



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

April 18, 2024

Timothy Joseph  
Regulatory Agent  
Fabrica de Sulfato el Aguila, S.A. de C.V.  
c/o Landis International, Inc.  
P.O. Box 5126  
Valdosta, GA, 31603-5126

Subject: Label Notification: Footnote corrections  
Product Name: Quimag Quimicos Aguila Copper Sul  
EPA Registration Number: 73385-3  
Application Date: January 29, 2024  
Case Number: 497789

Dear Timothy Joseph:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

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

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA 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) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should 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.

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

If you have any questions, please contact Kristy Crews at [crews.kristy@epa.gov](mailto:crews.kristy@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Kristy Crews".

Kristy Crews, Ph.D., Product Manager 22  
Fungicide Branch, Registration Division (7505T)  
Office of Pesticide Programs, USEPA

Enclosure- Stamped Label

<b>COPPER</b>	<b>GROUP</b>	<b>M1</b>	<b>FUNGICIDE</b>
<b>COPPER</b>	<b>GROUP</b>	<b>NON-CLASSIFIED</b>	<b>HERBICIDE</b>

 For Organic Production

# Quimag Quimicos Aguila

## Copper Sulfate Crystal – Crop

**Active Ingredient:**

Copper Sulfate Pentahydrate*† .....	99.00%
Other Ingredients .....	1.00%
<b>Total:</b>	<b>100.00%</b>

\* Metallic copper equivalent 25.2% †CAS No. 7758-99-8

- Algae and Tadpole shrimp control in rice fields
- Fungus control in various crops as Bordeaux mixture
- Vine kill in potatoes

**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.)

*See back panel for additional precautionary statements*

FIRST AID	
<b>If In Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on Skin or Clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If Inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
<p style="text-align: center;"><b>Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Monday through Friday, 8:00 AM to 12:00 PM Pacific Time (NPIC web site: <a href="http://www.npic.orst.edu">www.npic.orst.edu</a>). For emergencies, call the poison control center 1-800-222-1222, 24 hours a day, 7 days a week.</b></p>	
<p style="text-align: center;"><b>Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Product causes eye irritation.</b></p>	
<p><i>See side/back panels for additional precautionary statements</i></p>	

EPA Reg No.  
73385-3

Net Contents: 50 lbs.  
(22.68 kg)

EPA Establishment No.  
073385-MEX-001

**Manufactured By:**

**FABRICA DE SULFATO EL AGUILA, S.A. DE C.V.**  
 Carr. Guadalajara-Chapala Km. 17.5 N° 8100  
 Tlajomulco de ZuZiga, Jalisco C.P. 45640 Mexico



**NOTIFICATION**

73385-3

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:

04/18/2024

**PRECAUTIONARY STATEMENTS**  
**HAZARD TO HUMANS AND DOMESTIC ANIMALS**  
**DANGER**

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Do not get in eyes, or on clothing.

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 4.0 ppm copper sulfate (1.0 ppm metallic copper) in these waters.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of: barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride  $\geq 14$  mils, or viton  $\geq 14$  mils.
- Shoes plus socks
- Goggles or face shield

Some materials that are chemical resistant to this product are: polyethylene, polyvinyl chloride, barrier-laminate, and butyl, nitrile, neoprene, and natural rubber. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

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

**Engineering Controls**

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

**USER SAFETY RECOMMENDATIONS**

Users must: wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

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

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

**ENDANGERED SPECIES RESTRICTIONS:** It is a violation of Federal Law to use any pesticide in a manner that results in the death of an endangered species or adverse modification of their habitat. The use of this product may pose a hazard to certain Federally designated endangered species known to occur in specific areas of the following counties and their respective states: Lawrence, Wayne, Hancock, Claiborne, Hawkins, Sullivan (TN); Lauderdale, Limestone, Madison (AL); Grayson, Smyth, Scott, Washington, Lee (VA). To protect listed species in California, contact your County Agricultural Commissioner or refer to the Department of Pesticide Regulation's PRESCRIBE Internet Database: <http://www.cdpr.ca.gov/docs/endspec/prescint.htm>

## 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, other persons, adults, children, or pets either directly or through drift. Only protected handlers may be in the area during application. For requirements specific to your State or Tribe, consult the State or Tribal 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, greenhouses and handlers of agricultural insecticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours for agricultural uses.**

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

**The REI can be reduced to 24 hours for greenhouse uses if 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 for eye flush station that is located with the decontamination supplies, and
  - How to operate the eye flush container or eye flush station.

### SPRAY DRIFT MANAGEMENT

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

#### **Droplet Size**

Apply only as a medium or coarser spray (ASABE S572.1)

#### **Wind Speed**

Do not apply when wind speed exceeds 15 mph at the application site. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

#### **Temperature Inversions**

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

#### **Other State and Local Requirements**

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

#### **Equipment**

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

#### **For Aerial Applications:**

- Do not release spray at a height greater than 10 ft. above the vegetative canopy or water, 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.

#### **For Ground Boom Application:**

- 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.

### **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 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 – Aircraft**

Higher release heights increase the potential for spray drift. When applying aurally 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**

Shielded 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.

## **PRODUCT INFORMATION**

Copper Sulfate Crystal – Crop effectively controls many species of both filamentous (mat forming green) and planktonic (single cell blue-green algae in rice fields) algae. Copper Sulfate Crystal-Crop is only allowed for algacidal use on rice crops.

Use Copper Sulfate Crystal – Crop as noted below. When using Copper Sulfate Crystal – Crop to control algae, there are many factors to consider: water hardness, temperature of the water, kind and amount of vegetation to be controlled, and the amount of water flow.

Algae can be controlled more easily and effectively if treatment with Copper Sulfate Crystal – Crop is made soon after plant growth has started. Small amounts of copper sulfate can effectively control algae in water. However, if treatment is delayed until a large amount of algae is present, larger quantities of copper sulfate may be required. Control of algae in water systems is not always permanent. Usually algae are more difficult to control with copper sulfate when water temperatures are low. The dose rates recommended for copper sulfate are required in hard water. If possible, hold treated water dormant for approximately three days after treatment or until the plants have begun to die. It is usually best to treat algae on a sunny day when the heavy mats of filamentous algae are most likely to be floating on the surface where they can be sprayed directly. If there is some doubt about the concentration to apply, it is generally best to start with a lower concentration and to increase this concentration until the algae are killed.

### **RESTRICTIONS**

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

### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Quimag Quimicos Aguila Copper Sulfate Crystal contains a Group M01 fungicide. Any fungal population may contain individuals naturally resistant to Quimag Quimicos Aguila Copper Sulfate Crystal – Crop and other Group M01 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Quimag Quimicos Aguila Copper Sulfate Crystal or other Group M01 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides 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 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 developments, disease thresholds, as well as cultural, biological and other chemical control practices.

- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal 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 your pesticide distributor or university extension specialist to report resistance.

Water bodies or management units should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Water bodies or management units should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Quimag Quimicos Aguila Copper Sulfate Crystal retailer or representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further reproduction.

Implement the Early Detection, Rapid Response practice and Maintenance Control by using the following practices where possible:

- Identify weeds present in a management unit through scouting or history of the water body and understand the biology of target species.
- Applications should target weeds when populations are small and there is low biomass, early in the season to maximize efficacy.
- Applications should be made so that the herbicide contacts the weed. Use the appropriate application method for the use site/weed/chemical combination.
- Weed escapes should not be allowed to go to seed or produce asexual vegetative propagules.
- Use a diversified approach toward weed management. Whenever possible, incorporate multiple weed-control practices such as mechanical control, biological management practices, and rotation of MOAs.
- Time applications to have the highest probability for control and minimize need for follow-up control measures. Apply during conditions that minimize herbicide degradation (light/temperature/microbes) and/or dissipation (water exchange).

Contact your local sales representative, local water management agency, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.

It is the pesticide user's responsibility to ensure that all products are 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.

#### **COMPATIBILITY WITH APPLICATION EQUIPMENT**

When preparing a copper sulfate solution in water, it is best that the mixing container be made of glass or plastic or if a metal container is used, that it either be painted, enameled or copper-lined. The use of a galvanized container causes a chemical reaction to take place by which copper displaces the galvanized coating of the container.

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



It must be determined if proper application equipment is available and if waste associated with its use can be properly handled. Agricultural chemicals are often reactive with the materials used in the construction of application equipment, such as aluminum, rubber and synthetic materials. This factor should be taken into consideration when selecting proper application equipment. It is necessary that all application equipment be thoroughly flushed with clean water after each day's use.

### **CALCULATIONS FOR THE AMOUNT OF WATER IMPOUNDED AND FOR THE AMOUNT OF COPPER SULFATE CRYSTAL – CROP TO BE USED IN RICE FIELDS**

#### **Calculate water volume as follows:**

1. Obtain surface area by measuring regular shaped ponds or mapping of irregular ponds or by reference to previously recorded engineering data or maps.
2. Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by reference to previously obtained data.
3. Multiply surface area in feet by average depth in feet to obtain cubic feet of water volume.
4. Multiply surface area in acres by average depth in feet to obtain total acre-feet of water volume.

#### **Calculate weight of water to be treated as follows:**

1. Multiply the volume in cubic feet by 62.44 to obtain total pounds of water, or
2. Multiply the volume in acre feet by 2,720,000 to obtain pounds of water

#### **Calculations of the amount of Copper Sulfate Crystal to be applied:**

To calculate the amount of Copper Sulfate Crystal that will be required to achieve the specified concentration of dissolved copper, multiply the weight of water by the desired concentration of dissolved copper and divide the result by 0.252, the concentration of copper in Copper Sulfate Crystal. For instance, the following calculates that amount of Copper Sulfate Crystal that will be required to cause a one part per million increase in the concentration of dissolved copper in one acre foot of water:

$$\frac{\frac{1 \text{ lb copper}}{1,000,000 \text{ lb water}} \times 1 \text{ acre foot water} \times \frac{2,720,000 \text{ lb water}}{1 \text{ acre foot water}}}{0.252 \text{ lb copper}} = 10.7 \text{ lb Copper Sulfate Crystal}$$

**RESTRICTION:** If treated water is to be used as potable water (after further treatment), the residual metallic copper content must not exceed 1.0 ppm (4.0 ppm copper sulfate pentahydrate).

**Pre-Application Dose Determination:** For algae and aquatic plant treatments, applicators should conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

### **CONTROL OF ALGAE AND TADPOLE SHRIMP IN RICE FIELDS (DOMESTIC AND WILD)**

In aquatic rice fields for control of tadpole shrimp and algae, do not exceed one application per field during any 24-month period. This statement applies only to crops intended for organic certification, and otherwise shall not conflict with any conventional label requirement.

**Algae:** After the rice field has been flooded to a depth of 3 inches apply 2.7 pounds of Copper Sulfate Crystal per acre. Adjust the rate according to the average water depth. Do not exceed a concentration of 1.0 ppm copper in the water. The maximum annual application rate must be no greater than 5.48 lbs of metallic copper (21.92 lbs product) per acre-foot per year for control of algae in water-seeded rice.

**Tadpole Shrimp:** After the rice field has been flooded to a depth of 3 inches apply 4 to 6.5 pounds of Copper Sulfate Crystal per acre at the first sign of infestation by tadpole shrimp. Adjust the rate according to the average water depth.

**QUIMAG QUIMICOS AGUILA COPPER SULFATE CRYSTAL – CROP**

-8-

Do not exceed a concentration of 2.5 ppm copper in the water. The maximum annual application rate must be no greater than 13.7 lbs metallic copper (54.8 lbs product) per acre-foot per year.

**CROP USE DIRECTIONS**

**Bordeaux Mixtures**

**How to Understand Bordeaux Formulations** - If the Bordeaux mixture instructions reads 10-10-100, the first figure means the number of pounds of Copper Sulfate Crystal – Crop. The second figure means the pounds of hydrated spray lime, and the third figure, the gallons of water to be used. Use as a full coverage spray to runoff.

**How to Prepare a Bordeaux Mixture** - To prepare a Bordeaux mixture, fill a tank with water, one quarter full. Then with agitator runnings, mix in Copper Sulfate Crystal – Crop through a copper, bronze, stainless steel or plastic screen. Add water so the tank is three quarters full. Mix in the hydrated spray lime through the screen and finish filling the tank with water.

**CROP USE DIRECTIONS**

Crop: Pest	Season	Copper Mixture*	Max Single App Rate/Acre <sup>2</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Max Annual Rate/Acre <sup>3</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Minimum Retreatment Interval
Almonds, Apricots, Peaches, Nectarines: Shot Hole Fungus (Coryneum Blight)	Fall, Late Dormant	10/10/100 Bordeaux Mixture	31.7/31.7/317 (8)	71/71/710 (18)	7 Days
	Bloom, Growing Season (Early Spring)	10/10/100 Bordeaux Mixture	6.0/6.0/60 (1.5)	71/71/710 (18)	5 Days
<b>Use Directions:</b> Apply as a dormant spray in late fall or early spring.					
Almonds, Apricots, Cherries, Peaches, Nectarines, Plums, Prunes: Brown Rot Blossom Blight	Bloom, Growing Season (Spring)	10/10/100 Bordeaux Mixture	6.0/6.0/60 (1.5)	71/71/710 (18)	5 Days
	<b>Use Directions:</b> Apply when the buds begin to swell.				
Peach: Leaf Curl	Late Fall, early Spring	10/10/100 Bordeaux Mixture	31.7/31.7/317 (8)	71/71/710 (18)	7 Days
	<b>Use Directions:</b> Apply at leaf fall or as a dormant spray before buds begin to swell. If above sprays for Coryneum blight are made, peach curl will also be controlled.				
Blueberries: Bacterial Canker	Fall	8/8/100 Bordeaux Mixture	8.3/8.3/104 (2.1)	33.3/33.3/417 (8.4)	7 Days
<b>Use Directions:</b> Apply in the fall before heavy rains begin and again 4 weeks later. Not for use in California.					
Caneberries: Leaf and Cane Spot and Pseudomonas blight	Fall	8/8/100 Bordeaux Mixture	7.9/7.9/99 (2.0)	39.7/39.7/496 (10)	7 Days
	<b>Use Directions:</b> Apply in the fall before heavy rains begin and again 4 weeks later.				

QUIMAG QUIMICOS AGUILA COPPER SULFATE CRYSTAL – CROP

Crop: Pest	Season	Copper Mixture*	Max Single App Rate/Acre <sup>2</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Max Annual Rate/Acre <sup>3</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Minimum Retreatment Interval
Bulbs (Lilies, Easter): Botrytis Blight		10/10/100 Bordeaux Mixture	10/10/100 (2.5)	298/298/2980 (75)	7 Days
					<b>Use Directions:</b> Apply as a foliar spray to one acre. Apply for thorough coverage beginning at the first sign of disease and repeat as needed to control disease at 7 to 10 day intervals. Use the shorter intervals during periods of frequent rains or when severe disease conditions persist. Avoid spray just before flower cutting season if residues are a problem. Do not apply any additional copper pesticide to this land for 36 months.
Bulbs (Tulip, Gladiolus): Botrytis Blight		10/10/100 Bordeaux Mixture	8.0/8.0/80 (2.0)	80/80/800 (20)	7 Days
					<b>Use Directions:</b> Apply as a foliar spray to one acre. Apply for thorough coverage beginning at the first sign of disease and repeat as needed to control disease at 7 to 10 day intervals. Use the shorter intervals during periods of frequent rains or when severe disease conditions persist. Avoid spray just before flower cutting season if residues are a problem. Do not apply any additional copper pesticide to this land for 36 months.
Cherries (Sweet): Dead Bud and Bacterial Canker ( <i>Pseudomonas syringae</i> )	Fall, Late Dormant	12/12/100 Bordeaux Mixture	31.7/31.7/264 (8.0)	71/71/592	7 Days
					<b>Use Directions:</b> Apply at leaf fall and again in late winter before buds began to swell. In wet, cool Northwest U.S. winters, a third spray may be needed between above sprays.
Cherries (Sour): Leaf Spot	Fall, Late Dormant	10/10/100 Bordeaux Mixture	31.7/31.7/317 (8.0)	71/71/710 (18)	7 Days
	Bloom, Growing Season	10/10/100 Bordeaux Mixture	6.0/6.0/60 (2.5)	71/71/710 (18)	5 Days
					<b>Use Directions:</b> Apply as a full coverage spray after petal fall or as recommended by State Extension Service
Grapes: Downy Mildew (Not for use in California)		2/6/100 Bordeaux Mixture	11.9/35.7/595 (3.0)	79/237/3950 (20)	3 Days
					<b>Use Directions:</b> Spray beginning when downy mildew is detected. This mixture and its use will exhibit some phytotoxicity on most varieties.
Olives: Olive Leaf Spot (Peacock Spot) and Olive Knot		10/10/100 Bordeaux Mixture <sup>43</sup>	23.8/23.8/238 (6.0)	71.4/71.4/714 (18)	30 Days
					<b>Use Directions:</b> Apply in autumn before heavy winter rains to prevent peacock spot. To help protect against olive knot, apply before heavy rains and again in the spring. Injury may occur in areas of less than 10 inches of rainfall.
Walnuts: Walnut Blight		15/10/100 Bordeaux Mixture plus ½ Gallon Summer Oil Emulsion <sup>8</sup>	15.9/10.6/106 (4.0)	127/84.7/847 (32)	7 Days
					<b>Use Directions:</b> Make application in early pre-bloom before catkin blooms are showing (10-20% pistillate) before or after rain. Use only if Bordeaux mixture has been shown to be non-phytotoxic in your area. <b>PRECAUTION:</b> Addition of summer oil emulsion to pre-bloom and early bloom sprays may result in plant injury.

QUIMAG QUIMICOS AGUILA COPPER SULFATE CRYSTAL – CROP

Crop: Pest	Season	Copper Mixture*	Max Single App Rate/Acre <sup>2</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Max Annual Rate/Acre <sup>3</sup> : lbs Product/lbs lime (if Bordeaux)/gal water (lbs Cu <sup>2+</sup> )	Minimum Retreatment Interval
Citrus: Bacterial Blast		10/10/100 Bordeaux Mixture <sup>5,74,6</sup>	12.5/12.5/125 (3.15)	50/50/500 (12.6)	7 Days
	<b>Use Directions:</b> Apply a spray in late October to early November or before fall rains begin. Make a complete coverage spray using 10 to 25 gallons per mature tree.				
Lemons, Oranges, Grapefruits: Phytophthora Brown Rot		3/4.5/100 Bordeaux Mixture <sup>5,74,6</sup>	12.5/18.8/420 (3.15)	50/75/1700 (12.6)	7 Days
	<b>Use Directions:</b> Spray 6 gallons on skirt of tree 3 to 4 feet high, and 2 to 4 gallons on trunk and ground under the tree. If <i>Phytophthora hibernalis</i> is present, use 10 to 2.5 gallons to completely cover each tree. Apply in November or December just before or after first rain. In severe brown rot season apply second application in January or February.				
Lemons, Oranges, Grapefruits: Phytophthora Brown Rot		3/2/6/100 Bordeaux Mixture <sup>5,6,74,5,6</sup>	18.75/12.5/37.5/625 <sup>92</sup> (3.15)	75/50/150/2500 <sup>98</sup> (12.6)	7 Days
	<b>Use Directions:</b> Spray 6 gallons on skirt of tree 3 to 4 feet high, and 2 to 4 gallons on trunk and ground under the tree. If <i>Phytophthora hibernalis</i> is present, use 10 to 2.5 gallons to completely cover each tree. Apply in November or December just before or after first rain. In severe brown rot season apply second application in January or February.				
Lemons, Oranges, Grapefruits: Septoria Fruit and Leaf Spot (Central California), Brown Rot, Zinc and Copper Deficiencies		3/2/6/100 Bordeaux Mixture <sup>6,75,6</sup>	18.75/12.5/ 37.5/625 <sup>92</sup> (3.15)	75/50/ 150/2500 <sup>98</sup> (12.6)	7 Days
	<b>Use Directions:</b> Use 10 to 25 gallons to cover completely each tree. Apply in October, November or December just before or after first rain.				

\*Bordeaux Mixtures written as pounds of product/pounds of hydrated spray lime/gallons of water

<sup>1</sup>Maximum Copper Sulfate (lbs/Acre)/ pounds Hydrated Lime/Maximum Application Volume (Gallons) except where otherwise indicated

<sup>2</sup>Maximum Copper Sulfate (lbs/Acre)/ pounds Hydrated Lime/Maximum Annual Volume (Gallons) except where otherwise indicated.

<sup>3</sup>~~Maximum pounds of Copper Sulfate which may be applied in a 12-month period. Do not apply any additional copper pesticide to this land for 36 months.~~

<sup>4</sup>In areas of less than 10 inches of annual rainfall, use a 5-5-100 Bordeaux mixture.

<sup>5</sup>Apply where there is no history of crop injury.

<sup>6</sup>Zinc Sulfate- Copper Sulfate -Hydrated Lime-Gallons of water.

<sup>7</sup>Adding foliar nutritionals to spray mixtures containing Copper Sulfate or other products and applying to citrus during the post bloom period when young fruit is present may result in spray burn.

<sup>8</sup>~~Restriction: This product can be mixed with Diquat for use on potatoes in accordance with the most restrictive of label limitations and precautions.~~

<sup>9</sup>~~No label dosage rates should be exceeded.~~

<sup>92</sup>Zinc Sulfate/Maximum Copper Sulfate (lbs/Acre)/ Hydrated Lime/Maximum Application Volume (Gallons)

<sup>98</sup>Zinc Sulfate/Maximum Copper Sulfate (lbs/Acre)/ Hydrated Lime/Maximum Annual Volume (Gallons)

**Non-Bordeaux Applications**

<b>Crop: Pest</b>	<b>Season</b>	<b>Copper Mixture</b>	<b>Max Single App Rate/Acre<sup>1</sup>: lbs Product/gal water (lbs Cu<sup>2+</sup>)</b>	<b>Max Annual Rate/Acre<sup>2</sup>: lbs Product/gal water (lbs Cu<sup>2+</sup>)</b>	<b>Minimum Retreatment Interval</b>
Grapes, (Dormant): Powdery Mildew (Not for use in California)		4-8 lbs of Copper Sulfate 100 Gallons of Water	11.9/297 (3.0)	79/988-1975 (20)	3 Days
Apples: Fireblight	Fall, Late Dormant	5 lbs of Copper Sulfate per 100 Gallons of Water	24/ 480 (6.0)	24/480 (6.0)	N/A (Only 1 application per season permitted)
Potato: Vine Kill (Ground Equipment)		10 lbs/ Acre in 10 to 100 Gallons of Water <sup>3</sup>	10/10-100 (2.5)	99.2/99-990 (2.5)	5 Days
Potato: Vine Kill (Aerial Equipment)		10 lbs/ Acre in 5 to 10 Gallons of Water <sup>3</sup>	10/5-10 (2.5)	99.2/49.5-990 (2.5)	5 Days

<sup>1</sup>Maximum Copper Sulfate (lbs/Acre)/ Maximum Application Volume (Gallons)

<sup>2</sup>Maximum Copper Sulfate (lbs/Acre)/ Maximum Annual Volume (Gallons)

<sup>3</sup>Restriction: This product can be mixed with Diquat for use on potatoes in accordance with the most restrictive of label limitations and precautions.

No label dosage rates should be exceeded.

**Use Directions:** Apply in spring before bud-swell and before green tissue is present. Apply in a high volume spray of 300 gallons water per acre. Direct spray to thoroughly wet the dormant vine, especially the bark of the trunk, head, or cordons.

**Use Directions:** Spray uniformly to the point of runoff. Apply in dormant only before silver tip stage. After silver tip, severe burn will occur on any exposed green tissue. Do not mix lime to make a Bordeaux spray for this treatment.

**Use Directions:** To enhance vine-kill and suppress late blight, apply with Diquat at vine-kill to enhance vine desiccation and suppress late blight. Additional applications can be made with Diquat if needed within 7 days of harvest. May be applied alone until harvest to suppress late blight.

**Use Directions:** To enhance vine-kill and suppress late blight, apply with Diquat at vine-kill to enhance vine desiccation and suppress late blight. Additional applications can be made with Diquat if needed within 7 days of harvest. May be applied alone until harvest to suppress late blight.

## CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s). Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Posting of areas to be chemigated is required when 1) 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 2) when the 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. 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. 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”. All words shall consist of letters at least 2 ½ inches tall, and all letters and the symbol shall be a color that sharply contrasts with their immediate background. This sign is in addition to any sign posted to comply with the Worker Protection Standard.

### 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 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. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. See Treatment Instructions, below.

### SPRINKLER CHEMIGATION:

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 filtered with a system interlock. The system must contain a functional check valve, vacuum relief valve, and low pressure drain approximately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. This pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the infection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide



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

**TREATMENT INSTRUCTIONS:**

Do not apply when wind speed favors drift beyond the area intended for treatment. When mixing, fill nurse tank half full with water. Add Copper Sulfate Crystal – Crop slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures. Copper Sulfate Crystal – Crop should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal. Open burning and dumping is prohibited. Do not reuse empty container.

**Pesticide Storage:** Store product in a secure dry place. Keep product dry as product is water soluble. When opening, closing or handling open packages, or pouring product, wear goggles to prevent dusting into eyes. Spilled product should be swept up, used if clean, or disposed of according to the procedures below. Store product in original container. Store pesticide separately to prevent cross-contamination of other pesticides, fertilizers, food and feed.

**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: (Paper Bag)**

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed in accordance with local, state and federal regulations. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Container Handling: (Plastic Pail)**

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke. If rinsate cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations.

**Container Handling: [Household Use]**

If empty: Nonrefillable container. Do not reuse or refill this container. Place in trash.

If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**WARRANTY STATEMENT**

FABRICA DE SULFATO EL AGUILA warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of FABRICA DE SULFATO EL AGUILA. To the extent permitted by applicable law, FABRICA DE SULFATO EL AGUILA shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. To the extent permitted by applicable law, all such risks shall be assumed by the Buyer. To the extent permitted by applicable law exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product or at FABRICA DE SULFATO EL AGUILA's election, the replacement of this product. FABRICA DE SULFATO EL AGUILA MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.