CELERIAC			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early, Late & Bacterial Blights	2 0 (1 0 lbs of metallic equivalent)	7	Apply as soon as plants are first established in the field then every 7 days or longer depending on severity and weather
RESTRICTIONS Maximum single application rate is 2 0 lbs/A (1 0 lbs metallic copper equivalent) Maximum annual application rate is 10 0 lbs/A (5 0 lbs metallic copper equivalent)			

CEREAL GRAINS (Barley, Millet, Oat, Rye, Sorghum, wheat)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Septoria Leaf Blotch Helminthosporium Spot Blotch	1 0 (0 5 lbs of metallic equivalent)	10	Make first application at early heading and follow with second application 10 days later
RESTRICTIONS Maximum single application rate is 1 0 lb/A (0 50 lbs metallic copper equivalent) Maximum annual application rate is 2 0 lbs/A (1 0 lbs metallic copper equivalent)			

CHERRY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant Up to Pink Bud Anthracnose Dead Bud (Pseudomonas syringae) Coryneum Blight European Canker	8 0 - 16 0 (4 0 - 8 0 lbs of metallic equivalent)	7	In orchards where the disease is severe a spray should also be applied shortly after harvest
Bloom & Growing Season Brown Rot Blossom	2 0 - 3 0 (1 0 - 1 5 lbs of metallic equivalent)	5	Apply at popcorn and full bloom
RESTRICTIONS Maximum single dormant season application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent) Maximum single growing season application rate is 3 0 lbs/A (1 5 lbs metallic copper equivalent) Maximum annual application rate is 36 0/A (18 0 lbs metallic copper equivalent)			

CHIVES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	1 0 (0 5 lbs of metallic equivalent)	7	Begin applications when plants are established in the field Repeat applications every 7 10 days as dictated by disease conditions
RESTRICTIONS Maximum single application rate is 1 0 lb/A (0 5 lbs metallic copper equivalent) Maximum annual application rate is 5 0 lbs/A (2 5 lbs metallic copper equivalent)			

CITRUS (Grapefruit, Kumquat, Lemon, Orange, Pummelo, Tangelo, Tangerine & Lime)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Melanose, Scab Pink Pitting Greasy Spot,	3 0 – 6 3 (1 5 – 3 15 lbs of metallic equivalent)	7	Apply as pre bloom and post bloom sprays Use higher rates when conditions favor disease
Brown Rot Septoria Spot	4 0 – 6 3 (2 0 – 3 15 lbs of metallic equivalent)	7	Apply beginning in the fall and continuing as needed For Brown Rot apply to skirts of trees to a height of at least 4 feet Apply also to bare ground one foot beyond skirt Use higher rates when conditions favor disease NOTE In California in areas subject to copper injury add 1/4 lb of high quality lime per lb of BLUE SHIELD DF
Citrus Canker (SUPPRESSION ONLY)	6 3 (3 15 lbs of metallic equivalent)	7	Spraying flushes 7 14 days after shoots begin to grow Young fruit may need additional application Number and timing of applications will depend on disease pressure Under heavy disease pressure each flush of new growth should be sprayed
Phytophthora Foot Rot	6 3 (3 15 lbs of metallic equivalent) (See comment)	7	Mix 1 0 lb with one gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs Do not exceed 6 3 lbs of product per acre If maximum single application rate is met before application to all trees within the acre observe the 7 day interval before treating additional trees Trunk applications are included in the annual maximum application rate Apply in May before summer rains and/or in the fall before wrapping trees for freeze protection This treatment serves as protection for up to one year, but does not cure existing infections
Field Nursery Grown To control melanose, scab pink pitting greasy spot brown rot and for citrus canker (suppression)	4 0 – 6 3 (2 0 – 3 15 lbs of metallic equivalent)	7	Apply 2 0 pounds of Blue Shield DF per 100 gallons of water
RESTRICTIONS Maximum single application rate is 6 3 lbs/A (3 15 lbs metallic copper equivalent) Maximum annual application rate is 25 2 lbs/A (12 6 lbs metallic copper equivalent)			

COFFEE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Coffee Berry Disease (Collectotrichum coffeanum)	4 2 (2 1 lbs of metallic equivalent)	14	Apply after flowering and before the start of long rains and then at 14 28 day intervals until picking
Bacterial Blight (Pseudomonas syringae)		14	Begin spray program before the start of long rains and continue until picking The critical time of spraying to control disease is just before during and after flowering(s) especially when these times coincide with wet weather
Iron Spot (Cercospora coffeicola) & Pink Disease (Corticium salmonicolor)	2 0 (1 0 lbs of metallic equivalent)	14	Begin treatment at start of wet season and continue at 14 28 day intervals for three applications
Leaf Rust	3 0 – 4 2 (1 5 – 2 1 lbs of metallic equivalent)	14	Apply before the onset of rain and then at 14 21 day intervals while rains continue
RESTRICTIONS Maximum single application rate is 4 2 lbs/A (2 1 lbs metallic copper equivalent) Maximum annual application rate is 25 2 lbs/A (12 6 lbs metallic copper equivalent)			

CORN (FIELD, POP, SWEET) ✓			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Stalk Rot Goss s Wilt	1 0 – 2 1 (0 5 – 1 05 lbs of metallic equivalent)	7	Begin treatment when disease first appears and repeat every 7 to 10 days as needed Use the higher rates and shorter spray intervals when conditions favor disease
RESTRICTIONS Maximum single application rate is 2 1 lbs/A (1 05 lbs metallic copper equivalent) Maximum annual application rate is 8 4 lbs/A (4 2 lb metallic copper equivalent)			

CRANBERRY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Fruit Rot	4.2 (2.1 lbs of metallic equivalent)	7	One or two additional applications made at 7 to 14 day intervals may be required depending on disease pressure
Rose Bloom			Apply three sprays on 10-14 day schedule as soon as symptoms are observed
Bacterial Stem Canker			Apply postharvest and again in spring before bud burst. One or two additional applications at 10 to 14 day intervals may be required depending upon disease severity
Tip Blight (Monolinia) Stem and Leaf Blight Red Leaf Spot			Apply delayed dormant spray in the Spring. Repeat at 10-14 day intervals as needed through pre bloom
RESTRICTIONS Maximum single application rate is 4.2 lbs/A (2.1 lbs metallic copper equivalent) Maximum annual application rate is 12.6 lbs/A (6.3 lb metallic copper equivalent)			

CRUCIFERS (Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese cabbage, Collard Greens, Kale, Kohlrabi, Mustard Greens, & Turnip Greens)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew Black Rot (Xanthomonas) Black Leaf Spot (Alternaria)	1.0 (0.5 lbs of metallic equivalent)	7	Begin application after transplants are set in the field or shortly after emergence of field seeded crops or when conditions favor disease development. (CAUTION: A slight reddening of older leaves may occur on broccoli and a slight flecking of wrapper leaves may occur on cabbage.)
RESTRICTIONS Maximum single application rate is 1.0 lbs/A (0.5 lbs metallic copper equivalent) Maximum annual application rate is 5.0 lbs/A (2.5 lbs metallic copper equivalent)			

CUCURBITS (Cantaloupes, Casaba Chayote Citron melon, Cucumber Gourd Honeydews Muskmelons, Pumpkins, Squash, Watermelons & Waxgourd)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Leaf Spot Angular Leaf Spot Anthracnose Downy Mildew Powdery Mildew Gummy Stem Blight Watermelon Bacterial Fruit Blotch (suppression)	1.5 – 2.0 (0.75 – 1.0 lbs of metallic equivalent)	5	Begin application when conditions are favorable for disease development Repeat at 5-10 day intervals Use higher rates when conditions favor disease NOTE Crop injury may occur from application at higher rates and shorter intervals Discontinue use if injury occurs
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (1.0 lb metallic copper equivalent) Maximum annual application rate is 10.5 lbs/A (5.25 lbs metallic copper equivalent)			

CURRANTS & GOOSEBERRY (Ribes)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Leaf Spot	5.0 – 8.0 (2.5 – 4.0 lbs of metallic equivalent)	10	Make initial application after first leaves have expanded Continue on a 10-14 day schedule during wet conditions in the Spring Make an additional application after harvest
RESTRICTIONS Maximum single application rate is 8.0 lbs/A (4.0 lbs metallic copper equivalent) Maximum annual application rate is 20.0 lbs/A (10.0 lbs metallic copper equivalent)			

DILL			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Phoma Leaf Spot, Rhizoctonia Foliage Blight	1.5 (0.75 lbs of metallic equivalent)	7	Begin applications when plants are first established in the field and repeat at 7-10 day intervals depending upon disease severity and environmental conditions
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 7.5 lbs/A (3.75 lbs metallic copper equivalent)			

DOUGLAS FIR			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Rhabdocline needlecast	20 – 40 (10 – 20 lbs of metallic equivalent)	7	Begin applications at bud break and repeat at 7 – 28 day intervals Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 40 lbs/A (20 lbs metallic copper equivalent) Maximum annual application rate is 400 lbs/A (200 lbs metallic copper equivalent)			

EGGPLANT			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Blight Anthracnose Phomopsis	15 (0.75 lbs of metallic equivalent)	7	Begin applications prior to development of disease symptoms Repeat sprays at 7 to 10 day intervals as needed depending on disease severity
RESTRICTIONS Maximum single application rate is 15 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 150 lbs/A (7.5 lbs metallic copper equivalent)			

FILBERTS (Permitted only in Washington & Oregon)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Post Harvest application)	80 – 120 (40 – 60 lbs of metallic equivalent)	14	Apply as a post harvest spray In seasons of heavy rainfall apply a second spray when three quarters of leaves have dropped Add 1 pint of superior type oil per 100 gallons of water
Eastern Filbert Blight			Apply as a dilute spray in adequate water for thorough coverage Make initial application after harvest in October before heavy winter rains begin The next application should be made in late February to early March followed by another application 1 month later If desired add 1 pint of a sticking agent or superior type oil per 100 gallons of water
RESTRICTIONS Maximum single application rate is 120 lbs/A (60 lbs metallic copper equivalent) Maximum annual application rate is 480 lbs/A (240 lbs metallic copper equivalent)			

GINSENG			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Alternaria Leaf Stem Blight	2.1 (1.05 lbs of metallic equivalent)	7	<p>Begin tank mix applications as a tank mix with two pounds of Iprodione 50WP in 100 gallons of water per acre as soon as plants have emerged in spring Applications should be repeated every seven days until plants become dormant in fall</p> <p>Apply fungicides at least eight hours before rain giving the fungicides time to dry on the plants Use of a spreader sticker is advised</p> <p>NOTE Alternaria Leaf and Stem Blight is most severe in humid conditions such as those found in the dense canopies of two three and four year old ginseng Complete and thorough spray is required for control</p>

RESTRICTIONS
 Maximum single application rate is 2.1 lbs/A (1.05 lbs metallic copper equivalent)
 Maximum annual application rate is 10.5 lbs/A (5.25 lbs metallic copper equivalent)

GRAPES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Black Rot Powdery Mildew Downy Mildew Phomopsis	2.0 - 6.0 (1.0 - 3.0 lbs of metallic equivalent)	3	<p>Begin applications at late dormant up to bud break with subsequent applications throughout the season depending upon disease severity</p> <p>NOTE Foliage injury may occur on copper sensitive varieties such as Concord Delaware Niagara and Rosettes Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of Blue Shield DF</p>

RESTRICTIONS
 Maximum single application rate is 6.0 lbs/A (3.0 lbs metallic copper equivalent)
 Maximum annual application rate is 40.0 lbs/A (20.0 lbs metallic copper equivalent)

GUAVA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Red Algae	2.45 (1.22 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
RESTRICTIONS Maximum single application rate is 2.45 lbs/A (1.22 lbs metallic copper equivalent) Maximum annual application rate is 9.8 lbs/A (4.9 lbs metallic copper equivalent)			

HOPS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	1.0 (0.5 lbs of metallic equivalent)	10	Apply as a fungicide crown treatment (after pruning but before training) as needed After training, additional fungicide treatments are needed at 10 day intervals Discontinue use 2 weeks before harvest
RESTRICTIONS Maximum single application rate is 1.0 lb/A (0.5 lbs metallic copper equivalent) Maximum annual application rate is 5.0 lbs/A (2.5 lbs metallic copper equivalent)			

KIWI			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Pseudomonas syringae Erwinia herbicola Pseudomonas fluorescens	4.2 (2.1 lbs of metallic equivalent)	30	Make applications on a monthly basis. A maximum of 3 applications may be made
RESTRICTIONS Maximum single application rate is 4.2 lbs/A (2.1 lbs metallic copper equivalent) Maximum annual application rate is 12.6 lbs/A (6.3 lbs metallic copper equivalent)			

LETTUCE, ENDIVE & ESCAROLE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew	1 0 – 2 0 (0 5 – 1 0 lbs of metallic equivalent)	5	Begin treatment when disease first appears and repeat every 5 10 days as needed to suppress disease
NOTE Flecking and/or yellowing of leaves will occur under certain environmental conditions such as extended periods of moist weather acid rains or other conditions favoring reduced pH on leaf surfaces Injury may be severe enough to reduce crop value Increasing the volume of spray water may decrease phytotoxicity potential			
RESTRICTIONS Maximum single application rate is 2 0 lbs/A (1 0 lb metallic copper equivalent) Maximum annual application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent)			

LITCHI			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracoese	2 4 (1 2 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
RESTRICTIONS Maximum single application rate is 2 4 lbs/A (1 2 lbs metallic copper equivalent) Maximum annual application rate is 9 6 lbs/A (4 8 lbs metallic copper equivalent)			

LIVE OAK			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Ball Moss	See comment *	A second application may be required after 12 months	* Mix 4 lbs of product per 100 gallons of water Do not exceed the 4 0 lbs of product per acre limit Apply in spring after heavy rain using 1 5 gallons of spray per foot of tree height Make sure to set tufts thoroughly (NOTE BLUE SHIELD DF may be injurious to some ornamentals grown under live oaks)
RESTRICTIONS Maximum single application rate is 4 0 lbs/A (2 0 lbs metallic copper equivalent) Maximum annual application rate is 40 0 lbs/A (20 0 lbs metallic copper equivalent)			

MACADAMIA NUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	4 7 (2 35 lbs of metallic equivalent)	7	Initiate sprays at first sign of flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
Blossom blight Raceme blight	2 0 – 4 0 (1 0 – 2 0 lbs of metallic equivalent)	7	Apply during peak raceme development and bloom period Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 4 7 lbs/A (2 36 lbs metallic copper equivalent) Maximum annual application rate is 18 8 lbs/A (9 44 lbs metallic copper equivalent)			

MAMEY SAPOTE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Algal Leaf Spot	3 0 – 4 2 (1 5 – 2 1 lbs of metallic equivalent)	14	Apply when conditions favor disease development Repeat on 14 30 day schedule as disease severity and environmental conditions dictate Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 4 2 lbs/A (2 1 lbs metallic copper equivalent) Maximum annual application rate is 16 8 lbs/A (8 4 lbs metallic copper equivalent)			

MANGO			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	4 0 – 6 4 (2 0 –3 2 lbs of metallic equivalent)	7	Repeat on 7 30 day schedule as disease severity and environmental conditions dictate Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 6 4 lbs/A (3 2 lbs metallic copper equivalent) Maximum annual application rate is 96 0 lbs/A (48 0 lbs metallic copper equivalent)			

OKRA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Bacterial Leaf Spot Leaf Spots Pod Spots Powdery Mildew	1 0 – 2 1 (0 5 – 1 05 lbs of metallic equivalent)	5	Begin treatment when disease first threatens and repeat every 5 to 10 days or as needed depending on disease severity Use the higher rates and shorter spray intervals when conditions favor disease
RESTRICTIONS Maximum single application rate is 2 1 lbs/A (1 05 lbs metallic copper equivalent) Maximum annual application rate is 10 5 lbs/A (5 25 lbs metallic copper equivalent)			

OLIVES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Peacock Spot Olive Knot	5 0 – 12 0 (2 5 – 6 0 lbs of metallic equivalent)	30	Apply before winter rains fall A second application in early spring should be made if disease is severe Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 12 0 lbs/A (6 0 lbs metallic copper equivalent) Maximum annual application rate is 36 0 lbs/A (18 0 lbs metallic copper equivalent)			

ONION & GARLIC			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Purple Blotch Downy Mildew	2 0 (1 0 lbs of metallic equivalent)	7	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals as needed depending upon disease pressure Can cause phytotoxicity to leaves
Bacterial Blight	1 0 – 1 5 (0 5 – 0 75 lbs of metallic equivalent)		
RESTRICTIONS Maximum single application rate is 2 0 lbs/A (1 0 lb metallic copper equivalent) Maximum annual application rate is 12 0 lbs/A (6 0 lbs metallic copper equivalent)			

PAPAYA			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	4.0 – 5.3 (2.0 – 2.63 lbs of metallic equivalent)	14	Begin application before disease is expected to appear Repeat at 14 day intervals Use the higher rates when conditions favor disease The addition of a suitable spreader sticker may be desirable especially during periods of heavy rains
RESTRICTIONS Maximum single application rate is 5.3 lbs/A (2.63 lbs metallic copper equivalent) Maximum annual application rate is 42.4 lbs/A (21.2 lbs metallic copper equivalent)			

PARSLEY			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Blight (Pseudomonas sp)	2.0 (1.0 lbs of metallic equivalent)	10	Begin applications when plants are first established in the field and repeat at 10 day intervals depending upon disease severity and environmental conditions
RESTRICTIONS Maximum single application rate is 2.0 lbs/A (1.0 lbs metallic copper equivalent) Maximum annual application rate is 4.0 lbs/A (2.0 lbs metallic copper equivalent)			

PASSION FRUIT			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	4.7 (2.35 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
RESTRICTIONS Maximum single application rate is 4.7 lbs/A (2.36 lbs metallic copper equivalent) Maximum annual application rate is 18.8 lbs/A (9.44 lbs metallic copper equivalent)			

PEACHES & NECTARINES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant, Late Dormant Up to Pink Bud Bacterial Spot Leaf Curl Coryneum Blight (Shot Hole)	8 0 – 16 0 (4 0 – 8 0 lbs of metallic equivalent)	7	Apply at leaf fall as dormant application Use the higher rate when rainfall is very heavy and disease pressure is high May be used with an agricultural spray oil
Brown Rot Blossom Blight	8 0 – 12 0 (4 0 6 0 lbs of metallic equivalent)	7	Apply as a full cover spray at pink bud (Application at this time also affords some control of Leaf Curl and Coryneum Blight) NOTE Do not spray later than three weeks prior to harvest
Bloom & Growing Season Bacterial Spot	1 0 – 3 0 (0 5 – 1 5 lbs of metallic equivalent)	5	Post bloom application applied at first and second cover sprays NOTE do not spray 3 weeks prior to harvest Spotting of leaves and some defoliation may occur from use in post bloom cover sprays
RESTRICTIONS Maximum single dormant season application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent) Maximum single growing season application rate is 3 0 lbs/A (1 5 lbs metallic copper equivalent) Maximum annual application rate is 36 0 lbs/A (18 0 metallic copper equivalent)			

PEANUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	1 5 (0 75 lbs of metallic equivalent)	7	Begin spraying 25 40 days after planting or when disease symptoms appear Use sufficient water to get adequate coverage Continue applications at 7 to 14 day intervals Reduce spray interval to 7 days during humid weather
RESTRICTIONS Maximum single application rate is 1 5 lbs/A (0 75 lbs metallic copper equivalent) Maximum annual application rate is 9 0 lbs/A (4 5 metallic copper equivalent)			

PEAS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Powdery Mildew	1.5 (0.75 lbs of metallic equivalent)	7	Begin spray treatment when disease symptoms first appear Repeat applications at weekly intervals
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 7.5 lbs/A (3.75 lbs metallic copper equivalent)			

PECANS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Shuck and Kernel rot (Phytophthora cactorum)	2.0 – 4.2 (1.0 – 2.1 lbs of metallic equivalent)	14	Apply in sufficient water for good coverage at 2-4 week intervals starting at kernel growth and continuing until shucks open Use the higher rate and shorter intervals if frequent rainfall occurs
Zonate leaf spot (Cristulariella pyramidalis)			
Mosses Algae Lichen	See Comment	Make only one application per year	Mix 2 lbs per 100 gallons spray plus spreader sticker on a dilute spray basis and apply in dormant season before buds swell thoroughly wetting limbs and mosses
RESTRICTIONS Maximum single application rate is 4.2 lbs/A (2.1 lbs metallic copper equivalent) Maximum annual application rate is 16.8 lbs/A (8.4 lbs metallic copper equivalent)			

PEPPERS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Bacterial Spot	1.5 (0.75 lbs of metallic equivalent)	3	Apply when disease threatens in sufficient water to provide adequate coverage Use at 3 to 14 day intervals depending on disease severity
RESTRICTIONS Maximum single application rate is 1.5 lbs/A (0.75 lbs metallic copper equivalent) Maximum annual application rate is 23.5 lbs/A (11.75 lbs metallic copper equivalent)			

PISTACHIOS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Botrytis Blight Botryosphaeria Panicle, Shoot Blight Septoria Leaf Blight Late Blight (Alternaria)	3.0 – 4.2 (1.5 – 2.1 lbs of metallic equivalent)	14	Make initial application at bud swell and repeat on a 14 – 28 day schedule Use higher rates when conditions favor disease
RESTRICTIONS Maximum single application rate is 4.2 lbs/A (2.1 lbs metallic copper equivalent) Maximum annual application rate is 16.8 lbs/A (8.4 lbs metallic copper equivalent)			

PLUMS & PRUNES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Dormant Late Dormant Up to Pink Bud Coryneum blight (Shot hole)	8.0 – 16.0 (4.0 – 8.0 lbs of metallic equivalent)	7	Apply as a dormant spray Use the higher rate when rainfall is heavy and/or disease pressure is high
Bloom & Growing Season Brown rot blossom blight Black Knot	3.0 (1.5 lbs of metallic equivalent)	5	Apply full cover application at pink red or early white bud stage
RESTRICTIONS Maximum single dormant season application rate is 16.0 lbs/A (8.0 lbs metallic copper equivalent) Maximum single growing season application rate is 3.0 lbs/A (1.5 lbs metallic copper equivalent) Maximum annual application rate is 36.0 lbs/A (18.0 lbs metallic copper equivalent)			

POME FRUIT (Apple, Loquat, Pear, Quince)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Fall & Late Dormant Anthracnose Blossom & Shoot Blast (Pseudomonas) European Canker Shoot Blast	12 0 – 16 0 (6 0 – 8 0 lbs of metallic equivalent)	Only one dormant application allowed per season	Apply before fall rains Use on yellow varieties may cause discoloration To avoid pick before spraying
Between silver tip and green tip Apple Scab Fireblight	4 0 – 12 0 (2 0 – 6 0 lbs of metallic equivalent)	Only one application allowed per season	ATTENTION Phytotoxicity may occur from late application (Discontinue use when green tip is 1/2 inch)
Bloom & Growing Season Fireblight	1 0 – 3 0 (0 5 – 1 5 lbs of metallic equivalent)	5	Extended spray schedule where fruit finish is not a concern Continued applications may be made at 5 – 7 day intervals NOTE Crop injury may occur from extended spray schedule Not intended for fresh market apples due to possible russeting The addition of 1 – 3 lbs of lime per pound of Blue Shield DF may reduce injury
Crown or Collar Rot (Phytophthora cactorum)	1 0 (0 5 lbs of metallic equivalent) (See comment)	5	Apply either in early spring or in fall after harvest each year Do not use if soil pH is below 5 5 or copper toxicity may result Mix 1 lb product in 25 gallons of water Apply 1 4 gallons of suspension as a drench on the lower trunk area of each tree Do not exceed the maximum single application rate of 1 0 pounds of product per acre for growing season use Follow the 5 day retreatment interval for any untreated trees
RESTRICTIONS Maximum single dormant season application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent) Maximum single silver tip to green tip season application rate is 12 0 lbs/A (6 0 lbs metallic copper equivalent) Maximum single growing season application rate is 1 0 3 0 lbs/A (0 5 1 5 lbs metallic copper equivalent) Maximum annual application rate is 32 0 lbs/A (16 lbs metallic copper equivalent)			

POTATOES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early & Late Blight	1 0 – 5 0 (0 5 – 2 5 lbs of metallic equivalent)	5	Apply 1 0 – 1 5 pounds product at 5 to 10 day intervals starting when plants are 2 – 6 inches high until 2 weeks before harvest in locations where disease is light and up to 3 to 5 pounds per acre where disease is more severe Under conditions of severe disease control with Blue Shield DF will be improved by tank mixing with other compatible fungicides registered for use on potatoes Read and follow all label instructions of tank mix partners
RESTRICTIONS Maximum single application rate is 5 0 lbs/A (2 5 lbs metallic copper equivalent) Maximum annual application rate is 50 0 lbs/A (25 0 lbs metallic copper equivalent)			

SPINACH			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose Blue Mold Cercospora Leafspot Downy Mildew White Rust	1 5 (0 75 lbs of metallic equivalent)	7	Begin applications when disease first appears or conditions favor disease development Repeat at 7 to 10 day intervals as needed NOTE Flecking may occur on spinach leaves
RESTRICTIONS Maximum single application rate is 1 5 lbs/A (0 75 lbs metallic copper equivalent) Maximum annual application rate is 7 5 lbs/A (3 75 lbs metallic copper equivalent)			

STRAWBERRIES			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Downy Mildew Leaf Spot Leaf Blight	1 0 – 3 0 (1 0 – 1 5 lbs of metallic equivalent)	7	Begin application when plants are established and continue on a weekly schedule throughout season Apply in at least 20 gallons of water Use the higher rates when conditions favor disease NOTE Discontinue applications if signs of phytotoxicity appear
RESTRICTIONS Maximum single application rate is 3 0 lbs/A (1 5 lbs metallic copper equivalent) Maximum annual application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent)			

ATEMOYA, SUGAR APPLE (Annona)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	6.3 (3.15 lbs of metallic equivalent)	7	Make initial application just before flowering and repeat on a weekly schedule until just before harvest Apply in sufficient water for thorough coverage
RESTRICTIONS Maximum single application rate is 6.3 lbs/A (3.15 lbs metallic copper equivalent) Maximum annual application rate is 25.2 lbs/A (12.6 lbs metallic copper equivalent)			

SUGAR BEETS & TABLE BEETS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	2.45 (1.22 lbs of metallic equivalent)	10	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals as needed
RESTRICTIONS Maximum single application rate is 2.45 lbs/A (1.22 lbs metallic copper equivalent) Maximum annual application rate is 15.0 lbs/A (7.5 lbs metallic copper equivalent)			

SYCAMORE			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Anthracnose	2.0 - 4.0 (1.0 - 2.0 lbs of metallic equivalent)	7	Make two applications as a full cover spray Use a minimum of 100 gallons water per acre Make first application at bud crack and second application 7 to 14 days later at 10% leaf expansion
RESTRICTIONS Maximum single application rate is 4.0 lbs/A (2.0 lbs metallic copper equivalent) Maximum annual application rate is 40.0 lbs/A (20.0 lbs metallic copper equivalent)			

TOMATOES (Processing Market)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early Blight Bacterial Speck Bacterial Spot Anthracnose Gray Leaf Mold Gray Leaf Spot Septoria Leaf Spot Late Blight	1 0 (0 5 lbs of metallic equivalent)	3	When disease threatens apply at 7 10 day intervals more frequently when disease is severe
RESTRICTIONS Maximum single application rate is 1 0 lb/A (0 5 lbs metallic copper equivalent) Maximum annual application rate is 34 5 lbs/A (17 25 lbs metallic copper equivalent)			

TOMATOES (Fresh Market)			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Early Blight Bacterial Speck Bacterial Spot Anthracnose Gray Leaf Mold Gray Leaf Spot Septoria Leaf Spot Late Blight	3 2 (1 6 lbs of metallic equivalent)	3	When disease threatens apply at 7 10 day intervals more frequently when disease is severe
RESTRICTIONS Maximum single application rate is 3 2 lb/A (1 6 lbs metallic copper equivalent) Maximum annual application rate is 16 0 lbs/A (8 0 lbs metallic copper equivalent)			

TURFGRASS (Sod Farms and other non residential sites only)			
DISEASE	APPLICATION RATE lbs of product/acre	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Algae	3 0 – 6 0 (1 5 – 3 0 lbs of metallic equivalent)	10	May be used as a maintenance spray as needed May be used alone or in combination with fungicides such as dithiocarbamates Use a minimum of 100 gallons of spray mix per acre Phytotoxicity may depend on varietal differences Apply the recommended rate to a small area and observe 7 10 days for phytotoxicity If phytotoxicity occurs, discontinue use
RESTRICTIONS Maximum single application rate is 6 0 lbs/A (3 0 lbs metallic copper equivalent) Maximum annual application rate is 18 0 lbs/A (9 0 lbs metallic copper equivalent)			

WALNUTS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Walnut Blight	40 – 80 (20 – 40 lbs of metallic equivalent)	7	Apply first spray at early pre bloom when catkins are partially expanded Make three additional applications during bloom and early nutlet stages at 7 to 10 day intervals. Additional applications may be necessary when frequent rainfall occurs Thorough coverage of catkins, leaves and nutlets is essential for effective control. When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons of spray. NOTE: Adequate control may not be obtained when copper tolerant species of Xanthomonas bacteria are present.
RESTRICTIONS Maximum single application rate is 80 lbs/A (40 lbs metallic copper equivalent) Maximum annual application rate is 504 lbs/A (252 lbs metallic copper equivalent)			

WATERCRESS			
DISEASE	APPLICATION RATE (lbs of product/Acre)	MINIMUM DAYS RETREATMENT INTERVAL	COMMENT
Cercospora Leaf Spot	10 (0.5 lbs of metallic equivalent)	7	Begin application when plants are first established in the field, repeating at 7-14 day intervals depending on disease severity and environmental conditions. Do not exceed 4 applications per year. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre.
RESTRICTIONS Maximum single application rate is 10 lb/A (0.5 lbs metallic copper equivalent) Maximum annual application rate is 40 lbs/A (20 lbs metallic copper equivalent)			

GREENHOUSE AND SHADEHOUSE CROPS

NOTICE TO USER: Blue Shield DF may be used in greenhouses and shadehouses to control diseases on some crops which appear on this label. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not Blue Shield DF can be used safely prior to commercial use. In a small area, apply the labelled rates to the plant in question, i.e. foliage, fruit, etc. and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Apply Blue Shield DF according to specific rates given for these crops in pounds per acre or pounds per 100 gallons.

Blue Shield DF should be applied in adequate water for thorough coverage of plant parts. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed. Use shorter interval during periods when severe disease conditions persist.

The Re entry Interval (REI) for Greenhouse use is 24 hours. Refer to the Agricultural Use Requirements section for notification and PPE requirements for greenhouse use.

CROP	DISEASE	RATE Ounces/ 1 000 sq ft	COMMENTS
Eggplant	Alternaria Blight Anthracnose Phomopsis	0.2 to 0.5	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals as needed depending on disease pressure.
Pepper	Bacterial Spot	0.2 to 0.5	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates for severe disease.
Cucumber	Angular Leaf Spot Downy Mildew	0.4 to 0.77	Apply weekly when plants begin to vine.
Tomato	Early Blight Late Blight	0.2 to 0.4	Begin when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.
	Bacterial Speck	0.2 to 0.4	Begin applications when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity.
	Bacterial Spot Anthracnose Gray Leaf Mold Septoria Leaf Spot	0.2 to 0.4	Begin when disease first threatens and repeat at 3 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.

ORNAMENTALS

Notice to User Plant sensitivities to BLUE SHIELD DF have been found to be acceptable in specific genera and species listed on this label however phytotoxicity may occur Due to the large number of species and varieties of ornamentals and nursery plants it is impossible to test every one for sensitivity to BLUE SHIELD DF Neither the manufacturer nor seller has determined whether or not BLUE SHIELD DF can be safely used on ornamental or nursery plants not listed on this label The user should determine if BLUE SHIELD DF can be used safely prior to commercial use In a small area apply the recommended rates to the plants in question i.e. bedding plants foliage etc and observe for 7-10 days for symptoms of phytotoxicity prior to commercial use

Use BLUE SHIELD DF on container bench or bed grown ornamentals in greenhouses or outdoor nurseries for professional use on ornamentals grown for indoor and outdoor landscaping and for control of bacterial and fungal diseases of foliage flowers and stems

Apply as a thorough coverage spray using 1.0 lbs product per 100 gallons of water Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed use shorter interval during periods of frequent rains or when severe disease conditions persist

BLUE SHIELD DF may be used as a maintenance spray alone or in combination with other fungicides such as the dithiocarbamates

Ornamentals Restrictions

- Minimum retreatment interval is 7 days
- Maximum single application rate is 4.0 lbs/A (2.0 lbs metallic copper equivalent)
- Maximum annual application rate is 40.0 lbs/A (20 lbs metallic copper equivalent)

ORNAMENTAL/DISEASES

Althea (Rose of Sharon)/Bacterial Leaf Spot
 Aralia/Xanthomonas & Cercospora Leaf Spots Alternaria
 Arborvitae/Alternaria Twig Blight Cercospora Leaf Blight
 Azalea*/Cercospora Leaf Spot, Botrytis Blight Phytophthora Dieback & Powdery Mildew
 Begonia/Xanthomonas Leaf Spot Anthracnose
 Bougainvillea/Anthracnose Bacterial Leaf Spot
 Bulbs (Easter Lily** Tulip, Gladiolus)/Anthracnose, Botrytis Blight
 Camellia/Anthracnose Bacterial Leaf Spot
 Camphor Tree/Pseudomonas Leaf Spot
 Canna/Pseudomonas Leaf Spot
 Carnation*/Alternaria Blight Pseudomonas Leaf Spot, & Botrytis Blight
 Chinese Tallow Tree/Bacterial Leaf Spot (Xanthomonas sp Pseudomonas sp)
 Chrysanthemum*/Septoria Leaf Spot & Botrytis Blight
 Cotoneaster/Botrytis Blight
 Dahlia/Alternaria Leaf Spot Botrytis Gray Mold, Cercospora Leaf Spot
 Date Palm/Pestalotia Leaf Spot
 Dianthus/Bacterial Spot Bacterial Soft Rot
 Dogwood/Anthracnose
 Dusty Miller/Bacterial Leaf Spot (Pseudomonas cichorii)
 Echinacea/Bacterial Leaf Spot (Pseudomonas cichorii)
 Elm Drake /Xanthomonas Leaf Spot
 Euonymus/Botrytis Blight & Anthracnose
 European Fan Palm/Pestalotia Leaf Spot
 Gardenia/Alternaria Leaf Spot Botrytis Bud Rot Cercospora Leaf Spot
 Geranium/Alternaria Leaf Spot, Botrytis Gray Mold Cercospora Leaf Spot
 Gladiolus/Alternaria Leaf Spot Botrytis Gray Mold Bacterial Leaf Blight
 Golden Rain Tree/Bacterial Leaf Spot
 Hibiscus/Bacterial Leaf Spot
 Holly Fern/Pseudomonas Leaf Spot
 Impatiens/Bacterial Leaf Spot

India hawthorn (greenhouse)/Entomosporium Leaf Spot
 Ivy*/Xanthomonas Leaf Spot
 Ixora/Xanthomonas Leaf Spot
 Juniper (Eastern Red Cedar)/Anthracnose
 Lantana/Bacterial Leaf Spot
 Lilac/Cercospora Leaf Spot
 Loblolly Bay/Anthracnose
 Loquat/Entomosporium maculata, Colletotrichum sp
 Magnolia (Southern)/Algal Leaf Spot Anthracnose, Bacterial Leaf Spot
 Mandevillas/Anthracnose
 Marigold/Alternaria Leaf Spot Botrytis Leaf and Flower Rot
 Cercospora Leaf Spot
 Mulberry Weeping/Bacterial Leaf Spot
 Oak Laurel/Algal Leaf Spot (Cephaleuros virescens)
 Oleander/Bacterial Leaf Spot, Fungal Leaf Spot
 Pachysandra/Volutella Leaf Blight
 Pansy/Downy Mildew
 Pear (Flowering)/Fireblight Leaf Spot
 Pentas (Egyptian Star)/Bacterial Leaf Spot (Xanthomonas sp)
 Peony/Botrytis Blight
 Periwinkle/Phomopsis Stem Blight
 Philodendron/Bacterial Leaf Spot
 Phlox/Alternaria Leaf Spot
 Photinia (Red Tip)/Anthracnose Entomosporium Leaf Spot
 Pistachio/Anthracnose
 Plantain Lily/Bacterial Leaf Spot
 Powder Puff Plant/Bacterial Leaf Spot
 Pyracantha/Fireblight & Scab
 Queen Palm/Exosporium Leaf Spot Phytophthora Bud Rot
 Rhododendron/Alternaria Flower Spot
 Rose*/Powdery Mildew, Black Spot
 Verbena/Xanthomonas Leaf Spot
 Viburnum/Anthracnose
 Washingtonia Palm/Pestalotia Leaf Spot
 Weeping Willow/Anthracnose
 Yucca (Adams Needle)/Cercospora & Septoria Leaf Spot

*Discoloration of foliage and/or blooms have been noted on some varieties To prevent residues on commercial plants do not spray just before selling season

**For Easter Lily use 2.0 – 5.0 lbs product per 100 gallons

Restrictions (Easter Lily)

- Minimum retreatment interval is 7 days
- Maximum single application rate is 5.0 lbs/A (2.5 lbs metallic copper equivalent)
- Maximum annual application rate is 150 lbs/A (75 lbs metallic copper equivalent)
- Do not apply any additional copper pesticide to this land for 36 months

NOTICE To the extent consistent with applicable law Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on this label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose expressed or implied extends to the use of this product contrary to label instructions not reasonably foreseeable to seller the buyer assumes the risk of any such use