

# For Agricultural Use

## **ACTIVE INGREDIENT:**

Basic Copper Sulfate *	<mark></mark>	71.1%
<b>OTHER INGREDIENTS:</b>		28.9%
TOTAL	<mark></mark>	00.0%

<sup>\*</sup> Metallic copper equivalent, 40%

# KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If in eyes	<ul> <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 treatment advice.</li> </ul>
If on skin or clothing	<ul> <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 treatment advice.</li> </ul>
If inhaled	Move person to fresh air.     If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.     Call a poison control center or doctor for further treatment advice.
Have the product going for treatme	et container or label with you when calling a poison control center or doctor or ent.

EPA Registration No. 70506-201

EPA Establishment No. 4581-FRA-002

**Net Contents: 30 lbs.** 



Sold by:

United Phosphorus, Inc.

630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 1-800-438-6071 • www.upi-usa.com

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Wear long sleeved shirt, long pants, socks and shoes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- · Shoes plus socks

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.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users Should:**

- 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. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not contaminate water by disposal of equipment washwaters.

#### **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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **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 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. This standard also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals (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 12 hours without 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

#### **EMERGENCY TELEPHONE NUMBERS:**

CHEMTREC: (800) 424-9300

MEDICAL: (866) 673-6671 Rocky Mountain Poison Control Center

#### STORAGE AND DISPOSAL

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

**STORAGE:** Store in the original container in a cool, dry place out of reach of children and animals. Store pesticides separately to prevent cross contamination of other pesticides, fertilizer, food and feed.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **GENERAL INSTRUCTIONS AND INFORMATION**

Cuprofix Ultra 40 Disperss may be applied as an aerial, ground dilute, or ground concentrate spray unless specifically directed otherwise in the specific crop use directions.

The per acre use rate of Cuprofix Ultra 40 Disperss is applicable for both dilute and concentrate spraying. Depending upon the equipment used and the specific crop, the spray volume applied per acre will differ. Refer to Recommended Minimum Spray Volume Table. Complete spray coverage is essential to assure optimum performance from Cuprofix Ultra 40 Disperss. When treating by aerial application, or with low volume application equipment, unless you have had specific previous experience, it is advisable to test for compatibility and tolerance to crop injury prior to full-scale commercial utilization.

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

Consult this Cuprofix Ultra 40 Disperss label for specific rates and timing of application by crop. Where application rates are provided in a range (3 to 6 pounds), the higher rates are recommended when rainfall is heavy and/or disease pressure high. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. In addition, use the higher rates for large mature tree crops.

When mixing, fill spray tank half full with water. Add Cuprofix Ultra 40 Disperss to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers (cleared for application to growing crops,) nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank.

**NOTE:** Cuprofix Ultra 40 Disperss should not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur.

**NOTE:** If tank-mixing Cuprofix Ultra 40 Disperss with a benzimidazole type fungicide, do a jar test to check for full compatibility. Do not allow the spray mixture to remain in the tank for an extended period of time.

**NOTE:** Do not tank mix Cuprofix Ultra 40 Disperss with Aliette<sup>®</sup> fungicide unless appropriate precautions have been taken to buffer the spray solution or severe phytotoxicity may result.

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

**NOTE:** Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by a state/local expert or the user has direct experience, tank mixing should not be undertaken.

**NOTE:** It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as agricultural chemicals are often reactive with soft metals such as aluminum and even some synthetic materials, such as plastics, rubbers, etc. Therefore it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.

Do not apply this product through any type of irrigation (chemigation) 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, traveler, big gun, plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type or irrigation system.

#### **RECOMMENDED USES**

**CITRUS:** Grapefruit, Kumquats, Lemons, Limes, Oranges, Tangelos and Tangerines **FIELD CROPS:** Alfalfa, Barley, Oats, Peanuts, Potatoes, Soybeans, Sugar Beets and Wheat

**SMALL FRUITS:** Blackberries, Blueberries, Cranberries, Currants, Gooseberries, Raspberries and Strawberries

**TREE CROPS:** Almonds, Apples, Apricots, Avocados, Bananas, Cacao, Cherries, Coffee, Filberts, Mangos, Nectarines, Olives, Peaches, Pecans, Pistachios, Plums, Prunes, Quinces and Walnuts

VEGETABLES: Beans, Beet Greens, Broccoli, Brussels Sprouts, Cabbage, Cantaloupes, Carrots, Cauliflower, Celeriac, Celery, Cucumbers, Eggplant, Greens (Collard, Mustard, and Turnip), Honeydew, Muskmelon, Onions, Peas, Peppers, Pumpkins, Spinach, Squash, Table Beets, Tomatoes, Watercress, and Watermelons VINES: Grapes, Hops, and Kiwi

**GREENHOUSE AND SHADEHOUSE CROPS:** While specific directions are presented for Citrus, Cucumbers, Eggplant, Peppers and Tomatoes, general use may occur for any crop on this label where physiology allows greenhouse or shadehouse culture.

MISCELLANEOUS: Atemoya, Carambola, Chives, Dill, Douglas Fir, Ginseng, Guava, Litchi, Live Oak, Macadamia, Mamey Sapote, Papayas, Parsley, Passion Fruit, Pecan, Sugar Apple, and Sycamore

#### Minimum Recommended Spray Volume (Gallons) Per Acre When Applying Cuprofix Ultra 40 Disperss

Use	Aerial	Ground (	gal/Acre)
	(gal/Acre)	Dilute	Concentrate
Vegetables	3	20	20
Field Crops	3	20	20
Small Fruits	5	150	50
Vines	5	150	50
Tree Crops	10	400	50
Citrus	10	800	100
			(Florida*)

<sup>\*</sup>When using pesticide application equipment such as Curtee® or other similar sprayers, which are capable of obtaining thorough coverage at low volumes, applications as low as 20 gpa of spray volume may be used.

#### **APPLICATION INSTRUCTIONS**

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

#### **CITRUS**

Cuprofix Ultra 40 Disperss may be mixed with foliar micronutrients to create "Shot Bag" mixes to meet the various nutritional requirements of citrus and provide disease protection as described on this label. Cuprofix Ultra 40 Disperss per acre rates in these mixes must not exceed the maximum recommended labeled rates for disease control.

**NOTE:** Adding foliar micronutrients or other products to spray mixture containing Cuprofix Ultra 40 Disperss and applying to citrus during the post-bloom period when young fruit is present may result in phytotoxicity.

DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Algal Spot Melanose Scab	2.5 - 8	Apply as pre-bloom and post-bloom sprays. Use higher rates when conditions favor disease development.
Greasy Spot Pink Pitting	1.25 - 5	Apply in summer on expanded new flush. Repeat on subsequent flushes where disease pressure is severe. Use higher rates when conditions favor disease development.
Alternaria Brown Spot (Suppression)	2 - 6.5	On susceptible varieties, apply when the first spring flush appears and each flush thereafter. Application to the fruit should start after two thirds of the petals have fallen and be repeated on a 21-day schedule.  NOTE: When using the lower rates, use shorter spray intervals (7 to 14 days).
Phytophthora Brown Rot Septoria Spot	2.5 - 6	Begin application in fall before or just after the first rain and continue as needed. Apply to entire tree for Septoria, or just the lower 4 to 5 feet of the tree for Brown Rot. Apply also to bare ground 1 foot beyond skirt. Use higher rates when conditions favor disease development.
Phytophthora Foot Rot	1	Mix with 1 gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs. Apply in May prior to summer rains and/or in the fall prior to wrapping trees for freeze protection. Treatment serves as protection for up to 1 year, but does not cure existing infections.  NOTE: Areas where microjet or low volume irrigation hit the tree trunk may require retreatment due to wash off.
Citrus Canker (Suppression Only)	8	Spray flushes 7 to 14 days after shoots begin to grow. Young fruit may require an additional application. Number and timing of applications will be dependent upon disease pressure. Under heavy pressure, each flush of new growth should be sprayed.

 ${\bf NOTE} :$  Do not use Cuprofix Ultra 40 Disperss on citrus seedlings grown in greenhouses or shadehouses.

## **CITRUS**

#### **Field Nursery Grown**

To control brown rot, citrus canker (suppression), greasy spot, melanose, pink pitting, and for scab, apply 3-6 pounds per acre at a rate of 200 gallons of spray mixture per acre. Apply Cuprofix Ultra 40 Disperss at 28-day intervals or as needed depending on disease severity.

#### FIELD CROPS

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Alfalfa	Cercospora Leaf Spot Leptosphaerulina Leaf Spot	1.25	Apply 10 to 14 days before each harvest or earlier if disease threatens.  NOTE: Spray injury may occur with sensitive varieties such as Lahontan.
Peanuts	Cercospora Leaf Spot	1-2	Begin spraying at 35 to 40 days after planting or when disease symptoms first appear and repeat at 10 to 14 day intervals as needed. Use higher rates and reduce spray intervals to 7 days when conditions favor disease development. Two to four pounds of Microthiol® Disperss® sulfur per acre may be added.
Potatoes	Early Blight Late Blight	0.75 - 3	Apply lower rates at 7 to 10 day intervals starting when plants are 6 inches high when disease pressure is light and up to 3 pounds per acre where disease pressure is more severe. Under conditions of severe disease, control with Cuprofix Ultra 40 Disperss will be improved by tank mixing with other compatible fungicides registered for use on potatoes such as Penncozeb® 75DF (mancozeb). Read and follow all label instructions of tank mix partners.
Soybeans*	Alternaria Leaf Spot (Alternaria spp.)	1.25	Apply when mechanical injury, insect damage or another disease has occurred.
	Bacterial Blight (Pseudomonas syringae) Bacterial Pustule (Xanthomonas campestris)	0.75 - 1.25	Begin applications from first node through third node development on the main stem with fully developed leaves beginning with the unifoliolate leaves (V1 – V3 growth stages) or when extended periods of wet weather are favorable for disease development. Continue on a 5 to 10-day schedule when conditions continue to favor disease development.
	Brown Spot (Septoria glycines)	0.75 - 1.75	Begin applications at full bloom to when pods are 3/16" in length (R2 – R3 growth stages) or when extended periods of wet weather are favorable for disease development. Continue on a 5 to 10-day schedule when conditions continue to favor disease development.
	Cercospora Leaf Blight (Cercospora kikuchii)	1.25 - 3	Begin applications when seed in a pod is 1/8" long through beginning pod maturity (R5 – R7 growth stages). Continue on a 5 to 10-day schedule when conditions are favorable for disease development.
	Downy Mildew (Peronospora manchurica)	1.25 - 3	Begin applications when conditions favor disease development (high humidity and cool temperatures). Continue on a 5 to 10-day schedule if weather conditions remain cool and wet.
	Frogeye Leaf Spot (Cercospora sojina)	1.25 - 3	Begin applications when wet conditions exist. Continue on a 5 to 10-day schedule when conditions are favorable for disease development.
	Pod & Stem Blight (Diaporthe phaseolorum and Phomopsis longicola)	1.25 - 3	Begin applications when seed in a pod is 1/8" long through beginning pod maturity (R5 – R7 growth stages) or when extended periods of wet weather are favorable for disease development. Continue on a 5 to 10-day schedule if conditions continue to favor disease development.
	Powdery Mildew (Microsphaera manshurica)	1 - 2	Begin applications when conditions favor disease development (cool humid nights and mild daytime temperatures). Continue on a 5 to 10-day schedule if weather conditions remain cool and wet.
Sugar Beets	Cercospora Leaf Spot	1.25 - 3	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals or as needed. Use the higher rate when disease is severe.
Wheat Oats Barley	Helminthosporium Blotch Helminthosporium Spot Septoria Leaf Blotch	1 - 1.25	Make first application at early heading and follow with second spray 10 days later. Use the higher rates when conditions favor disease development.

<sup>\*</sup> Not for this use in California

### SMALL FRUIT

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Blackberries (Aurora, Boysen, Cascade, Chehalem, Logan, Marion, Santiam.	Anthracnose Cane Spot Leaf Spot Pseudomonas Blight Purple Blotch Yellow Rust	2.5 - 3	Make fall application after harvest. Apply delayed dormant spray after pruning/training in the spring. Add 1 quart of crop oil per acre.
Thornless Evergreen)	Anthracnose Cane Spot Leaf Spot Purple Blotch Yellow Rust	1.25	Apply when leaf buds begin to open and repeat when flower buds show white.  NOTE: Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear.
Blueberries	Bacterial Canker	3 - 4	Make first application before fall rains and a second application 4 weeks later.
	Fruit Rot Phompsis Twig Blight	2 - 4	Dormant application: Begin applications when bloom buds begin to swell. Make additional applications at 10 to 14 day intervals or as needed before blooms open.
Cranberries	Fruit Rots	5	Make first application at mid bloom. One or two additional applications at 7 to 10 day intervals may be required.
	Rose Bloom	5	Apply three sprays on 10 to 14 day schedule as soon as symptoms are observed.
	Leaf Spots Lophodermium Twig Blight Red Leaf Spot Tip Blight (Monilinia)	5	Apply delayed dormant spray in the spring. Repeat at 10 to 14 day intervals or as needed through pre-bloom.
Currants Gooseberries	Anthracnose Leaf Spot	6.5	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.
Raspberries	Anthracnose Cane Spot Leaf Spot Pseudomonas Blight Purple Blotch Yellow Rust	2.5 - 3	Make fall application after harvest. Apply delayed dormant spray after training in the spring. Add quart of crop oil per acre.
	Anthracnose Cane Spot Leaf Spot Purple Blotch Yellow Rust	1.25	Apply when leaf buds begin to open and repeat when flower buds show white.  NOTE: Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist environmental conditions. Discontinue applications if signs of crop injury appear.
Strawberries	Angular Leaf Spot (Xanthonomas) Leaf Blight Leaf Scorch Leaf Spot	1.25 - 2.5	Begin application when plants are established and continue on a weekly schedule throughout the season. Apply in at least 20 gallons of water. Use the higher rates when conditions favor disease.  NOTE: Discontinue applications if signs of crop injury appear.

#### TREE CROPS

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CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS	
Almonds Apricots Cherries Plums Prunes	Bacterial Blast (Pseudomonas) Bacterial Canker Shot-Hole	5 - 8	Make first application before fall rains and a second at late dormant. Use higher rates when rainfall is heavy and disease pressure is high. One pint of superior-type oil per 100 gallons of water may be added. For cherries, where disease is severe, an additional application at leaf fall may be required.	
	Blossom Brown Rot Shot-Hole	4 - 5 (Almond) 5 - 6.5 (All Others)	Early bloom (popcorn) application: Apply before full bloom. Use higher rates when rainfall is heavy and disease pressure is high. <b>NOTE</b> : To avoid plant injury, do not use higher rates after full bloom.	

<sup>\*</sup> Not for this use in California

# TREE CROPS continued

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Cherries (tart varieties only)	Cherry Leaf Spot*	4-5	Begin applications at the first cover spray (7 to 10 days after shuck split). Repeat as needed at 10-day intervals depending on the use of other cherry leaf spot fungicides in the disease control program.  Use the high rate under severe disease pressure. Use of copper fungicides, including Cuprofix Ultra 40 Disperss, may result in phytotoxicity including yellow leaf blotches, bronzing of lower leaf surfaces, and premature leaf drop. Phytotoxicity will be more likely under warm dry conditions. The addition of hydrated lime at a rate of 6 to 9 pounds per acre will help reduce phytotoxicity.
Plums	Black Knot *	3 - 5	Make an application at bud swell up to early bloom for early season disease suppression. Apply before full bloom. Use the higher rates when rainfall is heavy and disease pressure is high.  NOTE: To avoid plant injury, do not use after full bloom.
Almonds	Bacterial Blast	0.75 - 1.5	For bacterial blast control in sprinkler irrigated orchards or where disease is severe, apply 0.75 to 1.5 pounds per acre post-bloom, at 2-week intervals or just before irrigation.  NOTE: Injury may occur from post-bloom sprays on almonds, especially on Neplus varieties.
Apples	Fire Blight	5 - 7.5	Make applications up to green tip. Apply as a full-cover spray. <b>NOTE:</b> Crop injury may occur from late application; discontinue use at ½ inch green.
	Fire Blight	1.5 - 2	Recommended for processing apples only as fruit russeting and leaf spotting are likely to occur. Make one application during bloom.
	Black Pox Black Rot Brooks Spot Flyspeck Sooty Blotch Summer Scab White Rot	1.0 - 2.5	Recommended for processing apples only as fruit russeting and leaf spotting are likely to occur.  NOTE: Injury is more likely to occur on strains of Golden Delicious & Stayman.  Do not use more than 1.5 lb per acre per application on these varieties. Use of copper on weak or stressed trees can increase potential for leaf spotting/drop. Do not apply prior to 3rd cover and make 3 applications in rotation with other registered fungicides. Do not make more than 2 consecutive applications of Cuprofix Ultra 40 Disperss.
	Collar Rot Crown Rot	2.5	Mix in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early spring or in late fall after harvest.  NOTE: Do not use if soil pH is below 5.5 since copper toxicity may result.
	Anthracnose Blossom Blast European Canker Fire Blight Shoot Blast/ Blister Spot (Pseudomonas)	8 - 10	Apply after harvest before fall rains. Use higher rates under severe disease conditions.
Avocados	Anthracnose Blotch Scab	5 - 8	Apply when bloom buds begin to swell and continue application at monthly intervals for five to six applications. Use higher rates when conditions favor disease development.
Bananas	Sigatoka	1.25	Apply by air in 10 gallons of water combining 0.5 gallon of agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods.
	Black Pitting	2.5 - 3	Mix in 100 gallons of water directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.

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CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Cacao	Black Pod	1.25 - 5.5	Begin applications at the start of the rainy season and continue while infection period: persist. Apply 1.25 to 2.5 pounds at 14 to 21 day intervals in high rainfall areas. For drier areas, where two to four applications are recommended during critical infection periods and at long intervals, use 5.5 pounds per acre, according to disease incidence and planting density.
Coffee	Coffee Berry Disease	4 - 6	Apply first spray after flowering and before onset of rains and then at 21 to 28 day intervals until picking. Use higher rates when rainfall is heavy and disease pressure is high
	Bacterial Blight	4 - 6	Begin spray program applications before th onset of the rains and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during, and after flow ering(s) especially when coinciding with we weather. Use higher rates when rainfall is heavy and disease pressure is high.
	Leaf Rust (Hemileia vastatrix)	1.25 - 3	Apply before the onset of rain and then at 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot (Cercospora) Pink Disease (Corticium)	1.25	Use concentrate or dilute spray. Begin treat ments at the start of the wet season and continue at monthly intervals for three applications.
Filberts	Bacterial Blight	10 - 15	Apply as a postharvest spray. In seasons of heavy rainfall, apply a second spray when three fourths of the leaves have dropped. Add 1 pint of superior-type oil per 100 gallons of water. Use higher rates when rainfa is heavy and disease pressure is high.
	Eastern Filbert Blight	10 - 15	Apply as a dilute spray in adequate water fr thorough coverage. Make an application after harvest in October before winter rains begin. Additional applications should be made at bud swell to bud break and contin- ued on a two week interval or as needed until early May. If desired, add 1 pint of a sticking agent or superior-type oil per 100 gallons of water. Use higher rates wher rainfall is heavy and disease pressure is high
Mangos	Anthracnose	5 - 6	Apply monthly after fruit set until harvest.
Olives	Olive Knot Peacock Spot	5 - 8	Apply post harvest before winter rains fall. A second application in early spring should be made if disease is severe. Apply the high rate for heavy disease pressure or when conditions favor disease development.
Peaches Nectarine <b>WEST</b>	Bacterial Canker/ Bacterial Blast (Pseudomonas) Bacterial Spot (Xanthomonas) Leaf Curl Shot-Hole	5 - 10	Make dormant application after leaf drop and/or prior to bud swell. Can be used with superior type oils.
	Blossom Brown Rot Shot-Hole	5 - 8	Full cover spray at pink bud.
	Bacterial Spot	0.75	Post-bloom application applied at first and second cover sprays.  NOTE: Do not spray 3 weeks prior to harves Use only recommended rates. Spotting of leaves and defoliation may occur from use it cover sprays.
Peaches Nectarines EAST	Bacterial Canker/ Bacterial Blast (Pseudomonas) Bacterial Spot (Xanthomonas) Leaf Curl	5 - 7.5	Make dormant application after leaf drop and/or prior to bud swell. Can be used with superior type oils.
	Bacterial Spot	1 - 2.5	After initial dormant application, use 2.5 lbs per acre at early bud swell. At pink bud, make another application at 1.5 lbs per acre. At petal fall, apply 1 lb per acre. Do not apply after shuck split. Three lbs per acre of Ziram 76DF can be mixed in all post-dormant applications. Some leaf spotting may occur on newly emerged leaves.
Pears	Fire Blight	0.75	Apply at 5 day intervals throughout the bloom period.  NOTE: Do not apply to D'Anjou pears. Excessive dosages may cause fruit russet.
	Blossom Blast (Pseudomonas)	7.5 - 10	Apply before fall rains and again during dor- mancy before spring growth starts. Use the higher rate when disease pressure is high o when conditions favor disease development

# TREE CROPS continued

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Pecans	Kernel Rot (Phytophthora cactorum) Shuck Rot Zonate Leaf Spot (Cristulariella pyramidalis)	1.25 - 2.5	For suppression, apply in sufficient water volume to ensure complete coverage at 2 to 4 week intervals starting at kernel growth and continuing until shucks open. Use the higher rate and shorter interval if frequent rainfall occurs.
Pistachios	Botryosphaeria Panicle Blight Botrytis Blight Late Blight (Alternaria alternata) Septoria Leaf Blight Shoot Blight	3 - 6	Make initial application at bud swell and repeat on a 10 - 14 day schedule as dictated by disease conditions. If disease conditions are severe, use the higher rates and shorter spray interval.
Quince	Fire Blight	0.75	Apply at 5 day intervals throughout the bloom period. Apply in adequate water volume for thorough coverage.
Walnuts	Walnut Blight	5 - 10	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage or as needed if frequent rainfall occurs. Thorough coverage of catkins, leaves, and nutlets is essential for effective control. When applied as a dilute spray, 1 pint of summer oil emulsion may be added per 100 gallons.  NOTE: Adequate control may not be obtained when copper tolerant strains of Xanthomonas bacteria are present.

## **VEGETABLES**

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Beans (Dry, Green)	Brown Spot Common Blight Downy Mildew Halo Blight	0.75 - 2	Use the higher rates when conditions favor disease development. For protective sprays, make first application when plants are 6 inches high; repeat on a 7 to 14 day schedule depending upon environmental conditions.
Carrots	Alternaria Leaf Spot Cercospora Leaf Spot	1.25	Begin applications when disease first threat- ens and repeat at 7 to 14 day intervals or as needed depending on disease severity.
Celery Celeriac	Bacterial Blight Cercospora Early Blight Septoria Late Blight	1.25	Begin applications when plants are first established in the field, repeating at 5 to 7 day intervals depending on disease severity and environmental conditions.
Crucifers (Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collard Greens, Mustard Greens, Turnip Greens)	Black Leaf Spot (Alternaria) Black Rot (Xanthomonas) Downy Mildew	0.75 - 1.25	Apply at 7 to 10 day intervals. Begin applica- tions after transplants are set in the field or shortly after emergence of field seeded crops or when conditions favor disease development. Use higher rates when condi- tions favor disease. NOTE: Reddening of older leaves may occur on broccoli and a flecking of wrapper leaves may occur on cabbage.
Cucurbits (Cantaloupes, Cucumbers, Honeydew, Muskmelon, Pumpkins, Squash, Watermelons)	Alternaria Leaf Spot Angular Leaf Spot Anthracnose Downy Mildew Gummy Stem Blight Powdery Mildew Watermelon Bacterial Fruit Blotch (Suppression)	1.25 - 2	Begin application when conditions are favorable for disease development. Repeat at 5 to 7 day intervals. Use shorter intervals when conditions are favorable for disease development.  NOTE: Crop injury may occur from application at shorter intervals. Discontinue use if injury occurs.
Eggplant	Alternaria Blight Anthracnose Phomopsis	1.25	Begin applications prior to development of disease symptoms. Repeat sprays at 7 to 10 day intervals or as needed depending on disease severity.
Onions Garlic	Bacterial Blight Downy Mildew Purple Blotch	1.25 - 3	Begin when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals or as needed depending upon disease pressure. Can cause phytotoxicity to leaves.
Peas	Powdery Mildew	1 - 2	Begin applications when disease symptoms first appear and repeat at weekly intervals as needed. Use higher rates when condi- tions favor disease development.

## **VEGETABLES** continued

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Peppers	Anthracnose Bacterial Spot Cercospora Leaf Spot	1.25 - 3	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates when conditions are favorable for disease development. Maneb 75DF can be tank mixed with Cuprofix Ultra 40 Disperss for added disease control.
Spinach	Anthracnose Blue Mold Cercospora Leaf Spot White Rust	1.25 - 2	Begin applications when disease first appears or when conditions favor disease development. Repeat at 7 to 10 day intervals as needed. Use higher rates when conditions favor disease development.  NOTE: Flecking may occur on spinach leaves.
Table Beets	Cercospora Leaf Spot	1.25 - 3	Begin applications when conditions first favor disease development and repeat at 10 to 14 day intervals or as needed. Use the higher rate when disease is severe.
Tomatoes	Anthracnose Bacterial Speck Bacterial Spot Early Blight Gray Leaf Mold Late Blight Septoria Leaf Spot	1.25 - 3	Begin applications when disease first threatens and repeat at 5 to 10 day intervals or as needed depending on disease severity. Use higher rates when conditions favor disease development.
Watercress	Cercospora Leaf Spot	1.25	Begin applications 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 four applications per crop. Apply using ground equipment at no less than 50 gallons of water per acre.

# **VINES**

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Grapes	Black Rot Downy Mildew Phomopsis Powdery Mildew	1.25 - 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 Rosette. Either test for sensitivity or add 1 to 3 pounds of hydrated lime per pound of Cuprofix Ultra 40 Disperss.
Hops	Downy Mildew	1 - 1.5	Make crown treatment after pruning, but before training. After training, make additional applications at 7 to 10 day intervals or as needed. Discontinue use 2 weeks before harvest.
Kiwi	Erwinia herbicola Pseudomonas fluorescens Pseudomonas syringae	5	Apply in 200 gallons of water per acre. Make applications on a monthly basis. A maximum of three applications may be made.

# **MISCELLANEOUS**

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Atemoya	Anthracnose	2 - 3	Make initial application just before flowering and repeat on a weekly schedule.
Carambola	Anthracnose	4 - 5	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
Chives	Downy Mildew	1.25	Begin applications when plants are estab- lished in the field. Repeat applications every 7 to 10 days as dictated by disease condi- tions. If disease pressure is high, use the shorter spray interval.
Dill	Phoma Leaf Spot Rhizoctonia Foliage Blight	1 - 1.75	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. If disease pressure is high, use the shorter spray interval and the higher rate.
Douglas Fir	Rhabdocline Needlecast	1.25	Begin applications at bud break and repeat at 3 to 4 week intervals. Apply in a tank mix with another registered compatible fungi- cide if moderate to severe disease pressure is present.

# MISCELLANEOUS continued

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Ginseng	Alternaria Leaf Blight Stem Blight	1.75 - 2.5	Use as a tank mix with Rovral® 50W in 100 gallons of water. Begin Cuprofix Ultra 40 Disperss + Rovral applications as soon as plants have emerged in spring.  Applications should be repeated every 7 days until plants become dormant. Apply fungicides at least 8 hours before rain. Use of a spreader-sticker or sticker is advised.  NOTE: Alternaria Leaf and Stem Blight is most severe in humid conditions such as those found in the dense canopies of 2 to 4 year old Ginseng. It is very important that the stems be thoroughly covered with fungicide; therefore, use a spray apparatus that distributes the fungicide throughout the canopy.
Guava	Anthracnose Red Algae	2 - 3	Make initial application just before flower- ing and repeat on a weekly schedule until just before harvest. Apply in sufficient water volume for thorough coverage.
Litchi	Anthracnose	2 - 3	Make initial application just before flower- ing and repeat on a weekly schedule until just before harvest. Apply in sufficient water volume for thorough coverage.
Pecan Live Oaks	Ball Moss	5	Apply 5 pounds per 100 gallons of water in the spring when Ball Moss is actively growing, using 1.5 gallons of spray per foot of tree height. Make sure to wet Ball Moss tufts thoroughly. A second application may be required after 12 months.  NOTE: Cuprofix Ultra 40 Disperss may be injurious to ornamentals grown under Live Oaks. 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.
Macadamia	Anthracnose	4	Begin applications at first sign of flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water for thorough coverage.
	Phytophthora Blight (P. capsici) Raceme Blight (Botrytis cinerea)	3 - 4	Apply during raceme development and bloom periods. Apply in sufficient water for thorough coverage. Use higher rates when conditions favor disease development.
Mamey Sapote	Algal Leaf Spot Anthracnose	4 - 5.25	Apply when conditions favor disease development. Repeat on 14 to 28 day schedule as disease severity and environmental conditions dictate. Use higher rates when conditions favor disease development.
Papayas	Anthracnose	2.5 - 6	Apply before disease appears. Apply at 10 to 14 day intervals under light disease pressure and at 5 to 7 day intervals under heavy disease pressure. The addition of an approved spreader is recommended. Use higher rates when conditions favor disease development.
Parsley	Bacterial Blight (Pseudomonas sp.)	2	Begin applications when plants are first established in the field and repeat at 5 to 7 day intervals depending upon disease severity and environmental conditions.
Passion Fruit	Anthracnose	4 - 5	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water volume for thorough coverage.
Sugar Apple	Anthracnose	8 - 10	Make initial application just before flowering and repeat on a weekly schedule until just before harvest. Apply in sufficient water volume for thorough coverage.
Sycamore	Anthracnose	1.25 - 2	Apply as a full cover spray. Apply in 100 gallons of water or sufficient volume for thorough coverage. Make first application at bud crack and second application 7 to 10 days later (at 10% leaf expansion). Use higher rates when conditions favor disease development.

#### **GREENHOUSE AND SHADEHOUSE CROPS**

Notice to User: Cuprofix Ultra 40 Disperss may be used in greenhouses and shadehouses to control diseases on crops that appear on this label; specific instructions have been included for certain crops. The grower should bear in mind that the sensitivity of crops grown in greenhouses and shadehouses differ greatly from crops grown under field conditions. Neither the manufacturer nor seller has determined whether or not Cuprofix Ultra 40 Disperss can be used safely on all greenhouse and shadehouse grown crops. The user should determine if Cuprofix Ultra 40 Disperss can be used safely prior to commercial use. In a small area, apply the recommended rates to the plants in question, i.e. foliage, fruit, etc. and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Apply Cuprofix Ultra 40 Disperss according to specific rates given for those crops in pounds per acre or pounds per 100 gallons. One level teaspoon of Cuprofix Ultra 40 Disperss per 1000 square feet is equivalent to 1 pound per acre. Cuprofix Ultra 40 Disperss should be applied in adequate water for thorough coverage of plant parts. Begin applications at first sign of disease and repeat at 7 to 14 day intervals as needed. Use shorter intervals during periods when severe disease conditions persist.

**NOTE:** Do not use Cuprofix Ultra 40 Disperss on citrus seedlings grown in greenhouses or shadehouses.

CROP	DISEASE	RATE IN LBS Cuprofix Ultra 40 Disperss/A	USE INSTRUCTIONS
Cucumber	Angular Leaf Spot Downy Mildew	1.25	Apply weekly when plants begin to vine. Use higher rates when conditions favor disease development.
Eggplant	Alternaria Blight Anthracnose	1.25	Begin applications prior to development of disease symptoms. Repeat at 7 to 10 day inter- vals or as disease pressure dictates.
Peppers	Bacterial Spot	1.25 - 3	Begin applications when conditions first favor disease development and repeat at 5 to 10 day intervals as needed depending on disease severity. Use higher rates for severe disease.
Tomatoes	Anthracnose Bacterial Speck Bacterial Spot Early Blight Gray Leaf Mold Late Blight Septoria Leaf Spot	1.25 - 3	Begin when disease first threatens and repeat at 7 to 10 day intervals or as needed depending on disease severity. Use higher rate for severe disease.

#### **GENERAL CHEMIGATION INSTRUCTIONS**

Apply this product only through one or more of the following types of sprinkler irrigation systems: center pivot, lateral move, traveler, big gun, plastic pipe solid set systems which contain no aluminum parts or components. 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.

Shut off injection equipment after treatment and continue to operate irrigation system until Cuprofix Ultra 40 Disperss has been cleared from the last sprinkler head.

**NOTE:** It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as agricultural chemicals are often reactive with soft metals such as aluminum and even some synthetic material such as plastics, rubbers, etc. Therefore, it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.

Do not apply this product through any type of irrigation (chemigation) 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.

# 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. 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, quickclosing check valve to prevent the flow of fluid back toward the injection pump.

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

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

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

Do not apply when wind speed favors drift beyond the area intended for treatment. When mixing, fill nurse tank half full with water. Add Cuprofix Ultra 40 Disperss slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. DO NOT PRE-MIX OR SLURRY Cuprofix Ultra 40 Disperss before adding to the nurse tank. Stickers, spreaders (cleared for use on growing crops), nutrients, etc.

nurse tank. Stickers, spreaders (cleared for use on growing crops), 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 the most stringent cautions and limitations on the label of all products used in mixtures.

Cuprofix Ultra 40 Disperss should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation of the mixture in the nurse tank is recommended.

#### SPRINKLER CHEMIGATION

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

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

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

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

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

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

Do not apply when wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add Cuprofix Ultra 40 Disperss slowly to tank while hydraulic or mechanical agitation is operating and continue filing with water. DO NOT PRE-MIX OR SLURRY Cuprofix Ultra 40 Disperss. Stickers, spreaders (cleared for use on growing crops), 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 the most stringent cautions and limitations on the label of all products used in mixtures.

Cuprofix Ultra 40 Disperss should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation of the mixture in the nurse tank is recommended.

# IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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