



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

March 23, 2022

Arianna Shorey
Agent for Germains Seed Technology, Inc.
c/o Pyxis Regulatory Consulting, Inc.
4110 136th St. Ct. NW
Gig Harbor, WA 98332

Subject: Notification per PRN 98-10 – Primary Brand Name Change to Ultim Fungicide;
Addition of alternate brand names: ProBio Ultim Fungicide, ProBio Ultim-ST,
and Ultim-ST. Minor label revisions including addition of logo symbol.
Product Name: Ultim Fungicide
EPA Registration Number: 92690-1
Application Date: 10/11/21, 8/30/21
Decision Number: 581584, 581586

Dear Arianna Shorey:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

The primary brand name is Ultim Fungicide

The alternate brand names: ProBio Ultim Fungicide, ProBio Ultim-ST, and Ultim-ST has been added to the product record.

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

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If you have any questions, you may contact please contact James Orrock at 202-566-2862 or by email at orrock.james@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "C. J. Giles-Parker".

Fungicide Branch, Chief
Registration Division

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

{BOOKLET FRONT PANEL}

COPPER GROUP M1 FUNGICIDE

Mergence Ultim Fungicide -

{Alternate Brand Names} [Ultim[®]]-ST [ProBio Ultim Fungicide] [ProBio Ultim-ST]

Agricultural Fungicide/Bactericide†

† non-public health bacteria

COPPER GROUP M4 FUNGICIDE

ACTIVE INGREDIENT:	
Copper Hydroxide*	76.8%
OTHER INGREDIENTS	23.2%
TOTAL	100.0%

*(Metallic copper equivalent 50.0%) _____ CAS No. 20427-59-2
EPA Reg. No. 92690-1 EPA Est. No.

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 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.
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.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
For MEDICAL Emergencies Call 24 Hours A Day 1-(800) 424-9300	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage.	

{Note to Reviewer: First aid box may appear in paragraph form.}

~~See inside booklet for additional PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE and STORAGE AND DISPOSAL instructions~~

PRODUCT OF United States

NET WEIGHT:

[-] Lbs []

Manufactured for:
**Germain's Seed
Technology**

8333 Swanston Lane
Gilroy, California 95020



FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE, CALL CHEMTREC (800) 424-9300

See inside booklet for additional PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE and STORAGE AND DISPOSAL instructions.

[PRODUCT OF United States]

NOTIFICATION

92690-1

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

03/23/2022

[LOT #: _____]

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Do not breathe dust. Harmful if swallowed. Harmful if absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear a NIOSH-approved particulate filter with any R or P filter, OR a NIOSH-approved elastomeric particulate respirator with any R or P filter, OR a NIOSH-approved powered air-purifying respirator with an HE filter. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

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 (such as are barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyethylene polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils).
3. Shoes plus socks.
4. Protective eyewear, goggles or face shield.
5. A minimum of a NIOSH -approved particulate filtering facepiece respirator with any R or P filter, OR a NIOSH-approved elastomeric particulate respirator with any R or P filter, OR a NIOSH-approved powered air-purifying respirator with an HE filter.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROL STATEMENTS

Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40 CFR 170.305].

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

USER SAFETY RECOMMENDATIONS

Users should:

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. As soon as possible, wash thoroughly and change into clean clothing.
4. Wash the outside of gloves before removing.

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. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

Exposed treated seed may be hazardous to birds or other wildlife. Cover or collect seeds spilled during loading and planting

Certain water conditions including low pH (<6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow coming in contact with oxidizing agent. Hazardous chemical reaction may occur.

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 without the required PPE.

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 ONLY:

The 48-hour restricted entry interval (REI) may be reduced to 24-hour REI, provided that the following conditions are met:

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 condition 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.

RESISTANCE MANAGEMENT

FUNGICIDES: For resistance management, Ultim Fungicide Mergence contains a Group M1 fungicide/bactericide (†Non-public health bacteria). Any fungal/bacterial population may contain individuals naturally resistant to Ultim Fungicide Mergence and other Group M1 fungicides/bactericides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide/bactericide resistance, take one or more of the following steps:

- Rotate the use of Ultim Fungicide Mergence or other Group M1 fungicides/bactericides within a growing season sequence with different groups that control the same pathogens. Avoid application of more than maximum number of applications specified in the use directions and consecutive sprays of Ultim Fungicide Mergence or other (fungicides/bactericides) in the same group in a season.
- Use tank mixtures with fungicide/bactericides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide/bactericide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide/bactericide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal/bacterial populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Germain's Seed Technology at <https://germain.com/us/contact/>. You can also contact your pesticide distributor or university extension specialist to report resistance.

PESTICIDE INSTRUCTIONS

Ultim Fungicide Mergence may be applied by Aerial Application, 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. Sufficient spray volume and spray pressure is essential to thoroughly penetrate the plant canopy and give thorough spray coverage and at the times indicated. On crops sensitive to copper fungicides use the higher volumes of spray water per acre. Use the higher dosage of Ultim Fungicide Mergence on mature trees, or when disease pressure is severe, or weather conditions warrant.

RESTRICTIONS Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40 CFR 170.305]

When using adjuvants or other pesticides in combination with this product, always observe the most restrictive statements on the product's label and required days before harvest. Sprays of Ultim Fungicide Mergence may be applied up to 24 hours pre-harvest. 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. Ultim Fungicide Mergence 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.

INSTRUCTIONS FOR SEED TREATMENT USE

For use in commercial seed treatment equipment only. Not for use in hopper box, planter box, slurry box, or other on-farm seed treatment applications.

USE INFORMATION

This product may be applied using mechanical, slurry or mist-type seed treating equipment. The equipment must be calibrated and must be able to accurately and uniformly apply the product to the seed. Uniform application of seed treatments is important for ensuring the best disease protection. It may be applied as a water-based slurry in water or in mixtures with water-based seed treatment products.

When mixing with water, mix the product with the water and allow the mixture to disperse completely until a uniform suspension is obtained.

When used in a tank mix with other seed treatments, allow each slurry component to disperse completely prior to the next addition. All tank mixes should be pre-tested to determine physical compatibility between formulations. Observe the most restrictive use precautions and limitations on labeling of the products used in mixtures.

The slurry application volume must be sufficient to ensure complete and uniform coverage and distribution on the seed.

Treatment of mechanically damaged seed, heavily scarified, or seed known to be of low vigor and poor quality, except for the purpose of protection against prescribed diseases, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small test sample of seed before treating commercial quantities with a selected chemical treatment. Due to seed quality and seed storage conditions beyond the control of Germain's, Germain's makes no claims or guarantees as to germination of carry-over seed.

Ultim Fungicide Mergence Fungicide must be applied in combination with a seed coating suitable for copper hydroxide seed treatments. A ProBio® coating produced by Germain's Seed Technology is recommended. Add the coating to the treating slurry prior to application. Contact your local Germain's Seed Technology representative or supplier for specific treating recommendations on specific coating and slurries for your crop and treater.

For protection against seed decay, damping-off, and seedling blight caused by seed-borne and soil-borne Pythium.

The following crops may be treated on a per seed or per unit of seed, as per the table below:

SEED TREATMENT RATE TABLE – Rates per Seed and Per Unit of Seed

Crop	Rate	mg Al/seed (Metallic Copper)	Oz Product /Unit	Lbs Elemental Copper/ Unit	Maximum Allowed Annual Lbs Elemental Copper Per Acre
Spinach	Low	0.035	0.247 oz/100,000 Seeds	0.0077 per 100,000 Seeds	3.95
	High	0.05625	0.40 oz/100,000 Seeds	0.0124 per 100,000 Seeds	
Peas	Low	0.125	0.35 oz/40,000 Seeds	0.0110 per 40,000 Seeds	3.75
	High	0.205	0.58 oz/40,000 Seeds	0.0181 per 40,000 Seeds	
Corn (field, sweet & popcorn)	Low	0.125	0.705 oz/80,000 Seeds	0.0220 per 80,000 Seeds	4.20
	High	0.205	1.157 oz/80,000 Seeds	0.0362 per 80,000 Seeds	
Soybeans	Low	0.125	1.23 oz/140,000 Seeds	0.0386 per 140,000 Seeds	4.75
	High	0.205	2.02 oz/140,000 Seeds	0.0633 per 140,000 Seeds	
Beans	Low	0.125	0.88 oz/100,000 Seeds	0.0276 per 100,000 Seeds	4.50
	High	0.205	1.45 oz/100,000 Seeds	0.0452 per 100,000 Seeds	
Peanuts	Low	0.125	0.88 oz/100,000 Seeds	0.0276 per 100,000 Seeds	4.50
	High	0.205	1.45 oz/100,000 Seeds	0.0452 per 100,000 Seeds	

The following crops may be treated on a per weight of seed basis, as per the table below:

SEED TREATMENT RATE TABLE – Rates per Weight of Seed

Crop	Rate	Oz Product per 100 Lbs seed	Lbs Elemental Copper per 100 Lbs seed	Maximum Allowed Annual Lbs Elemental Copper Per Acre
Peas (Field) Seed Size 3,300 Seeds/Lb	Low	2.91	0.0909 per 100 Lbs seed	3.75
	High	4.77	0.1491 per 100 Lbs seed	
Corn (Field) Seed Size 1,681 Seeds/Lb	Low	1.48	0.0463 per 100 Lbs seed	4.20
	High	2.43	0.0760 per 100 Lbs seed	
Corn, sweet Seed Size 3,150 Seeds/Lb	Low	2.78	0.0868 per 100 Lbs seed	4.20
	High	4.56	0.1424 per 100 Lbs seed	
Corn, popcorn Seed Size 3,061 Seeds/Lb	Low	2.70	0.0844 per 100 Lbs seed	4.20
	High	4.43	0.1383 per 100 Lbs seed	
Soybeans Seed Size 2,550 Seeds/Lb	Low	2.25	0.0703 per 100 Lbs seed	4.75
	High	3.69	0.1152 per 100 Lbs seed	
Beans, Dry common Seed Size 1,307 Seeds/Lb	Low	1.15	0.0360 per 100 Lbs seed	4.50
	High	1.89	0.0591 per 100 Lbs seed	
Peanuts Seed Size 684 Seeds/Lb	Low	0.60	0.0188 per 100 Lbs seed	4.50
	High	0.99	0.0309 per 100 Lbs seed	
Wheat, barley, oats	Low	2.14	0.0669 per 100 Lbs seed	1.00
	High	5.34	0.1669 per 100 Lbs seed	

NOTE: * **Ultim Fungicide Mergence** contains 500 milligrams of metallic copper per gram of product.

Do not exceed a total of the following rates of metallic copper per acre per year through the use of seed treated with this product and the use of any other applied copper formulations.

† “Peas” include succulent and dry peas, including dwarf pea, edible pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea

‡ “Beans” includes succulent and dry beans: *Cicer arietinum* (chickpea, garbanzo bean); *Lupinus spp.* (including sweet lupine, white sweet lupine, white lupine, and grain lupine). *Phaseolus spp.* (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and waxbean); *Vicia faba* (broad bean, fava bean); *Vigna spp.* (including asparagus bean, blackeyed pea and cowpea).

SEED BAG LABELING

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

- This seed has been treated with copper hydroxide
- Do not use for feed, food, or oil purposes.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with **Ultim Fungicide Mergence**:

- Wear long pants, long-sleeved shirt, shoes plus socks, and chemical-resistant gloves when handling treated seed.
- 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. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.
- For treated Peas, Corn (field, sweet & popcorn), Soybeans, Beans, Peanuts, Wheat, Barley and Oats; include the statement “Seed must be planted at least one inch deep”.
- Exposed treated seed may be hazardous to birds or other wildlife. Cover or collect seeds spilled during loading and planting.

- Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.
- Store treated seed away from food and feed
- Do not allow children, pets, or livestock to have access to treated seed.
- Dispose of all excess treated seed by burying seed away from bodies of water.
- Do not contaminate bodies of water when disposing of planting equipment wash water.
- Dispose of seed packaging or containers in accordance with local requirements.
- The maximum pounds of copper/acre per calendar year and the pounds of copper applied (per unit of seed or per 100 pounds of seed) for the applicable crop and rate, as per the tables below.

SEED TAG RATE STATEMENT TABLE – Rates per Unit of Seed [(continued)]

{Note to Reviewer: [(continued)] will be used throughout the label where applicable to indicate where a text group continues to subsequent page.}

Crop	Rate	Oz Product per unit	Lbs Elemental Copper/Unit	Seed Tag Statement
Spinach	Low	0.247 oz/100,000 Seeds	0.0077 per 100,000 Seeds	Do not apply more than 3.95 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0077 lbs of metallic copper per 100,000 Seeds.
	High	0.40 oz/100,000 Seeds	0.0124 per 100,000 Seeds	Do not apply more than 3.95 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0124 lbs of metallic copper per 100,000 Seeds.
Peas	Low	0.35 oz/40,000 Seeds	0.0110 per 40,000 Seeds	Do not apply more than 3.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0110 lbs of metallic copper per 40,000 Seeds.
	High	0.58 oz/40,000 Seeds	0.0181 per 40,000 Seeds	Do not apply more than 3.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0181 lbs of metallic copper per 40,000 Seeds.
Corn (field, sweet & popcorn)	Low	0.705 oz/80,000 Seeds	0.0220 per 80,000 Seeds	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0220 lbs of metallic copper per 80,000 Seeds.
	High	1.157 oz/80,000 Seeds	0.0362 per 80,000 Seeds	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0362 lbs of metallic copper per 80,000 Seeds.
Soybeans	Low	1.23 oz/140,000 Seeds	0.0386 per 140,000 Seeds	Do not apply more than 4.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0386 lbs of metallic copper per 140,000 Seeds.
	High	2.02 oz/140,000 Seeds	0.0633 per 140,000 Seeds	Do not apply more than 4.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0633 lbs of metallic copper per 140,000 Seeds.
Beans	Low	0.88 oz/100,000 Seeds	0.0276 per 100,000 Seeds	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0276 lbs of metallic copper per 100,000 Seeds.
	High	1.45 oz/100,000 Seeds	0.0452 per 100,000 Seeds	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0452 lbs of metallic copper per 100,000 Seeds.
Peanuts	Low	0.88 oz/100,000 Seeds	0.0276 per 100,000 Seeds	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0276 lbs of metallic copper per 100,000 Seeds.
	High	1.45 oz/100,000 Seeds	0.0452 per 100,000 Seeds	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0452 lbs of metallic copper per 100,000 Seeds.

SEED TAG RATE STATEMENT TABLE – Rates per Weight of Seed [(continued)]

Crop	Rate	Oz Product per 100 lbs seed	Lbs Elemental Copper per 100 Lbs seed	Seed Tag Statement
Peas (Field)	Low	2.91	0.0909 per 100 lbs of Seed	Do not apply more than 3.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0909 lbs of metallic copper per 100 lbs seed.
	High	4.77	0.1491 per 100 lbs of Seed	Do not apply more than 3.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.1491 lbs of metallic copper per 100 lbs seed.
Corn (field)	Low	1.48	0.0463 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0463 lbs of metallic copper per 100 lbs seed.
	High	2.43	0.0760 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0760 lbs of metallic copper per 100 lbs seed.
Corn (sweet)	Low	2.78	0.0868 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0868 lbs of metallic copper per 100 lbs seed.
	High	4.56	0.1424 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.1424 lbs of metallic copper per 100 lbs seed.
Corn (popcorn)	Low	2.70	0.0844 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0844 lbs of metallic copper per 100 lbs seed.
	High	4.43	0.1383 per 100 lbs of Seed	Do not apply more than 4.2 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.1383 lbs of metallic copper per 100 lbs seed.
Soybeans	Low	2.25	0.0703 per 100 lbs of Seed	Do not apply more than 4.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0703 lbs of metallic copper per 100 lbs seed.
	High	3.69	0.1152 per 100 lbs of Seed	Do not apply more than 4.75 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.1152 lbs of metallic copper per 100 lbs seed.
Beans, Dry Common	Low	1.15	0.0360 per 100 lbs of Seed	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0360 lbs of metallic copper per 100 lbs seed.
	High	1.89	0.0591 per 100 lbs of Seed	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0591 lbs of metallic copper per 100 lbs seed.
Peanuts	Low	0.60	0.0188 per 100 lbs of Seed	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0188 lbs of metallic copper per 100 lbs seed.
	High	0.99	0.0309 per 100 lbs of Seed	Do not apply more than 4.5 lbs of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0309 lbs of metallic copper per 100 lbs seed.
Wheat, barley, oats	Low	2.14	0.0668 per 100 lbs of Seed	Do not apply more than 1 lb of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.0668 lbs of metallic copper per 100 lbs seed.
	High	5.34	0.1670 per 100 lbs of Seed	Do not apply more than 1 lb of metallic copper/A per calendar year from copper-containing products regardless of the type of application. This seed has been treated with 0.167 lbs of metallic copper per 100 lbs seed.

NOTE: To comply with 40 CFR 153.155, all seed treated commercially with this product must be colored with an EPA approved dye or colorant of a suitable color to prevent accidental use as food for man or feed for animals.

MIXING INSTRUCTIONS FOR SPRAY APPLICATION

Fill the spray tank one-fourth to one-third full with clean water. Start agitation (**NOTE:** Proper agitation creates a rippling or rolling action on the liquid surface). Add [Ultim Fungicide Mergence](#) 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.

It is the pesticide user's responsibility to ensure that all products registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

MINIMUM SPRAY VOLUME IN GALLONS PER ACRE (GPA)

If a crop is sensitive to copper sprays, higher volumes of spray water will decrease potential injury. 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-leaved 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 [Ultim Fungicide Mergence](#) as noted below unless indicated otherwise in the specific crop directions. [Ultim Fungicide Mergence](#) 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 listed volumes below:

	Aerial in GPA	Ground in GPA	
		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

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

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, traveling 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 device for public water systems is 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 ensure 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 chemigation 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.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such 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 the 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

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

CHEMIGATION 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

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, air blast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Aerial Applications:

- Do not release spray at a height greater than 10 ft. above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speed exceeds 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the application area.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the spray release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

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.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

CROPS

ALFALFA			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Cercospora & Leptosphaerulina Leaf Spots	1.0 (0.5 lbs of metallic copper 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: <ul style="list-style-type: none"> • Maximum single application rate is 1.0 lb/A (0.5 lbs metallic copper equivalent). • Maximum annual application rate is 2.0 lbs/A (1.0 lb metallic copper equivalent). 			

ALMONDS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Dormant to late dormant Stage: Bacterial Blast <i>(Pseudomonas)</i> Coryneum Blight Shot hole)	8.0 – 16.0 (4 - 8 lbs of metallic copper equivalent)	7	Use at dormant to late dormant. For blast control in sprinkler irrigated orchards or where disease is severe, apply the higher listed rate at a minimum retreatment interval of 7 days, but do not exceed the maximum annual application rate. NOTE: Slight leaf injury may occur from post-bloom spray.
Early Bloom Stage: Coryneum Blight (Shot Hole) Blossom Brown Rot	1.0-3.0 (0.5-1.5 lbs of metallic copper equivalent)	5	Use during the early bloom stage (popcorn). Use the higher listed rate when rainfall is heavy and disease pressure is high. NOTE: To avoid plant injury, do not use after full bloom.
RESTRICTIONS: <ul style="list-style-type: none"> • 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). 			

APPLES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Fall & Late Dormant: Anthracnose European Canker <i>Pseudomonas Syringae</i>	12.0 (6 lbs of metallic copper 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: Fireblight	12.0 (6 lbs of metallic copper equivalent)		Make application between silver-tip and green-tip. 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 copper equivalent)	5	Extended spray schedule where fruit finish is not a concern. Continued applications may be made at 5- to 7-day intervals. NOTE: Crop injury may occur from extended spray schedule. Not intended for fresh market apples due to possible russetting. The addition of 1–3 lbs of lime per lb of <u>Ultim Fungicide MERGENCE</u> may reduce injury.
Crown or Collar Rot <i>(Phytophthora cactorum)</i>	See APPLICATION INSTRUCTIONS	Only one dormant application allowed per season.	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 4 lbs in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Do not apply more than 300 gallons of mixture/A (12 lbs product/A; 6 lbs metallic copper/A).
RESTRICTIONS: <ul style="list-style-type: none"> • Maximum single dormant season application rate is 12.0 lbs/A (6.0 lbs metallic copper equivalent). • Maximum single silver-tip to green-tip growing season is 12.0 lbs/A (6.0 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 12.0 lbs/A (6.0 lbs metallic copper equivalent). 			

[(continued)]

APRICOTS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Fall & late dormant up to pink bud: Anthracnose European Canker <i>Pseudomonas Syringae</i>	12.0 – 16.0 (6 - 8 lbs of metallic copper equivalent)	7	Apply before fall rains. Use the higher listed rate 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 – 1.5 lbs of metallic copper equivalent)	5	Apply at popcorn to full bloom as a full-cover spray. To avoid spray injury, do not apply after full bloom.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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). 			

ATEMOYA, SUGAR APPLE (Annona)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthracnose	6.3 (3.15 lbs of metallic copper 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:			
<ul style="list-style-type: none"> • 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). 			

AVOCADOS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthracnose Blotch Scab	4.0 – 6.3 (2 – 3.15 lbs of metallic copper equivalent)	14	Apply when bloom buds begin to swell. Continue application at 14- to 28-day intervals for 5 to 6 applications. Use higher listed rate when conditions favor disease.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Sigatoka (black and yellow)	2.1 (1.05 lbs of metallic copper 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- to 14-day schedule throughout the wet season. Apply at 14- to 21-day intervals during dry periods.
Black Pitting	2.1 (1.05 lbs of metallic copper equivalent)	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:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bacterial Blight (Halo & Common) Brown spot	1.0 – 1.5 (0.5 – 0.75 lbs of metallic copper equivalent)	7	For protective sprays apply first application when plants are five to six inches high. Apply on 7- to 14-day schedule depending on local conditions. Use the higher listed rate for more severe disease pressure.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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), including the copper applied through seed treatment use, if applicable. 			

[(continued)]

BLUEBERRIES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bacterial Canker	3.0 – 4.2 (1.5 – 2.1 lbs of metallic copper equivalent)	21	Make first application before the fall rains, preferably the first week in October and a second application 3 to 5 (preferably 4) weeks later. Use the higher listed rate when conditions favor disease.
RESTRICTIONS: <ul style="list-style-type: none"> • 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). 			

CACAO			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Black Pod	2.0 – 4.5 (1 – 2.25 lbs of metallic copper 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 3-4.5 lbs/A depending on disease severity. Use the higher listed rate for higher 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: <ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthraxnose	4.2 (2.1 lbs of metallic copper 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: <ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Carrot Blight (<i>Cercospora</i>)	2.0 (1 lb of metallic copper equivalent)	7	Begin application when disease first threatens and repeat at 7- to 14-day intervals as needed depending on disease severity.
RESTRICTIONS: <ul style="list-style-type: none"> • Maximum single application rate is 2.0 lbs/A (1.0 lb metallic copper equivalent). • Maximum annual application rate is 10.0 lbs/A (5.0 lbs metallic copper equivalent). 			

[(continued)]

CELERY & CELERIAC			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Early, Late & Bacterial Blights	2.0 (1 lb of metallic copper equivalent)	7	Apply as soon as plants are first established in the field, then up to every 7 days depending on disease presence, severity and weather.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 2.0 lbs/A (1.0 lb metallic copper equivalent). • Maximum annual application rate is 10.0 lbs/A (5.0 lbs metallic copper equivalent). 			

CHERRY			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Dormant, late dormant, up to pink bud: Dead Bud (<i>Pseudomonas syringae</i>) Coryneum Blight	8.0 – 16.0 (4 - 8 lbs of metallic copper equivalent)	7	In orchards where the disease is severe a spray should be applied shortly after harvest.
Bloom & Growing Season: Brown Rot Blossom	2.0 – 3.0 (1 – 1.5 lbs of metallic copper equivalent)	5	Apply at popcorn and full bloom.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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). 			

CHIVES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Downy Mildew	1.0 (0.5 lbs of metallic copper equivalent)	7	Begin applications when plants are established in the field. Repeat applications every 7 – 10 days as dictated by disease conditions.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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, Citron & Lime)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Melanose Scab Pink Pitting greasy Spot	4.0 – 6.3 (2 – 3.15 lbs of metallic copper equivalent)	7	Apply as pre-bloom and post-bloom sprays. Use the higher listed rate when conditions favor disease.
Brown Rot Septoria Spot	4.0 – 6.3 (2 – 3.15 lbs of metallic copper 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 the higher listed rate when conditions favor disease. NOTE: In California, in areas subject to copper injury, add 1/4 lb of high-quality lime per lb of Ultim FungicideMergence .
Citrus Canker (SUPPRESSION ONLY)	6.3 (3.15 lbs of metallic copper equivalent)	7	Spraying flushes 7 – 14 days after shoots begin to grow. Young fruit may need additional application. Number of applications will depend on disease pressure. Under heavy disease pressure, each flush of new growth should be sprayed.
Phytophthora Foot Rot	See APPLICATION INSTRUCTIONS	7	Mix 1.0 lb with one gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs. Apply in May before summer rains and/or in the fall before wrapping trees for freeze protection. Do not apply more than 6.3 lbs of Ultim FungicideMergence per acre per treatment. 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 – 3.15 lbs of metallic copper equivalent)	7	Apply 2.0 lbs of Ultim Fungicide Mergence per 100 gallons of water. Repeat application may be necessary if humid conditions conducive to disease pressure persist.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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). 			

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COFFEE			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Coffee Berry Disease (<i>Collectotrichum coffeanum</i>)	4.2 (2.1 lbs of metallic copper equivalent)	14	Apply after flowering and before the start of long rains and then at 14- to 28-day intervals until picking.
Bacterial Blight (<i>Pseudomonas syringae</i>)		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 (<i>Cercospora coffeicola</i>) & Pink Disease (<i>Corticium salmonicolor</i>)	2.0 (1 lb of metallic copper equivalent)	14	Begin treatment at start of wet season and continue for three applications.
Leaf Rust	3.0 – 4.2 (1.5 – 2.1 lbs of metallic copper equivalent)	14	Apply before the onset of rain and then at 14- to 21-day intervals while rains continue.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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). 			

CRANBERRY			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Fruit Rot	4.2 (2.1 lbs of metallic copper 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 a 10- to 14-day schedule as soon as symptoms are observed.
Bacterial Stem Canker			Apply post-harvest 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 (<i>Monolinia</i>) Stem and Leaf Blight Red Leaf Spot			Apply delayed dormant spray in the Spring. Repeat at 10- to 14-day intervals as needed through pre-bloom.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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). 			

CRUCIFERS (Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collard Greens, Kale, Kohlrabi, Mustard Greens, & Turnip Greens)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Downy Mildew Black Rot (<i>Xanthomonas</i>) Black Leaf Spot (<i>Alternaria</i>)	1.0 (0.5 lbs of metallic copper 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:			
<ul style="list-style-type: none"> Maximum single application rate is 1.0 lb/A (0.5 lb metallic copper equivalent). Maximum annual application rate is 5.0 lbs/A (2.5 lbs metallic copper equivalent). 			

CUCURBITS (Cucumbers, Cantaloupes, Honeydews, Muskmelons, Pumpkins, Squash & Watermelons)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
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 lbs of metallic copper equivalent)	5	Begin application when conditions are favorable for disease development. Repeat at 5- to 10-day intervals. Use the higher listed rate when conditions favor disease. NOTE: Crop injury may occur from application at higher rates and shorter intervals. Discontinue use if injury occurs.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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). 			

[(continued)]

CURRANTS & GOOSEBERRY			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose Leaf Spot	5.0 – 8.0 (2.5 - 4 lbs of metallic copper equivalent)	10	Make initial application after first leaves have expanded. Continue on a 10- to 14-day schedule during wet conditions in the Spring. Make an additional application after harvest.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Phoma Leaf Spot Rhizoctonia Foliage Blight	1.5 (0.75 lbs of metallic copper equivalent)	7	Begin applications when plants are first established in the field and repeat at 7- to 10-day intervals depending upon disease severity and environmental conditions.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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). 			

EGGPLANT			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Alternaria Blight Anthracnose Phomopsis	1.5 (0.75 lbs of metallic copper equivalent)	7	Begin applications prior to development of disease symptoms. Repeat sprays at 7- to 10-day intervals depending on disease severity.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 1.5 lbs/A (0.75 lbs metallic copper equivalent). • Maximum annual application rate is 15.0 lbs/A (7.5 lbs metallic copper equivalent). 			

FILBERTS (Permitted only in WA and OR)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bacterial Blight (Post-harvest application)	8.0 – 12.0 (4 - 6 lbs of metallic copper 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 cover- age. 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:			
<ul style="list-style-type: none"> • 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). 			

[(continued)]

GINSENG			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Alternaria Leaf and Stem Blight	2.1 (1.05 lbs of metallic copper equivalent)	7	Use a "tank mix" of <u>Ultim Fungicide Mergence</u> and an iprodione product registered for such use. The "tank mix" must contain 2.1 lbs of <u>Ultim Fungicide Mergence</u> plus one pound of iprodione active ingredient per 100 gallons of water. The iprodione product must be labeled for such use at that application rate. Use in accordance with the most restrictive of label limitations and precautions. No label application rates are to be exceeded. The tank mix is to be applied at 100 gallons per acre. The first "tank mix" application should be made as soon as plants have emerged in spring. Applications should be repeated as frequently as every seven days (or longer), as needed, until plants become dormant in fall or until the maximum <u>Ultim Fungicide Mergence</u> application rate of 10.5 lbs/A has been applied (i.e., a maximum of 5 applications may be applied). Apply fungicides at least eight hours before rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker is advised. 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.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Black Rot Powdery Mildew Downy Mildew Phomopsis	2.0 – 6.0 (1 - 3 lbs of metallic copper equivalent)	3	Begin applications at late dormant up to bud break with subsequent applications throughout the season depending upon disease severity. 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 lbs of hydrated lime per pound of <u>Ultim Fungicide Mergence</u> .
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthraxnose Red Algae	2.46 (1.23 lbs of metallic copper equivalent)	7	Make initial application just before flowering and repeat as frequently as every seven days (or longer), as needed, until just before harvest, or until the maximum annual application of <u>Ultim Fungicide Mergence</u> has been applied (i.e. a maximum of 4 applications per year may be applied). Apply in sufficient water for thorough coverage.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 2.46 lbs/A (1.23 lbs metallic copper equivalent). • Maximum annual application rate is 9.84 lbs/A (4.92 lbs metallic copper equivalent). 			

HOPS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Downy Mildew	1.0 (0.5 lbs of metallic copper equivalent)	10	Apply as a fungicide crown treatment (after pruning, but before training). After training, additional fungicide treatments are needed at 10-day intervals. Discontinue use 2 weeks before harvest.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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). 			

[(continued)]

KIWI			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
<i>Pseudomonas syringae</i> <i>Erwinia herbicola</i> <i>Pseudomonas fluorescens</i>	4.2 (2.1 lbs of metallic copper equivalent)	30	Make applications on a monthly basis. A maximum of 3 applications may be made.
RESTRICTIONS: <ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Downy Mildew	1.0 – 2.0 (0.5 – 1 lbs of metallic copper 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: <ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose	2.4 (1.2 lb of metallic copper equivalent)	7	Make initial application just before flowering and repeat as frequently as every seven days (or longer), as needed, until just before harvest, or until the maximum annual application of Ultim Fungicide Mergence has been applied (i.e. a maximum of 4 applications per year may be applied). Apply in sufficient water for thorough coverage.
RESTRICTIONS: <ul style="list-style-type: none"> • 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). 			

MACADAMIA NUTS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose	4.7 (2.35 lbs of metallic copper equivalent)	7	Make initial application just before flowering and repeat as frequently as every seven days (or longer), as needed, until just before harvest, or until the maximum annual application of Ultim Fungicide Mergence has been applied (i.e. a maximum of 4 applications per year may be applied). Apply in sufficient water for thorough coverage.
Blossom blight Raceme blight	3.0 – 4.0 (1.5 - 2 lbs of metallic copper equivalent)	7	Apply during peak raceme development and bloom period. Use the higher listed rate when conditions favor disease.
RESTRICTIONS: <ul style="list-style-type: none"> • Maximum single application rate is 4.7 lbs/A (2.35 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose Algal Leaf Spot	3.0 – 4.2 (1.5 – 2.1 lbs of metallic copper equivalent)	14	Use the higher listed rate when conditions favor disease development. Repeat on a 14- to 30-day schedule as disease severity and environmental conditions dictate.
RESTRICTIONS: <ul style="list-style-type: none"> • 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). 			

[(continued)]

MANGO			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose	4.0 – 6.4 (2 – 3.2 lbs of metallic copper equivalent)	30	Apply monthly after fruit set, until harvest, not to exceed the annual application rate.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 6.4 lbs/A (3.2 lbs metallic copper equivalent). • Maximum annual application rate is 36.4 lbs/A (18.2 lbs metallic copper equivalent). 			

OLIVES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Peacock Spot Olive Knot	5.0 – 12.0 (2.5 – 6 lbs of metallic copper equivalent)	30	Apply before winter rains fall. A second application in early spring should be made if disease is severe. Use the higher listed rate when conditions favor disease.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 12.0 lbs/A (6.0 lbs metallic copper equivalent). • Maximum annual application rate is 24 lbs/A (12 lbs metallic copper equivalent). 			

ONION & GARLIC			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Purple Blotch Downy Mildew	2.0 (1 lb of metallic copper 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 copper equivalent)		
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose	4.0 – 5.26 (2 - 2.63 lbs of metallic copper equivalent)	14	Begin application before disease is expected to appear. Repeat at 14-day intervals. Use the higher listed rate when conditions favor disease. The addition of a suitable spreader-sticker may be desirable especially during periods of heavy rains.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 5.26 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bacterial Blight (<i>Pseudomonas</i> sp.)	2.0 (1.0 lbs of metallic copper equivalent)	10	Begin applications when plants are first established in the field and repeat once after at least 10-days, if necessary.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 2.0 lbs/A (1.0 lb metallic copper equivalent). • Maximum annual application rate is 4.0 lbs/A (2.0 lbs metallic copper equivalent). 			

PASSION FRUIT			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Anthrachnose	4.7 (2.35 lbs of metallic copper 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:			
<ul style="list-style-type: none"> • Maximum single application rate is 4.7 lbs/A (2.35 lbs metallic copper equivalent). • Maximum annual application rate is 18.8 lbs/A (9.44 lbs metallic copper equivalent). 			

[(continued)]

PEACHES & NECTARINES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Dormant & late dormant up to pink bud: Bacterial Spot Leaf Curl Coryneum Blight (Shot Hole)	8.0 – 16.0 (4 - 8 lbs of metallic copper equivalent)	7	Apply at leaf fall as dormant application. Use the higher listed rate when rainfall is very heavy and disease pressure is high. May be used with an agricultural spray oil.
Dormant & late dormant to pink bud: Brown Rot, Blossom Blight	8.0 – 12.0 (4 - 6 lbs of metallic copper 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).
Bloom & Growing Season: Bacterial Spot	1.0 – 3.0 (0.5 – 1.5 lbs of metallic copper 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:			
<ul style="list-style-type: none"> • 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). 			

PEANUTS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Cercospora Leaf Spot	1.5 (0.75 lbs of metallic copper 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:			
<ul style="list-style-type: none"> • 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), including the copper applied through seed treatment use, if applicable. 			

PEARS, QUINCE			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bloom & Growing Season: Fireblight	1.0 – 3.0 (0.5 – 1.5 lbs of metallic copper equivalent)	5	Apply at 5-day intervals throughout bloom period. Excessive dosages may cause fruit russet.
Fall & Late Dormant Season: Pseudomonas blight	12.0 (6 lbs of metallic copper equivalent)	Only one dormant application allowed per season.	Apply before fall rain begins.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single dormant season application rate is 12.0 lbs/A (6.0 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 32.0 lbs/A (16.0 lbs metallic copper equivalent). 			

PEAS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Powdery Mildew	1.5 (0.75 lbs of metallic copper equivalent)	7	Begin spray treatment when disease symptoms first appear. Repeat applications at weekly intervals.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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), including the copper applied through seed treatment use, if applicable. 			

[(continued)]

PECANS (Not For Use in California Unless Accompanied by a Supplemental Label)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Shuck and Kernel rot (<i>Phytophthora cactorum</i>) Zonate leaf spot (<i>Cristulariella pyramidalis</i>)	2.0 – 4.2 (1 – 2.1 lbs of metallic copper equivalent)	14	Apply in sufficient water for good coverage at 2- to 4-week intervals starting at kernel growth and continuing until shucks open. Use the higher listed rate and shorter intervals if frequent rainfall occurs.
Mosses Algae Lichen	See APPLICATION INSTRUCTIONS	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. Do not apply more than 210 gallons per acre (4.2 lbs metallic copper per acre).
RESTRICTIONS:			
<ul style="list-style-type: none"> 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). 			

PEPPERS (Bell and Chili)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Bacterial Spot	1.5 (0.75 lbs of metallic copper 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:			
<ul style="list-style-type: none"> 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Botrytis Blight Botryosphaeria Panicle Shoot Blight Septoria Leaf Blight Late Blight (<i>Alternaria</i>)	3.0 – 4.2 (1.5 - 2.1 lbs of metallic copper equivalent)	14	Make initial application at bud swell and repeat on a 14- to 28- day schedule. Use the higher listed rate when conditions favor disease.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Dormant Season: Coryneum blight (Shot hole)	8.0 – 16.0 (4 - 8 lbs of metallic copper equivalent)	7	Apply as a dormant spray. Use the higher listed 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 copper equivalent)	5	Apply full-cover application at pink, red or early white bud stage.
RESTRICTIONS:			
<ul style="list-style-type: none"> Maximum single dormant season application rate is 16.0 lbs/A (8.0 lbs metallic copper equivalent). Maximum single bloom and 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). 			

POTATOES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Early & Late Blight	1.0 – 5.0 (0.5 – 2.5 lbs of metallic copper equivalent)	5	Apply 1.0 – 1.5 lbs 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 lbs/A where disease is more severe. Under conditions of severe disease, control with Ultim Fungicide MERGENCE —will be improved by tank mixing with other compatible fungi-cides registered for use on potatoes. Read and follow all label instructions of tank mix partners.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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). 			

[(continued)]

STRAWBERRIES			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Downy Mildew Leaf Spot Leaf Blight	2.0 – 3.0 (1 – 1.5 lbs of metallic copper 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 listed rate when conditions favor disease. NOTE: Discontinue applications if signs of phytotoxicity appear.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 3.0 lbs/A (1.5 lbs metallic copper equivalent). • Maximum annual application rate is 12.0 lbs/A (6.0 lbs metallic copper equivalent). 			

SUGAR BEETS & TABLE BEETS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Cercospora Leaf Spot	2.0 – 2.5 (1 – 1.25 lbs of metallic copper equivalent)	10	Begin applications when conditions first favor disease development and repeat at 10- to 14-day intervals as needed. Use the higher listed rate when disease is severe.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 2.5 lbs/A (1.25 lbs metallic copper equivalent). • Maximum annual application rate is 15.0 lbs/A (7.5 lbs metallic copper equivalent). 			

TOMATOES (Processing Market)			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
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 copper equivalent)	3	When disease threatens, apply at 3- to 10-day intervals. Use the lower interval when disease is severe.
RESTRICTIONS:			
<ul style="list-style-type: none"> • 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/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
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 copper equivalent)	3	When disease threatens, apply at 3- to 10-day intervals. Use the lower interval when disease is severe.
RESTRICTIONS:			
<ul style="list-style-type: none"> • Maximum single application rate is 3.2 lbs/A (1.6 lbs metallic copper equivalent). • Maximum annual application rate is 16 lbs/A (8 lbs metallic copper equivalent). 			

[(continued)]

WALNUTS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Walnut Blight	4.0 – 8.0 (2 - 4 lbs of metallic copper 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 rain- fall 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 <i>Xanthomonas</i> bacteria are present.
RESTRICTIONS:			
<ul style="list-style-type: none"> Maximum single application rate is 8.0 lbs/A (4.0 lbs metallic copper equivalent). Maximum annual application rate is 50.4 lbs/A (25.2 lbs metallic copper equivalent). 			

WATERCRESS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Cercospora Leaf Spot	1.0 (0.5 lbs of metallic copper equivalent)	7	Begin application when plants are first established in the field, repeating at 7- to 14-day intervals depending on disease severity and environmental conditions. Do not exceed 4 applications per crop. Apply using ground spray equipment at no less than 50 gallons of spray solution per acre. For applications made to watercress, production fields must be drained of water at least 24 hours prior to each application and water must not be reapplied to the field for a minimum of 24 hours following each application. Copper must not be applied to watercress during the aquatic production phase.
RESTRICTIONS:			
<ul style="list-style-type: none"> Maximum single application rate is 1.0 lb/A (0.5 lbs metallic copper equivalent). Maximum annual application rate is 4.0 lbs/A (2.0 lbs metallic copper equivalent). 			

WHEAT, BARLEY & OATS			
DISEASE	APPLICATION RATE (lbs/A)	MINIMUM DAYS RETREATMENT INTERVAL	APPLICATION INSTRUCTIONS
Septoria Leaf Blotch Helminthosporium Spot Blotch	1.0 (0.5 lbs of metallic copper equivalent)	10	Make first application at early heading and follow with second application 10 days later.
RESTRICTIONS:			
<ul style="list-style-type: none"> 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 lb metallic copper equivalent), including the copper applied through seed treatment use, if applicable. 			

FROST INJURY PROTECTION

Bacterial ice nucleation inhibitor – Application of [Ultim Fungicide MERGENCE](#) made to all crops listed on this label at rates and stages of growth indicated on this label at least 24 hours and not more than 72 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola*, and *Pseudomonas fluorescens*) 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.

ORNAMENTALS

(Not For Use in California Unless Accompanied by a Supplemental Label)

Notice to User: Plant sensitivities to [Ultim Fungicide MERGENCE](#) 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 [Ultim Fungicide MERGENCE](#). Neither the manufacturer nor seller has determined whether or not [Ultim Fungicide MERGENCE](#) can be safely used on ornamental or nursery plants not listed on this label. The user should determine if [Ultim Fungicide MERGENCE](#) can be used safely prior to commercial use. In a small area, apply the labeled 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 [Ultim Fungicide MERGENCE](#) 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 1.0 – 2.0 lbs of [Ultim Fungicide MERGENCE](#) (0.5-1 pounds of metallic copper) per acre as a thorough coverage spray using 0.5 lbs [Ultim Fungicide MERGENCE](#) per 100 gallons of water. Begin applications 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.

[Ultim Fungicide MERGENCE](#) may be used as a maintenance spray alone or in combination with other fungicides such as the dithiocarbamates.

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 lbs metallic copper equivalent). The above restrictions apply to all ornamentals except for Easter lilies. For Easter lilies:
 - Restrictions (Easter Lily): Do not apply any additional copper pesticide to this land for 36 months.
- 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).

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 of product (1-2.5 pounds of metallic copper) per 100 gallons. lbs/Albs/A.

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 containers.

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 HANDLING: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. For solid dilutables in containers small enough to shake (5 gallons or 50 pounds or less): "Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times." Offer for recycling, if available, or dispose of in trash or in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For any dilutable pesticide in containers too large to shake (larger than 5 gallons or 50 pounds): "Triple Rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times."

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WARRANTY

NOTICE: 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. To the extent consistent with applicable law, the buyer assumes the risk of any usage contrary to label instructions or not reasonably foreseeable to seller. SELLER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE PRODUCTS. TO THE MAXIMUM EXTENT PERMITTED BY LAW, SELLER SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT AND FURTHER DISCLAIMS ANY IMPLIED WARRANTIES ARISING OUT OF THE COURSE OF PERFORMANCE, COURSE OF DEALING, OR USAGE OF TRADE.

[INTERNAL LABEL CODE]

{OPTIONAL LOGO/GRAPHICS. Note: may appear on any part of label.}



{ SECURELY ATTACHED PORTION OF THE LABEL }

COPPER GROUP M1 FUNGICIDE

Ultim Fungicide Mergence

{Alternate Brand Names} [Ultim-ST] [ProBio
Ultim Fungicide] [ProBio Ultim-ST]

**NET
WEIGHT:
[-] Lbs [.]**

Agricultural Fungicide/Bactericide†

† non-public health bacteria

COPPER GROUP M4 FUNGICIDE

ACTIVE INGREDIENT:

Copper Hydroxide* 76.8%

OTHER INGREDIENTS 23.2%

TOTAL 100.0%

*(Metallic copper equivalent 50.0%) CAS No. 20427-59-2

EPA Reg. No. 92690-1

EPA Est. No.

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 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.
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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
For MEDICAL Emergencies Call 24 Hou.rs A Day 1-(800) 424-9300 NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage.	

{Note to Reviewer: First aid box may appear in paragraph form.}

PRECAUTIONARY STATEMENTS - HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Do not breathe dust. Harmful if swallowed. Harmful if absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear a NIOSH-approved particulate filter with any R or P filter, OR a NIOSH-approved elastomeric particulate respirator with any R or P filter, OR a NIOSH-approved powered air-purifying respirator with an HE filter. Remove and wash contaminated clothing before reuse. **PERSONAL PROTECTIVE EQUIPMENT - 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 (such as are barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyethylene polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils). 3. Shoes plus socks. 4. Protective eyewear, goggles or face shield. 5. A minimum of a NIOSH -approved particulate filtering facepiece respirator with any R or P filter, OR a NIOSH-approved elastomeric particulate respirator with any R or P filter, OR a NIOSH-approved powered air-purifying respirator with an HE filter. 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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

STORAGE AND DISPOSAL

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**FOR CHEMICAL SPILL,
LEAK, FIRE, OR EXPOSURE,
CALL CHEMTREC (800) 424-
9300**

Manufactured for:
**Germins Seed
Technology**
8333 Swanston Lane,
Gilroy, California 95020

See inside booklet for
additional PRECAUTIONARY
STATEMENTS, DIRECTIONS
FOR USE and STORAGE
AND DISPOSAL instructions.

INTERNAL LABEL CODE

[LOT #: _____]

[PRODUCT OF United States]