



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAR 30 1998

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

W. Neudorff GmbH KG
c/o Mr. Walter G. Talarek, P.C.
1008 Riva Ridge Drive
Great Falls, Virginia 220066-1620

Subject: NEU1140F Copper Soap
EPA Registration No. 67702-2
Your label amendment application dated January 20,
1998

Dear Mr. Talarek,

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

1. Make the following changes to the label:
 - a. In the first sentence in the "Non-Agricultural Use Requirements" box, change "worker protection Standard" to "Worker Protection Standard".
 - b. In the first sentence in the "Bacterial soft rot and bottom rot" subsection of the "HOP" section on page 11, change:

"for application by aircraft, of
water and apply to one acre."

to

"for application by aircraft, and
apply to one acre."
 - c. In the fourth sentence of the "Leaf and fruit spots" section near the bottom of page 20, change
"Cylindrosproium" to "Cylindrosporium".
2. Submit one copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration may be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

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

Sincerely yours,

/s/

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

Attachment: Label stamped "ACCEPTED with COMMENTS"

NEU1140F COPPER SOAP

Flowable Liquid Copper Fungicide

Active Ingredient:

Copper Octanoate (Copper Soap)	10.0%
Inert Ingredients	90.0%
Total	100.0%
metallic copper equivalent	1.8%

EPA Registration #67702-2
Net Contents:

EPA Establishment #67702-WG-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

- If swallowed, call a physician immediately.
- If in eyes, wash eyes with water and see a physician.
- If on skin, wash with soap and water. See a physician if irritation persists.
- If inhaled, move to fresh air.

PRECAUTIONARY STATEMENTS - Household

Hazards to Humans and Domestic Animals

Caution: Harmful if swallowed, absorbed through skin or inhaled. Wash thoroughly with soap and water after handling. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse.

Environmental Hazards

This product may be toxic to fish and aquatic organisms. Do not apply directly to water. Do not contaminate water by disposal of equipment washwaters.

PRECAUTIONARY STATEMENTS - Commercial Agriculture

Hazards to Humans and Domestic Animals

Caution: Harmful if swallowed, absorbed through skin or inhaled. Wash thoroughly with soap and water after handling. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse.

Personal Protective Equipment (PPE) Requirements: Applicators and other handlers must wear: long-sleeved shirts, long pants, waterproof gloves, and 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.

ACCEPTED
with COMMENTS
In EPA Letter Dated

MAR 30 1998

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

67702-2

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User Safety Recommendations - Commercial Agriculture

Users should:

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

Environmental Hazards

This product may be toxic to fish and aquatic organisms. 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 by disposal of equipment washwaters.

STORAGE AND DISPOSAL - Commercial Agriculture

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

Storage

Store in a secure place, away from open fire or flame. Keep container closed and reseal after use. Product may be damaged by freezing. Do not store product below 4°C. If spilled, use absorbent materials and dispose of in an approved manner.

Disposal

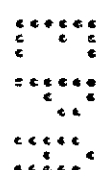
Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse container (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.

STORAGE AND DISPOSAL - Household

Storage

Store in a secure place, away from open fire or flame. Keep container closed and reseal after use. Product may be damaged by freezing. Do not store product below 4°C. If spilled, use absorbent materials and dispose of in an approved manner.



Disposal

Do not reuse container. Securely wrap original container in several layers of newspaper and discard in trash.

DIRECTIONS FOR USE - Commercial Agriculture

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 manner that will contact workers or other persons, either directly or through drift. Only protected workers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Read and follow all applicable directions and precautions on this label before using.

DIRECTIONS FOR USE - Household

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

Read and follow all applicable directions and precautions on this label before using.

Agricultural Use Requirements

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

Entry-Restrictions: Do not enter or allow worker entry into treated areas during the restricted-entry interval of 4 hours.

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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, wear: coveralls, shoes, socks and waterproof gloves.

Conflicting Instructions: If the requirements of the WPS conflict with instructions listed elsewhere on this product label, users must obey the more protective requirements.

Non-Agricultural Use Requirements

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

Keep unprotected persons out of treated areas until sprays have dried.

For early reentry to treated areas and that involves contact with anything that has been treated such as plants, soil, or water, wear: coveralls, shoes, socks and waterproof gloves.

DIRECTIONS FOR USE - COMMERCIAL AGRICULTURE

Tank Mixing NEU1140F COPPER SOAP with Other Pesticides

Read and follow all applicable directions and precautions on the label of other products, before mixing with NEU1140F COPPER SOAP.

NEU1140F COPPER SOAP can be applied up to day of harvest. When tank-mixed with products, do not apply that product closer to harvest than is permitted or stated on the other product's label.

Pour NEU1140F COPPER SOAP into spray tank at least half filled with water using adequate agitation. When mixed with other products proven or known to be compatible, wettable powders should be added first, followed in order by flowables (such as NEU1140F COPPER SOAP), and then emulsifiable concentrates.

NEU1140F COPPER SOAP can be mixed with Bravo® (WP, 720, 500), captan, Daconil® 2787, Ferbam, maneb (WP or Flowable), Dithane® M-45, Manzate® 200, sulfur (wettable or flowable), organo phosphates, Thiodan®, *Bacillus thuringiensis* Berliner, Guthion®, Pydrin®, Diazinon®, malathion for use on the crops listed on this label, in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product

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containing a label prohibition against such mixing. Do not mix NEU1140F COPPER SOAP with oil when applied to citrus. Do not mix NEU1140F COPPER SOAP with chelated or liquid fertilizers. Use caution when using product with other fungicides and insecticides. Observe all cautions and limitations on all products used in mixtures.

Directions for use on Fruit and Field Crops

Do not apply this product through any type of irrigation system.

Shake well before use. Most conventional liquid pesticide plant sprayers can be used to apply NEU1140F COPPER SOAP to plants. A spreader may be used to improve the spreading of NEU1140F COPPER SOAP on hard to wet plants.

BEAN, PEA

Anthrachnose, Ascochyta leaf and pod spot, Bacterial blights (halo, common and brown spot), Downy mildew, Gray mold

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

White mold (Sclerotinia)

To prevent floral infection, apply NEU1140F COPPER SOAP at 25% bloom. Use 1.0 to 2.0 gallons of NEU1140F COPPER SOAP in 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre.

BEET, CHARD, SPINACH**Cercospora leaf spot, Downy mildew, White rust**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery Mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

CARROTS**Alternaria leaf blight, Bacterial leaf blight, Cercospora leaf blight**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

CELERY AND CELERIAC

Bacterial leaf spot, Cercospora (early) blight, Septoria (late) blight

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

CITRUS (Grapefruit, Lemon, Lime, Orange, Pummelo, Tangerine)

Melanose, greasy spot, citrus scab, alternaria brown spot

Mix 0.5 to 2.0 gallons NEU1140F COPPER SOAP in 10 gallons of water and apply to one acre by aircraft. Use 0.5 to 2.0 gallons in 100 gallons of water if applied by ground spray. Apply 1 to 3 weeks after petal fall. Repeat every 2 weeks if necessary until the fruit is 3 inches in diameter. Do not mix NEU1140F COPPER SOAP with oil when applied on any citrus.

Red alga (Florida), Melanose on fruit

Mix 0.5 to 2.0 gallons in 100 gallons of water when applied as a dilute ground spray. Apply in spring as a preventive spray. Repeat in late summer to control new algal colonies. Do not mix with oil when applying on citrus.

CORN

Southern leaf blight, Cercospora leaf spot

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

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CRUCIFER CROPS (Broccoli, Brussel sprouts, Canola, Cauliflower, Cabbage, Kale, Kohlrabi, Mustard, Pak-Choi, Rape, Rutabaga, Turnip)

Alternaria blight, Bacterial leaf spot, Downy mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

White mold (Sclerotinia)

To reduce floral infection, apply NEU1140F COPPER SOAP at 25% bloom. Use 0.5 to 2.0 gallons per acre in sufficient water for adequate coverage, usually 5 to 10 gallons per acre by aircraft or 50 to 100 gallons per acre by ground equipment.

CUCURBITS (Cucumbers, cantaloupe, squash, pumpkin, zucchini)

Alternaria blight, scab, Angular leaf spot, Anthracnose, Downy mildew, Gray mold, Scab, Ulocladium leaf spot

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

For cucumbers grown in a greenhouse, apply NEU1140F COPPER SOAP 2 times per week in the first 2 weeks after emergence, followed by sprays every 7 days.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application. On plants that are very susceptible to powdery mildew, such as greenhouse-grown cucumber, it is best to spray the plants twice a week during the first 2 weeks after emergence, and weekly thereafter. On outdoor plants, re-apply after rain.

CURRENT AND GOOSEBERRY

Anthrachnose, Phyllosticta and Septoria leaf spots

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

GINSENG**Alternaria blight, Botrytis blight, Phytophthora, mildew**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

GRAPES

Note: Do not mix NEU1140F COPPER SOAP with lime. Certain Vinifera and French Hybrid varieties may be sensitive to copper sprays resulting in marginal leaf burn. Before spraying these varieties, consult your State Experiment Station or make test sprays.

Downy mildew, Black rot, Phomopsis Cane and Leaf Spot, Powdery mildew

Mix 0.5 to 2.0 gallons per 100 gallons of water and apply to one acre. For best control begin treatment when new growth reaches ½ inch and repeat at 7 to 14 day intervals throughout the growing season.

Gray mold

Mix 0.5 to 2.0 gallons per 100 gallons of water and apply to one acre. For best control begin treatment at the end of bloom and repeat at 7 to 14 day intervals until 3 weeks before harvest.

HOP**Anthracnose, Cercospora leaf spot, Downy mildew**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

LETTUCE, CHICORY, ENDIVE**Downy mildew, Septoria leaf spot**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Powdery mildew

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Bacterial soft rot and bottom rot

Mix 0.5 to 2.0 gallons in 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, of water and apply to one acre. Begin treatment before disease is expected or when weather conditions favor disease development. Repeat every 7 to 10 days as needed. Use lower rate when disease pressure is low or on copper sensitive varieties of lettuce.

ONION, GARLIC, LEEK, SHALLOT, CHIVES

Botrytis leaf blight, Downy mildew, Neck rot and Bacterial soft rot

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

PARSLEY**Leaf scorch, Leaf spot**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

PEANUTS**Sclerotinia blight**

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. Make first application at first bloom and repeat every 7 to 14 days until harvest. Use higher rates of NEU1140F COPPER SOAP where Sclerotinia blight infection is expected to be heavy.

Leaf spots (early and late), web blotch

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. Begin spray when disease first appears, or for best control begin early, usually 25 to 40 days after emergence and repeat at 10 to 14 days until harvest.

POME FRUIT TREES (Apple, Pear, Quince)

NOTICE: NEU1140F COPPER SOAP as used in this recommendation may cause russetting of Golden Delicious and similar susceptible apple varieties. Mild russetting of other varieties may occur. Preferred use is on non-bearing or processing varieties where russetting is not a concern. On apples, do not exceed the rate of 1.0 gallon of NEU1140F Copper Soap per 100 gallons of water.

Anthracnose

Use 0.5 to 2 gallons of NEU1140F COPPER SOAP per 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Apply in mid-July.

Cedar Apple Rust, Quince Rust,

Use 0.5 to 2 gallons of NEU1140F COPPER SOAP per 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Apply every 7 to 10 days from the pink bud stage until 30 days after petal fall. The disease can also be reduced by removing nearby eastern red cedar plants (*Juniperus virginiana* L.) On juniper, cedar apple rust can be controlled by spraying plants at least 4 times between late August and late October.

Fireblight

Use 0.5 to 2 gallons of NEU1140F COPPER SOAP per 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Spray at silver tip and bud break and repeat on 3 to 5 day intervals as needed, up to petal fall. Use the lower rate if disease pressure is light and higher rate when conditions favor heavy disease pressure.

Scab, Sooty Blotch and Flyspeck

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

SMALL FRUITS (Blackberry, Blueberry, Raspberry, Strawberry)**Gray mold, Mucor fruit rot, Rhizopus fruit rot**

Use 0.5 to 2.0 gallons in 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Apply at the start of flowering and continue every 7 to 10 days until harvest.

STONE FRUIT TREES (Almond, Apricot, Cherry, Nectarine, Peach, Plum)**Bacterial canker (*Pseudomonas syringae*), brown rot blossom blight, leaf and fruit spots**

Mix 0.5 to 2 gallons per 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. For bacterial canker, apply as a dormant spray as buds begin to swell, repeating at the bud burst stage, and weekly thereafter as needed, up to six sprays. In the fall spray again at 10 and 80% leaf fall. For brown rot blossom blight apply full cover spray at delayed dormant (bud swell), popcorn, full bloom and petal fall stages. During wet weather additional bloom sprays may be necessary.

Bacterial spot

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

Anthracnose, Coryneum blight, Peach Leaf Curl

Use 0.5 to 2.0 gallons in 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Apply as a dormant spray in late fall during a period of dry weather.

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STRAWBERRY

Angular leaf spot, Leaf scorch, Mycosphaerella leaf spot, Phomopsis leaf blight, Powdery mildew, Septoria leaf spots

Use 0.5 to 2.0 gallons in 100 gallons of water and apply to one acre. Spray 1 month after planting (or before flowering on established plants) and twice more at 7 to 10 day intervals.

Anthracnose fruit rot, Gray mold

Use 0.5 to 2.0 gallons in 100 gallons of water and apply to one acre. Apply at the start of flowering and continue every 7 to 10 days until harvest.

TOBACCO

Blue Mold (Downy Mildew)

NEU1140F COPPER SOAP can be used on tobacco in transplant beds or on field grown plants. For transplant beds mix 0.5 to 2.0 gallons with 50 to 100 gallons of water and thoroughly spray all leaf surfaces. For field grown plants mix 0.5 to 2.0 gallons with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application.

TOMATO, POTATO, EGGPLANT, PEPPER

Anthracnose, Bacterial speck, Bacterial spot, Cercospora leaf spot, Early blight, Gray mold, Late blight, Leaf mold, Septoria leaf spot

Mix 0.5 to 2.0 gallons of NEU1140F COPPER SOAP with 50 to 100 gallons of water for application by ground equipment or with 2 to 5 gallons of water for application by aircraft, and apply to one acre. Use sufficient water to ensure good coverage. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Use the 2.0 gallon rate of NEU1140F COPPER SOAP, applied every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. If possible, time applications so that 12 hours of dry weather follow application. Use 2.0 gallons NEU1140F COPPER SOAP in 50 to 100 gallons of water when spraying to control late blight.

18 930

WALNUTS

Blight

Mix 0.5 to 2.0 gallons per 100 gallons of water and apply at 500 gallons per acre in mature orchards. Make first application when leaflets start to unfold (prior to, but not later than, 1% pistulate bloom) and repeat weekly as needed, especially until seasonal rainfall stops. When rain threatens, additional applications are important, applied before or immediately after the rain.

Directions for Use on Ornamentals and Turf

Shake well before use.

ORNAMENTAL PLANTS

The ornamental species listed below may be treated with NEU1140F COPPER SOAP. The diseases controlled have been designated with the following codes.

Code	Common name	Causal Pathogen
ANTH	Anthrachnose	<i>Colletotrichum</i> , <i>Glomerella</i>
BOT	Botrytis blight	<i>Botrytis cinerea</i>
BLS	Bacterial leaf spot and blight	<i>Erwinia</i> , <i>Pseudomonas</i> , <i>Xanthomonas</i>
DM	Downy mildew	<i>Plasmopara</i>
LEAFSPOT	Leaf spot (fungal)	<i>Acremonium</i> , <i>Alternaria</i> , <i>Cephalosporium</i> , <i>Cercospora</i> , <i>Colletotrichum</i> , <i>Corynespora</i> , <i>Curvularia</i> , <i>Dactylaria</i> , <i>Drechslera</i> , <i>Exserohilium</i> , <i>Glomerella</i> , <i>Myrothecium</i> , <i>Phyllosticta</i> , <i>Phytophthora</i>
PM	Powdery mildew	<i>Oidium</i>
RHIZC	Rhizoctonia blight	<i>Rhizoctonia</i>
SOFTROT	Soft rot	<i>Erwinia</i>

Ornamental Plant	Common Name	Diseases Controlled
<i>Aechmea fasciata</i>	Urn plant, bromeliad	ANTH, BLS
<i>Aeschynanthus pulcher</i>	Lipstick vine	BOT, LEAFSPOT
<i>Aglaonema</i> species	Chinese evergreen	ANTH, BLS, LEAFSPOT, RHIZC, BLS, SOFTROT
<i>Anthurium</i> species	Tailflower	ANTH, BLS, LEAFSPOT, RHIZC, SOFTROT
<i>Aphelandra squarrosa</i>	Zebra plant	BOT, LEAFSPOT, RHIZC
<i>Araucaria heterophylla</i>	Norfolk Island pine	Colletotrichum needle blight
<i>Asplenium nidus</i>	Bird's nest fern	BLS
<i>Brassaia actinophylla</i>	Schefflera	ANTH, BLS, LEAFSPOT, RHIZC
<i>Caladium</i> species	Caladium	BLS, RHIZC
<i>Calathea</i> species	Rattlesnake plant	BLS, LEAFSPOT
<i>Caryota mitis</i>	Fishtail palm	BLS, LEAFSPOT
<i>Chamaedorea</i> species	various palms	LEAFSPOT
<i>Chrysalidocarpus lutescens</i>	Areca palm	LEAFSPOT
<i>Cissus</i> species	Grape ivy	ANTH, BOT, DM, PM, RHIZC
<i>Codiaeum variegatum</i>	Croton	ANTH, BLS
<i>Cordyline terminalis</i>	Ti plant	ANTH, LEAFSPOT
<i>Chryptanthus</i> species	Bromeliad, earthstar	ANTH
<i>Dieffenbachia</i> species	Dieffenbachia	BLS, LEAFSPOT, RHIZC
<i>Dracaena</i> species	Dracaena, Corn plant	BLS, BOT, LEAFSPOT
<i>Epipremnum aureum</i>	Pothos, Devil's ivy	BLS, RHIZC
<i>Euphorbia milii</i>	Euphorbia	RHIZC
<i>Fatsia japonica</i>	Japanese fatsia	BLS, LEAFSPOT, RHIZC
<i>Ficus benjamina</i>	Weeping fig	LEAFSPOT
<i>Ficus elastica</i>	India-rubber tree	LEAFSPOT, BOT
<i>Fittonia verschaffeltii</i>	Nerve plant	RHIZC
<i>Hedra helix</i>	English ivy	ANTH, BLS, BOT, LEAFSPOT, RHIZC
<i>Hoya carnosa</i>	Wax plant	BOT, LEAFSPOT, RHIZC
<i>Maranta leuconeura</i>	Prayer plant	LEAFSPOT
<i>Monstera deliciosa</i>	Swiss cheese plant	BLS, ANTH, RHIZC, SOFTROT
<i>Nephrolepis exaltata</i>	Boston fern	BSL, BOT, RHIZC
<i>Peperomia</i> species	Peperomia	LEAFSPOT, RHIZC
<i>Philodendron</i> species	Philodendron	ANTH, BOT, LEAFSPOT

Ornamental Plant	Common Name	Diseases Controlled
<i>Pilea species</i>	Aluminum plant	BLS, ANTH, LEAFSPOT, RHIZC
<i>Platycerium bifurcatum</i>	Staghorn fern	BLS, RHIZC
<i>Polyscias species</i>	Aralia	ANTH, BLS, LEAFSPOT
<i>Rhapis species</i>	Ladyfinger palm	LEAFSPOT
<i>Rhoeo spathacea</i>	Oyster plant	LEAFSPOT
<i>Saintpaulia ionantha</i>	African violet	BLS, BOT, LEAFSPOT, PM
<i>Sansevieria triafasciata</i>	Snake plant	BLS, LEAFSPOT
<i>Schefflera arboricola</i>	Dwarf Schefflera	BLS, LEAFSPOT
<i>Schlumbergera species</i>	cactus	LEAFSPOT
<i>Sedum species</i>	Sedum	LEAFSPOT
<i>Spathiphyllum species</i>	Spathe flower	LEAFSPOT, RHIZC
<i>Syngonium podophyllum</i>	Nephthytis	BLS, LEAFSPOT, RHIZC
<i>Yucca species</i>	yucca	LEAFSPOT

NEU1140F COPPER SOAP can be used for controlling diseases on ornamentals grown under field conditions, in nurseries, greenhouses, interior landscapes and other sites. For control of these diseases on plants grown on a large scale, mix 0.5 to 2.0 gallons in 100 gallons of water, and apply to 1 acre. For plants grown on a small scale, mix 0.5 to 2.0 fluid ounces in 1 gallon of water, and spray all plant surfaces thoroughly. When necessary, repeat sprays every 7 to 10 days. NEU1140F COPPER SOAP may cause some copper toxicity on some plant species. Before spraying a specific plant species, consult your State Experiment Station or make a test spray.

PINE

Needle blight

Mix 0.5 to 2.0 gallons in 100 gallons of water and spray until needles are thoroughly wet with spray. Apply when new needles are just emerging. Make a second application 3 weeks later.

ROSE AND ORNAMENTAL SHRUBS

Blackspot, Downy mildew, Gray mold, Leafspots, Powdery mildew, Rust

Mix 0.5 to 1.0 gallons NEU1140F COPPER SOAP in 100 gallons of water and spray to point of run-off. Begin treatment when new spring growth emerges and repeat every 7 to 10 days for as long as needed to control disease. NEU 1140F COPPER SOAP may cause copper toxicity on some rose varieties. Copper toxicity appears as purple spots.

SYCAMORE**Anthracnose**

Mix 0.5 to 2.0 gallons in 100 gallons of water. Make first application just before buds begin to swell, and repeat twice at 7 day intervals.

TURF

NEU1140F COPPER SOAP is suitable for controlling diseases of turf in golf courses, turf farms, home lawns and other sites. For large areas, mix 0.5 to 2.0 gallons in 100 gallons of water and apply to 1 acre. For small areas mix 1.5 to 6 fluid ounces with 2.5 gallons of water and apply to 1000 ft². For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed.

Ascochyta leaf blight, Cercospora leaf spots, Dollar spot

To reduce Ascochyta leaf blight mow less frequently, only as necessary to maintain recommended height. Water before noon to allow grass to dry. Water thoroughly only as required to avoid moisture stress. Apply NEU1140F COPPER SOAP when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. In frequently diseased areas, prune adjacent trees and shrubs to reduce turf shading and to improve air movement.

Rust

To reduce rust mow frequently to reduce rust spore production. Water and fertilize lawn as required to avoid moisture and nutrient stress. Water before noon to allow grass to dry. Apply NEU1140F COPPER SOAP when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. In frequently diseased areas, prune adjacent trees and shrubs to reduce turf shading and to improve air movement.

DIRECTIONS FOR USE - HOUSEHOLD

Fixed copper is one of the oldest fungicides and bactericides, used to control a wide range of plant diseases. NEU1140F COPPER SOAP is a patented, fixed copper fungicide, made by combining a soluble copper fertilizer with a naturally-occurring fatty acid. The copper and the fatty acid combine to form a copper salt of the fatty acid, known technically as a true soap. The copper soap fungicide controls many common diseases using low concentrations of copper, down as low as 90 ppm. The net result is an excellent vegetable, fruit and ornamental fungicide. NEU1140F COPPER SOAP decomposes to form soluble copper, and fatty acid, both of which can be used by microbes and plants. NEU1140F

COPPER SOAP is suited for use in domestic circumstances, both indoors and outdoors. The National Organic Standards Board of the USA allows fixed copper to be used in organic crop production for controlling plant diseases.

NEU1140F COPPER SOAP controls diseases of a wide range of plants, including many vegetables, fruit and ornamentals. As with most fungicides, NEU1140F COPPER SOAP acts to protect plants from infection. Therefore, it is important to have NEU1140F COPPER SOAP on the leaf, flower or fruit before the pathogen is able to cause an infection.

A wide range of bacteria and fungi attack plants, however, they generally only cause a few types of diseases. When using NEU1140F COPPER SOAP, it is important to identify the type of disease in order to use the best method of disease control.

Powdery mildews tend to occur on the upper leaf surfaces, as though a white powder was sprinkled onto the plant. Powdery mildews can form a dense, white, cottony mass, making the whole leaf appear white. They are also commonly found on stems. Powdery mildews rarely kill plants. Most fungal diseases require water to infect plants. Powdery mildews are unique in that they do not require water for infection. Hence, under greenhouse conditions, powdery mildews can become severe. Shade and dense plantings also promote powdery mildew. Powdery mildews commonly occur on the following plants: apple, bean, beet, broccoli, brussel sprouts, cauliflower, cabbage, cantaloupe, chard, chicory, chive, cucumber, currant, endive, gooseberry, grape, grasses, hop, kale, kohlrabi, lettuce, lilac, oak, pea, pumpkin, rose, rutabaga, spinach, squash, strawberry, turnip, zucchini and many other plant species.

Downy mildews tend to occur on the lower leaf surfaces. Downy mildews are much finer than powdery mildews, and appear as fine white cotton, similar to duck down. Downy mildews can rapidly kill plant leaves during wet, cool weather, but are inhibited by hot dry weather. Downy mildews commonly occur on the following plants: bean, beet, broccoli, brussel sprouts, cauliflower, cabbage, cantaloupe, chard, chicory, chive, corn, cucumber, endive, garlic, grape, grasses, hop, kale, kohlrabi, leek, lettuce, onion, pea, pumpkin, rutabaga, shallot, spinach, squash, sunflower, tobacco, turnip, zucchini and many other plant species.

Leaf and fruit spots are small brown or black spots on the leaf or fruit. They commonly occur on apple and pear (scab), as well as on most of the plants grown around the home and in the garden. These spots can be caused by a range of fungi and bacteria. Leaf and fruit spots are commonly caused by fungi belonging to the following genera: *Alternaria*, *Cercospora*, *Colletotrichum*, *Cylindrosporium*, *Gloeosporium*, *Glomerella*, *Gnomonia*, *Marssonina*, *Mycosphaerella* (*Didymella*), *Phomopsis*, *Phyllosticta*, *Septoria*, and *Sphaceloma*. Spots on leaves and fruit can expand and grow together. Leaf spot pathogens require water to infect plants. During wet weather, spots can develop into a **blight**, very rapidly, killing leaves, flowers and stems.

Rusts are small orange blisters that appear on plant leaves, and that are full of orange powder. The orange powder is rust spores. Towards the end of the season, black spores are often produced. Rust is commonly found on grasses, currants and many other types of plants.

Fruit rots commonly occur on strawberries, raspberries, and other fruit. They appear as soft, rotten areas on the fruit. Often the causal fungus can be seen growing and producing spores on the surface of the rotting area. Rots are often caused by fungi belonging to the following genera: *Aspergillus*, *Botrytis*, *Monilinia*, *Mucor*, *Penicillium*, *Rhizopus* and *Sclerotinia*.

Application Directions

Shake well before use. Most conventional liquid pesticide plant sprayers can be used to apply NEU1140F COPPER SOAP to plants.

To control **powdery mildews**, use a solution of 1 fluid ounce of NEU1140F COPPER SOAP in a gallon of water. For best control, start spraying before the disease is visible or when mildew is first visible on the plant. Spray all plant parts thoroughly, and repeat every 7 to 10 days. On plants that are very susceptible to powdery mildew, such as greenhouse-grown cucumber. It is best to spray the plants twice a week during the first 2 weeks after emergence, and weekly thereafter. On outdoor plants, re-apply after rain.

To control **downy mildews, leaf and fruit spots, blights, and rust**, use a solution of 1 fluid ounce of NEU1140F COPPER SOAP in a gallon of water. Ensure that all surfaces of the plant are thoroughly sprayed. For best control, begin treatment 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. Re-apply after rain. Use 2 fluid ounces per gallon of water, sprayed every 7 days or less, following heavy rain or when the amount of disease is increasing rapidly. This higher rate should be used for preventing late blight on potato and related plants. If possible, time applications so that at least 12 hours of dry weather follows application.

To prevent **fruit rots**, use a solution of 1 fluid ounce of NEU1140F COPPER SOAP in a gallon of water. Ensure that all surfaces of the plant are thoroughly sprayed. Apply at the start of flowering and continue every 7 to 10 days until harvest. Fungicidal sprays are especially warranted when weather forecasts predict a long period of wet weather. Re-apply after rain.

(The following information may or may not be placed, in whole or in part, on the final household label)

Directions for Use on Ornamentals and Turf Diseases Controlled, Listed by Plant:

Ornamental Plant	Common Name	Diseases Controlled
<i>Aechmea faciaa</i>	Urn plant,	Anthrachnose leaf and fruit spot, Bacterial leaf spot

	bromeliad	and blight
<i>Aeschynanthus pulcher</i>	Lipstick vine	Botrytis blight, Leaf spot (fungal)
<i>Aglaonema</i> species	Chinese evergreen	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight, Leaf spot (fungal), Rhizoctonia blight, Soft rot
<i>Anthurium</i> species	Tailflower	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight, Leaf spot (fungal), Rhizoctonia blight, Soft rot
<i>Aphelandra squarrosa</i>	Zebra plant	Botrytis blight, Leaf spot (fungal), Rhizoctonia blight
<i>Araucaria heterophylla</i>	Norfolk Island pine	Colletotrichum needle blight
<i>Asplenium nidus</i>	Bird's nest fern	Bacterial leaf spot and blight
<i>Brassaia actinophylla</i>	Schefflera	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight, Leaf spot (fungal) Rhizoctonia blight
<i>Caladium</i> species	Caladium	Bacterial leaf spot and blight, Rhizoctonia blight
<i>Calathea</i> species	Rattlesnake plant	Bacterial leaf spot and blight, Leaf spot (fungal)
<i>Caryota mitis</i>	Fishtail palm	Bacterial leaf spot and blight, Leaf spot (fungal)
<i>Chamaedorea</i> species	various palms	Leaf spot
<i>Chrysalidocarpus lutescens</i>	Areca palm	Leaf spot
<i>Cissus</i> species	Grape ivy	Anthracnose leaf and fruit spot, Botrytis blight, Downy mildew, Powdery mildew, Rhizoctonia blight
<i>Codiaeum variegatum</i>	Croton	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight
<i>Cordyline terminalis</i>	Ti plant	Anthracnose leaf and fruit spot, Leaf spot (fungal)
<i>Chryptanthus</i> species	Bromeliad, earthstar	Anthracnose leaf and fruit spot
<i>Dieffenbachia</i> species	Dieffenbachia	Bacterial leaf spot and blight, Leaf spot (fungal) Rhizoctonia blight
<i>Dracaena</i> species	Dracaena, Corn plant	Bacterial leaf spot and blight, Botrytis blight, Leaf spot (fungal)
<i>Epipremnum aureum</i>	Pothos, Devil's ivy	Bacterial leaf spot and blight, Rhizoctonia blight
<i>Euphorbia milii</i>	Euphorbia	Rhizoctonia blight
<i>Fatsia japonica</i>	Japanese fatsia	Bacterial leaf spot and blight, Leaf spot (fungal) Rhizoctonia blight
<i>Ficus benjamina</i>	Weeping fig	Leaf spot (fungal)
<i>Ficus elastica</i>	India-rubber tree	Leaf spot (fungal), Botrytis blight
<i>Fittonia verschaffeltii</i>	Nerve plant	Rhizoctonia blight

Ornamental Plant	Common Name	Diseases Controlled
<i>Hedra helix</i>	English ivy	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight, Botrytis blight, Leaf spot (fungal), Rhizoctonia blight
<i>Hoya carnosa</i>	Wax plant	Botrytis blight, Leaf spot (fungal), Rhizoctonia blight
<i>Maranta leuconeura</i>	Prayer plant	Leaf spot (fungal)
<i>Monstera deliciosa</i>	Swiss cheese plant	Bacterial leaf spot and blight, Anthracnose leaf and fruit spot, Rhizoctonia blight, Soft rot
<i>Nephrolepis exaltata</i>	Boston fern	Bacterial leaf spot and blight, Botrytis blight, Rhizoctonia blight
<i>Peperomia species</i>	Peperomia	Leaf spot (fungal), Rhizoctonia blight
<i>Philodendron species</i>	Philodendron	Anthracnose leaf and fruit spot, Botrytis blight, Leaf spot (fungal)
<i>Pilea species</i>	Aluminum plant	Bacterial leaf spot and blight, Anthracnose leaf and fruit spot, Leaf spot (fungal), Rhizoctonia blight
<i>Platynerium bifurcatum</i>	Staghorn fern	Bacterial leaf spot and blight, Rhizoctonia blight
<i>Polyscias species</i>	Aralia	Anthracnose leaf and fruit spot, Bacterial leaf spot and blight, Leaf spot (fungal)
<i>Rhapis species</i>	Ladyfinger palm	Leaf spot (fungal)
<i>Rhoeo spathacea</i>	Oyster plant	Leaf spot (fungal)
<i>Saintpaulia ionantha</i>	African violet	Bacterial leaf spot and blight, Botrytis blight, Leaf spot (fungal), Powdery mildew
<i>Sansevieria triafasciata</i>	Snake plant	Bacterial leaf spot and blight, Leaf spot (fungal)
<i>Schefflera arboricola</i>	Dwarf Schefflera	Bacterial leaf spot and blight, Leaf spot (fungal)
<i>Schlumbergera species</i>	Cactus	Leaf spot (fungal)
<i>Sedum species</i>	Sedum	Leaf spot (fungal)
<i>Spathiphyllum species</i>	Spathe flower	Leaf spot (fungal), Rhizoctonia blight
<i>Syngonium podophyllum</i>	Nephthytis	Bacterial leaf spot and blight, Leaf spot (fungal), Rhizoctonia blight
<i>Yucca species</i>	yucca	Leaf spot (fungal)

(The following information may or may not be placed, in whole or in part, on the final household label)

The ornamental and turf species listed may be treated with NEU1140F COPPER SOAP. Mix 1/2 to 2 fluid ounces in one gallon of water and spray all plant surfaces thoroughly. When necessary, repeat sprays every 7 to 10 days. NEU1140F COPPER SOAP may cause some copper toxicity on some plant species. Before spraying a specific plant species, consult your State Experiment Station or make a test spray.

(The following information may or may not be placed, in whole or in part, on the final household label)

Crop	Diseases Controlled	Application Notes
Pine	Needle blight	Spray until needles are thoroughly wet with spray. Apply when new needles are just emerging.
Rose and Ornamental Shrubs	Blackspot, Downy mildew, Gray mold (Botrytis), Leafspots, Powdery mildew, Rust	NEU 1140F COPPER SOAP may cause copper toxicity on some rose varieties. Copper toxicity appears as purple spots.
Sycamore	Anthracnose leaf and fruit spot	
Turf	Ascochyta leaf blight, Cercospora leaf spots, Dollar spot	Mix 1.5 to 6 fluid ounces with 2.5 gallons of water and apply to 1,000 sq. ft. For best control, begin treatment 2 weeks before disease normally appears. Alternatively, begin treatment when disease first appears, and repeat at 7 to 10 day intervals for as long as needed.
		To reduce Ascochyta leaf blight mow less frequently, only as necessary to maintain recommended height. Water before noon to allow grass to dry. Water thoroughly only as required to avoid moisture stress. Apply NEU1140F COPPER SOAP when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. In frequently diseased areas, prune adjacent trees and shrubs to reduce turf shading and to improve air movement.
	Rust	To reduce rust mow frequently to reduce rust spore production. Water and fertilize lawn as required to avoid moisture and nutrient stress. Water before noon to allow grass to dry. Apply NEU1140F COPPER SOAP when disease first appears, and repeat at 7 to 10 day intervals for as long as needed. In frequently diseased areas, prune adjacent trees and shrubs to reduce turf shading and to improve air movement.

(The following information may or may not be placed, in whole or in part, on the final household label)

Directions for Use on Fruit and Field Crops

Do not apply this product through any type of irrigation system.

Crop	Diseases Controlled	Application Notes
Bean, Pea	Anthracnose leaf and fruit spot,	

27 7 30

Master Label of NEU1140F COPPER SOAP 25/28

	Ascochyta leaf and pod spot, Bacterial blights (halo, common and brown spot), Downy mildew, Gray mold (Botrytis), Powdery mildew, White mold (Sclerotinia)	
Beet, Chard, Spinach	Cercospora leaf spot, Downy mildew, White rust, Powdery Mildew	
Carrots	Alternaria leaf blight, Bacterial leaf blight, Cercospora leaf blight	
Celery and Celeriac	Bacterial leaf spot, Cercospora (early) blight, Septoria (late) blight	
Citrus (Grapefruit, Lemon, Lime, Orange, Pummelo, Tangerine)	Melanose spot, greasy spot, citrus scab, alternaria brown spot, Red alga (Florida)	Apply 1-3 weeks after petal fall. Repeat every 2 weeks if necessary until the fruit is 3 inches in diameter. Do not mix NEU1140F Copper Soap with oil when applied on any citrus.
Corn	Southern leaf blight, Cercospora leaf spot	
Crucifer Crops (Broccoli, Brussels sprouts, Canola, Cauliflower, Cabbage, Kale, Kohlrabi, Mustard, Pak-Choi, Rape, Rutabaga, Turnip)	Alternaria blight, Bacterial leaf spot, Downy mildew, Powdery mildew, White mold (Sclerotinia)	
Cucurbits (Cucumbers, Cantaloupe, Squash, Pumpkin, Zucchini)	Alternaria blight, Angular leaf spot, Anthracnose leaf and fruit spot, Downy mildew, Gray mold, Scab, Ulocladium leaf spot, Powdery mildew	For cucumbers grown in a greenhouse, apply NEU1140F COPPER SOAP 2 times per week in the first 2 weeks after emergence, followed by sprays every 7 days.
Currant and Gooseberry	Anthracnose leaf and fruit spot, Phyllosticta, Septoria leaf spots, Powdery mildew	
Ginseng	Alternaria blight, Botrytis blight, Phytophthora, mildew	

Crop	Diseases Controlled	Application Notes
Grapes	Downy mildew, Black rot, Phomopsis Cane and Leaf Spot, Powdery mildew, Gray mold (Botrytis)	Do not mix NEU1140F COPPER SOAP with lime. Certain Vinifera and French Hybrid varieties may be sensitive to copper sprays resulting in marginal leaf burn. Before spraying these varieties, consult your State Experiment Station or make test sprays.
Hop	Anthrachnose leaf and fruit spot, Cercospora leaf spot, Downy mildew, Powdery mildew	
Lettuce, Chicory, Endive	Downy mildew, Septoria leaf spot, Powdery mildew, Bacterial soft rot and bottom rot	Use lower rate when disease pressure is low or on copper sensitive varieties of lettuce.
Onion, Garlic, Leek, shallot, Chives	Botrytis leaf blight, Downy mildew, Neck rot, Bacterial soft rot	
Parsley	Leaf scorch, Leaf spot	
Peanuts	Sclerotinia blight, Leaf spots (early and late), web blotch	
Pome Fruit Trees (Apple, Pear, Quince)		NOTICE: NEU1140F COPPER SOAP as used in this recommendation may cause russetting of Golden Delicious and similar susceptible apple varieties. Mild russetting of other varieties may occur. Preferred use is on non-bearing or processing varieties where russetting is not a concern. On apple do not exceed the rate of 1.0 fluid ounces NEU1140F per gallon water.
	Anthrachnose leaf and fruit spot	Apply in mid-July.
	Cedar Apple Rust, Quince Rust	The disease can also be reduced by removing nearby eastern red cedar plants (<i>Juniperus virginiana</i> L.). On juniper, cedar apple rust can be controlled by spraying plants at least 4 times between late August and late October.
	Fireblight	Spray at silver tip and bud break and repeat on 3 to 5 day intervals as needed, up to petal fall. Use the lower rate if disease pressure is light and higher rate when conditions favor heavy disease pressure.

29 7 30

Crop	Diseases Controlled	Application Notes
	Scab, Sooty Blotch, Flyspeck (fruit and leaf spots)	
Small Fruits (Blackberry, Blueberry, Raspberry, Strawberry)	Gray mold (<i>Botrytis</i>), Mucor fruit rot, Rhizopus fruit rot	Apply at the start of flowering and continue every 7 to 10 days-until harvest.
Stone Fruit Trees (Almond, Apricot, Cherry, Nectarine, Peach, Plum)	Bacterial canker (<i>Pseudomonas syringae</i>), Brown rot blossom blight, leaf and fruit spots	For bacterial canker, apply as a dormant spray as buds begin to swell, repeating at the bud burst stage, and weekly thereafter as needed, up to six sprays. In the fall spray again at 10 and 80% leaf fall. For brown rot blossom blight apply full cover spray at delayed dormant (bud swell), popcorn, full bloom and petal fall stages. During wet weather additional bloom sprays may be necessary.
	Bacterial leaf spot	
	Anthracnose leaf and fruit spot, Coryneum blight, Peach leaf curl	Apply as a dormant spray in late fall during a period of dry weather.
Strawberry	Angular leaf spot, Leaf scorch, Mycosphaerella leaf spot, Phomopsis leaf blight, Powdery mildew, Septoria leaf spots	Spray 1 month after planting (or before flowering on established plants) and twice more at 7 to 10 day intervals.
	Anthracnose fruit rot, Gray mold (<i>Botrytis</i>)	Apply at the start of flowering and continue every 7 to 10 days until harvest.
Tobacco	Blue Mold (<i>Downy Mildew</i>)	
Tomato, Potato, Eggplant, Pepper	Anthracnose leaf and fruit spot, Bacterial speck, Bacterial spot, Cercospora leaf spot, Early blight, Gray mold, Late blight, Leaf mold, Septoria leaf spot	
Walnuts	Blight	

(The following information may or may not be placed, in whole or in part, on the final label)

Cultural Method to Assist in Reducing Plant Disease

Several common sense techniques can also be used to reduce plant disease. These include:

- Inspect the plants often for signs of disease or insect pests. Take appropriate measures when warranted.
- Promote healthy plant growth, but do not over fertilize.
- Do not grow the same types of plants in the same location in successive years.

- Control weed species around the garden that are related to the plant species that you are growing. Weeds are a source of plant pathogens.
- Space plants to ensure good airflow and drying after rain. Also, water plants in the morning to minimize the time that the plants are wet. Wet leaves, flowers and fruit promote infections by plant pathogens.
- Prune plants during dry weather to avoid wound infections.
- At the end of the growing season remove and compost all garden refuse. Garden refuse can act as a source of plant pathogens.

NOTICE TO BUYER

Seller warrants that this product conforms to the chemical description on this label and is reasonably fit for purposes stated on this label only when used in accordance with directions under normal use conditions. This warranty does not extend to use of this product contrary to label directions, or under abnormal use conditions, or under conditions not reasonably foreseeable to seller. Buyer assumes all risk of any such use. Seller makes no other warranties, either expressed or implied.

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