PM 23 45002-4 1 of 14

SEP 23 1991

Arthur F. Gohlke
Agent for Cuproquim
Cuproquim SA
Cuproquim Corp.
9601 Katy Fwy 350
Houston, TX 77024

Dear Mr. Gohlke

Subject: Add New Uses
Hydrox
EPA Registration No. 45002-4
Your Submission Dated August 29, 1991

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/-reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. In the environmental hazards section update the statements to read:

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

b. Delete the Signal Word CAUTION wherever it appears on the labeling and replace with an appropriate precautionary heading. Only one Signal Word, DANGER, is allowed on pesticide labeling.

c. On page 3 correct the spelling of "aerial"

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will 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.

A stamped copy of the label is enclose[illegible] your records.

Sincerely you[illegible],

Cynthia Giles-Parker
Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

PM 02 45002-4

FRONT PANEL

DRAFT LABEL

DRAFT LABEL 8-91

HYDROX

FUNGICIDE/BACTERICIDE

Active ingredient: Cupric Hydroxide*..... 77%

Inert ingredients:..... 23%

(*Copper expressed as elemental 50%)

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

PRECAUTION ALL UNSUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicado ampliament.

STATEMENTS OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with steady stream of water for 15 minutes. Get medical attention.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferable mouth-to-mouth. Get medical attention.

IF SWALLOWED: Drink promptly a large quantity of milk, egg white, gelatin solution, or, if these are not available, large quantities of water. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. May cause skin sensitization reactions in certain individuals. Do not get in eyes or on clothing. Harmful if swallowed, or absorbed through the skin. Avoid contact with skin. Wash thoroughly after handling. Remove and wash contaminated clothing before reuse.

SEE ADDITIONAL PRECAUTIONS ON SIDE OR BACK PANEL.

EPA Reg. No. 45002-4 EPA Est. No. 45002-MX-02

CUPROQUIM CORPORATION
9601 Katy Freeway, Suite 350
Houston, Texas, 77024

Net Weight xx Pounds, xx Kilograms

ACCEPTED
with COMMENTS
In EPA Letter Dated:
SEP 23 1991
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 45002-4

BACK PANEL

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not allow rinsate from cleaning of equipment or disposal material to enter surface or ground water.

DIRECTIONS FOR USE

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

RE-ENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: DANGER. Area treated with HYDROX on (date of application). Do not enter treated areas without protective clothing until sprays have dried. Required Protective clothing should include long-sleeved shirt, long-legged pants, rubber overshoes, gloves and a hat.

GENERAL INSTRUCTIONS

HYDROX may be applied by **Aerial**, or by **Dilute** or **Concentrated Ground Sprayers**, or **Chemigation** on crops and at rates given on this label unless specifically prohibited for that crop use. Sufficient spray volume and spray pressure is essential to thoroughly penetrate the plant canopy and give thorough spray coverage and at the times indicated. On crops sensitive to copper fungicides use the higher volumes of spray water per acre.

Use the higher dosage rates of HYDROX on mature trees, or when disease pressure is severe or weather conditions warrant.

When using adjuvants or other pesticides in combination with this product, always observe the caution statements on the product's label and required days before harvest. Sprays of HYDROX maybe applied upto day of harvest. Residue is exempt from a residue tolerance.

Before mixing with other products in spray tank, be sure that products are compatible. HYDROX should not be applied in spray water having a pH of less than 6.5 as phytotoxicity may result. Also avoid using water having a pH of greater than 9.0 as effectiveness may be reduced.

MINIMUM RECOMMENDED SPRAY VOLUME in gallons per acre (GPA) when applying HYDROX. If crop is sensitive to copper sprays, higher volumes of spray water will decrease potential injury. A full dilute spray on tree crops means the maximum amount of spray when uniformly applied that an acre of such trees will hold to the point that excess spray begins to drip off. Thus the dilute spray volume per acre will depend on tree size and leaf surface per acre. The following listed dilute spray volumes are the volume that will generally provide such coverage on average size of full leafed trees. A Concentrate spray is a spray applied in less volumes than a dilute. The extent of the concentration varies by equipment used. Thus the following spray volumes for a concentrated spray are the minimum volumes recommended per acre:

GROUND SPRAYS - CONCENTRATED AND DILUTE: (Minimum GPA).

Citrus - Concentrate: 100 GPA. (Florida 50 GPA).
Dilute: 800 to 1,000 GPA on mature trees and decrease toward 100 GPA as tree size decreases.

Fruit and Nut Trees - Concentrate: 50 GPA. Dilute spray: 250 GPA for mature fruit trees, and to 400 to 800 GPA acre for other tree crops depending on size. (On young fruit tree plantings, use a minimum of 15 gallons spray per acre.)

Vegetable and Field Crops - Concentrate: 20 GPA. Dilute: 100 to 125 GPA.

AIRIAL APPLICATION:

For vegetables and field crops, use 3 to 20 gallons per acre. For tree crops, use 10 to 20 gallons per acre.

GENERAL CHEMIGATION INSTRUCTIONS

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

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, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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

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 HYDROX slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures.

HYDROX should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

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 HYDROX slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures.

HYDROX should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

MIXING INSTRUCTIONS FOR SPRAY APPLICATION

Fill the spray tank one-fourth to one-third full with clean water. Start agitation (NOTE: Proper agitation creates a rippling or rolling action on the liquid surface). Add HYDROX at the recommended rate.

Mix thoroughly and then add enough water to fill spray tank. Maintain sufficient agitation during mixing and during application of sprays to ensure a uniform spray mixture. When tank mixing with other pesticides, add wettable powders or dry flowables first and emulsifiable concentrates or spreader-stickers last. Before adding a second pesticide, be sure that prior product is well mixed and suspended before adding the next ingredient.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.
STORAGE: Store in a cool secure, dry area, in original containers.
CONTAINER DISPOSAL: Completely empty bag into application

equipment. Dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

See 45002-7 for label

FROST INJURY PROTECTION:

Bacterial ice nucleation inhibitor - Application of made to all crops listed on this label at rates and stages of growth indicated on this label at least 24 hours and not more than 72 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (Pseudomonas syringae, Erwinia herbicola, and Pseudomonas fluorescens) may thereby provide some protection against light frost. The degree of frost protection will vary with weather conditions and other factors. Not recommended for those geographical areas where weather conditions favor severe frost.

ALFALFA: **Cercospora & Leptosphaerulina Leaf Spots.** Apply at 2 lbs per acre 10-14 days before each harvest or earlier if disease threatens. Apply with ground or aerial equipment. Spray injury may occur with sensitive varieties, such as Lahontan.

ALMONDS, APRICOTS: Dormant and delayed dormant. Use to control **Coryneum Blight** (Shot Hole) and **Bacterial Blast** (Pseudomonas). For dilute applications apply 2-3 lbs per 100 gallons of water as a full cover spray (300-400 GPA). For concentrate applications apply 6-12 lbs in 25-100 gallons of water per acre. For aerial applications use 6-12 lbs in 15-25 gallons of water per acre. Early application is more effective on Blast, later application is more effective on Shot Hole. Popcorn to full bloom for control of **Shot Hole** and **Brown Rot Blossom Blight** - For dilute applications, use 2 lbs per 100 gallons of water as a full cover spray or 8 lbs per acre as a low volume concentrate spray. For aerial applications apply 8 pounds per acre in 15-25 gallons of water per acre.

APPLES: **Anthracnose, Pseudomonas, European Canker.** Apply 3-4 lbs before fall rains in 100 gallons of water, using 300-400 gallons water per acre. Use on yellow varieties may cause discoloration. **Fire Blight.** Apply 2-4 lbs per 100 gallons of water as full cover spray at silver and green tip stages. Do not apply after green tips reach 1/2 inch because phytotoxic problems may occur at later applications.

AVOCADOS: **Scab.** Apply when bloom buds begin to swell at 2 lbs HYDROX per 100 gallons or 8-10 lbs per acre depending on equipment. Continue applications at monthly intervals for 5 to 6 applications or as needed. Follow recommendations of State Agricultural Experiment Stations.

BANANAS: **Sigatoka.** Apply by air at 2 lbs per acre in 3 gallons of water containing 0.5 gallon agricultural oil. Apply on a 14-day schedule throughout the wet season. Apply at 21 day intervals during

dry periods. **Black Pitting** - Apply at 4 lbs per 100 gallons directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after emergence.

BEANS: **Bacterial Blight** (Halo, Brown spot and Common) - For protective sprays, apply first application when plants have second trifoliate leaves or are about five to six inches high. Apply on 7-14 day schedule depending on local conditions. Use 1 to 3 lbs per acre depending on disease severity.

BLACKBERRIES: (Santiams, Logans, Boysens, Marions, Auroras, Cascades, Chehalems, and Thornless Evergreens) - **Leaf & Cane Spot** -Apply delayed dormant spray after training in spring at 4 lbs plus 1 quart superior-type oil per 100 gallons. Apply again in late spring at 2 lbs plus 1 quart superior-type oil per 100 gallons and when leaf buds begin to open and repeat when flower buds show white. Make fall spray applications after harvest using 4 lbs plus 1 quart superior-type oil per 100 gallons.

BROCCOLI, BRUSSELS SPROUT, CABBAGE & CAULIFLOWER: **Downy Mildew** (Peronospora) - Apply 0.5 to 1 lb in a minimum of 25 GPA at 7 day intervals. **CABBAGE ONLY: Black Rot** (Xanthomonas) & **Black Leaf Spot** (Alternaria) - Apply at 2 lbs per acre in a minimum of 25 GPA at 7-10 day intervals. (Caution: A slight reddening of older leaves may occur on broccoli and a slight flecking of wrapper leaves may occur on cabbage at the two pound rate). For control of diseases on these crops, begin application after transplants are set in the field, or shortly after emergence of field seeded crops or when conditions favor disease development.

CACAO: **Black Pod** - Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 to 21 days in high rainfall areas at varying rates from 2 to 4.5 lbs per acre depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 6.5 to 8.5 lbs per acre, according to disease incidence and planting density.

CANTALOUPES, HONEYDEWS & MUSKMELONS: **Downy Mildew** - Apply weekly at 2 lbs per acre before disease appears.

CARROTS: **Carrot Blight** (Cercospora) - When disease threatens, apply 2 lbs per acre at 7 to 14 day intervals depending on disease severity.

CELERY: **Early, Late & Bacterial Blights** - Apply as soon as plants are first established in the field at 2 lbs per acre, then every 5-7 days depending on severity and weather. A spreader-sticker may be added or one or two quarts of a suitable agricultural spray oil per acre may be used as spreader-sticker.

CHERRIES: **Dead bud** (Pseudomonas syringae) and **Coryneum blight** -Apply 6 lbs plus 1 pint superior-type oil per 100 gallons in October (before heavy fall rains) and again in January. In orchards where the disease is severe, a spray should also be applied in August. **Brown Rot Blossom Blight** - Apply 2 to 3 lbs per 100 gallons water as a full cover spray applied at popcorn and full bloom

CITRUS: **Melanose, Pink pitting, and Scab (except Texas)** -Use 1 1/2 lbs per 100 gallons by dilute spray or 8 to 12 lbs per acre by concentrate or aerial spray. Apply at beginning of dormant season. Repeat at 2/3 petal fall, and again when fruit is 1/2 inch in diameter, and as necessary thereafter. **In Texas**, use 5 to 8 lbs per acre with above timings. For pink pitting apply about mid July in Florida. **Greasy spot** - Use 0.75 to 1.5 lbs per 100 gallons by dilute spray, or 3 to 6 lbs per acre by concentrate or aerial spray. For **Brown Rot** - Use 1/2 to 1 1/2 lbs per 100 gallons in dilute spray; applying 6 gallons per tree to the lower 3-4 feet of tree skirt and to the bare ground under tree and one foot beyond the tree line before fall rains, and 2-4 gallons per tree in January or February depending upon the amount of rain during this period. Addition of Spreader-sticker adjuvant may increase the effectiveness of the treatment. NOTE: Do not use or apply in areas where copper injury is known to occur or where fumigation with hydrogen cyanide gas is practiced. (California only - In areas subject to copper injury, add 1/2 to 1 lb of high grade spray lime per each lb of HYDROX added.

CITRUS: **Bacterial canker:** (except California) - To aid in suppressing or controlling bacterial canker on citrus, spray HYDROX to expanding foliage and young fruit less than 3 months old, their most susceptible period. On bearing trees apply above spray for melarose control applied 1 to 3 weeks after petal fall and repeating with 2 sprays at monthly intervals. Also one spray at the melanose recommendation applied during the early spring flush maybe beneficial. On non-bearing trees, including greenhouse, nurseries, and young transplants, a spray of 7.5 lbs HYDROX in 500 gallons of water sprayed to point of run-off may be applied monthly, or as needed to keep expanding tender foliage protected during its fast growth period of early spring to late fall. If bearing trees are not routinely sprayed for melanose but bacterial canker is a threat, follow the melanose spray program and the two monthly repeat sprays described above along with the early spring flush spray.

COFFEE: **Iron spot** (Cercospora coffeicola) and **Pink Disease** (Costicium salmonicolor) - Apply at 2 lbs per acre as a concentrate or dilute spray. Begin treatment at start of wet season and continue at monthly intervals for three applications. **Coffee Berry Disease** (Collectotrichum coffeanum) - Apply 6 to 8 lbs per acre. Make first spray after flowering and before onset of long rains and repeat at 21 to 28 day intervals until picking. Use higher rates and shorter intervals when rainfall is heavy and disease pressure is high. **Bacterial blight** (Pseudomonas syringae) - Apply 6 to 8 lbs per acre. Begin spray program before the onset of the long 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 flowering(s), especially when coinciding with wet weather. Use higher rates and shorter intervals when rainfall is heavy and disease pressure is high. **Leaf rust** (Hemileia vastatrix) -Apply at 3.5 to 5.5 lbs per acre for average density plantings. High density plantings may require 7 to 8 lbs per acre. Make first application before the onset of rains and then continue at 21 day intervals while the rains continue and disease conditions continue. Use the higher rates when rainfall is heavy and disease pressure is high.

CRANBERRY: **Fruit Rot** - Apply at 8 lbs per acre beginning in late bloom (mid July), followed by two additional applications made at 10 to 14 day intervals.

CUCUMBERS: **Angular Leaf Spo & Downy Mildew** - Apply weekly once the plants begin to vine. Use 1.5 to 2 lbs per acre.

CURRANTS & GOOSEBERRY: **Leaf Spot** - Make three applications of HYDROX at 10 lbs per acre, starting after harvest, before bloom and after petal fall.

EGGPLANT: **Alternaria Blight, Anthracnose, Phomopsis** - Use 2 lbs HYDROX per acre before disease appears. Repeat at 7 to 10 day intervals.

FILBERT: **Bacterial blight** - Use 16 to 24 lbs plus 1 pint superior-type oil per 100 gallons as a post-harvest spray in late August or early September. In seasons of heavy rainfall, apply another spray when three-quarters of leaves have dropped. For **Eastern Filbert Blight** - Apply as a dilute spray in sufficient water for thorough coverage. Make initial application after harvest in October before heavy winter rains begin. Repeat application in late February to early March and again 4 weeks later.

GRAPES: **Black Rot, Powdery Mildew & Downy Mildew** - Apply 2 lbs HYDROX plus 2-6 lbs hydrated lime per acre as a dilute or concentrate spray. Use for the last one or two late summer applications following early season application of another fungicide. Follow State schedule for exact timing. (Caution: Slight to severe foliage injury may occur on copper-sensitive varieties such as Concord, Delaware, Niagara, and Rosette.)

HOPS: **Downy Mildew** - Apply 2 lbs as a fungicide crown treatment (after pruning, but before training) as needed. After training, additional fungicide treatments are needed at about 10 day intervals. Discontinue use 2 weeks before harvest.

LETTUCE: **Downy mildew** - Apply 1 to 2 lbs per acre in 100 gallons or more water. Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease. NOTE: The application rates recommended, may cause yellowing of leaf margins. Sensitivity may vary due to varieties and weather conditions. Increasing the volume of spray water will frequently decrease phytotoxicity potential.

MANGO: (Florida only). **Anthracnose** - Apply monthly after fruit set until harvest at 2 lbs HYDROX per 100 gallons or 8-10 lbs per acre depending on equipment. Consult Extension Service for local recommendations.

OAK TREES: **Ball moss and Spanish moss** - Mix 6 lbs in 100 gallons of water. Apply in spring after heavy rain. Thoroughly wet tree and moss, applying about 1.5 gallons per foot of tree height. A second application may be required after 12 months.

OLIVES: (California only), **Leaf Spot** (Peacock) - Use 5 to 6 lbs per 100 gallons acre applied by dilute spray before fall rains begin. NOTE: In areas with 10 inches or less of rainfall per year, use only 2 lbs. In concentrate sprays, apply 8 to 12 lbs per acre in not less

than 40 gallons of water, or 4 to 8 lbs per acre in areas with less than 10 inches of rainfall per year. A second application in early spring should be made if disease is severe.

ONION: **Purple Blotch & Downy Mildew** - Apply 2 lbs HYDROX per acre when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals. Addition of a spreader-sticker at recommended rates may improve wetting of onion foliage.

PAPAYA: (except California) **Anthracnose** - Mix 2 lbs per 100 gallons water on a dilute spray basis. Addition of a sticker is desirable. Begin treatment before rains when disease is expected. Repeat at 10 to 14 day intervals during periods of heavy rainfall.

PEACHES & NECTARINES: **Leaf Curl & Coryneum Blight (Shot Hole)** - Apply 8 to 16 lbs per acre at leaf fall. Use the higher rates per acre when rainfall is heavy and disease pressure is high. Addition of an agricultural spray oil may be desired. **Brown Rot Blossom Blight** - Apply at 8 to 12 lbs per acres as a full cover spray at pink bud. (Application at this time also affords some control of Leaf Curl and Coryneum Blight.) **Bacterial Spot** - Apply 12 to 16 lbs per acre as a dormant application. If Bacterial spot infection is potentially heavy, two post bloom sprays applying 1/4 lb per 100 gallons at first and second cover sprays in full dilute spray may aid control. Do not spray later than three weeks prior to harvest. Do not use at rates above those recommended. (**Caution:** Slight defoliation and spotting of leaves may occur from use in cover sprays).

PEANUTS: **Cercospora Leaf Spot** - Begin spraying 25 to 40 days after planting or when disease symptoms appear. Make ground or aerial application at 1.5 to 3 lbs per acre. For aerial application use 3-10 gallons of water. Continue applications at 10-14 day intervals. Use in sufficient water to get adequate coverage. For dust application, HYDROX may be blended by dealers with talc and/or sulfur to make a 3 to 10 per cent dust and applied at equivalent rates per acre of copper.

PEARS: **Fire Blight**, (Western U.S.) - Apply at 1/4 lbs per 100 gallons or 1 pound per acre at 5 day intervals throughout bloom period. (**Caution:** May cause fruit russet).

PEAS: **Powdery Mildew** - Begin spray treatment when disease symptoms first appear. Use at 1.5 to 3 lbs per acre according to disease severity. Repeat applications at weekly intervals.

PECANS: **Shuck and Kernel Rot** (Phytophthora cactorum) and **Zonate Leafspot** (Cristulariella pyramidalis) - For suppression, apply 2 to 4 lbs per acre in sufficient water for good coverage at 2 to 4 week intervals starting at kernel growth and continuing until shucks open. Use the higher rate and shorter intervals if frequent rainfall occurs. **Mosses, Alga, and Lichen** - Mix 6 lbs per 100 gallons spray plus spreader-sticker on a dilute spray basis and apply in dormant season before buds swell, thoroughly wetting limbs and mosses.

PEPPERS: **Bacterial Spot** - When disease threatens, apply 2 to 3 lbs per acre (1 to 1.5 lbs per 100 gallons) at 7 to 14 day intervals depending on disease severity.

PHILODENDRON: **Bacterial Leaf Spot** - Apply weekly before disease appears with 1.5 lbs of HYDROX plus 1.5 lbs of a coordination product of Maneb and zinc (80% active compound) per 100 gallons of water, (only using this product if it is EPA registered for this crop).

POTATOES: **Early & Late Blight** - Apply at 7 to 10 day intervals starting when plants are 4 to 6 inches high and continue until harvest. Use 1 to 1.5 lbs per acre in those locations where disease is light and up to 3-4 lbs per acre where disease is more severe. If late blight is a problem, apply prior to digging or in vine kill spray.

PUMPKINS & SQUASH: **Powdery Mildew** - Begin applications when plants are 3 weeks old or when first disease symptoms appear. Use at weekly intervals at 1.5 to 3 lbs per acre depending on disease severity.

STRAWBERRIES: **Downy mildew, Leaf spot and Leaf blight** - Use 2 to 3 lbs per 100 gallons water per acre. Begin spray when plants are established and continue on a weekly schedule throughout the season. Discontinue applications if signs of phytotoxicity appear. May be used in nursery and field plantings.

SUGAR BEETS: **Cercospora Leaf Spot** - Start spray when disease threatens and continue for 4 to 5 applications. Spray 10-14 days depending on weather conditions at 2 to 5 lbs per acre depending on disease severity. Addition of suitable agricultural spray oil is recommended at 2 quarts per acre.

SYCAMORE: **Anthracnose** - Make two applications using 2 to 3 lbs per 100 gallons as a full cover spray. Make first application at bud crack and second application 7-14 days later at 10% leaf expansion.

TOMATOES: **Early blight, Anthracnose, Bacterial speck, Gray leaf spot** - When disease threatens, apply 2 to 3 lbs per acre at 7 to 10 day intervals. Use more frequent application when disease pressure is high. **Bacterial spot** - When disease threatens, apply 2 to 4 lbs per acre at 7 to 10 intervals, more frequently when disease is severe. May be tank-mixed with 1.5 to 2 lbs per acre of Maneb or coordination product of maneb and zinc (80% active ingredient) if product is labeled for use on tomatoes. Follow all directions for use and days between last spray and harvest on those product labels. Do not use above named fungicides in the tank-mix unless they are registered for use on tomatoes. Addition of a Chlorothanil like Bravo, controls target leaf spot and may enhance control of some of the other listed diseases on this label with a tank-mix.

WALNUTS: **Bacterial Blight** - Apply 8 to 12.5 lbs per acre in early pre-bloom (1% pistillate, not catkins blooms showing) and the second application when 10% to 20% pistillate (not catkins) blooms are showing. Repeat applications 3-4 times as needed during bloom and and early nutlet stage at 7-10 day intervals. Additional applications may be necessary when frequent rainfall occurs. Dilute: Apply 2 pounds per 100 gallons water (minimum of 8 lbs/acre).
Concentrate: Apply a minimum of 8 lbs per acre in 50-100 gallons of water per acre. Use higher rate and frequency when disease pressure is high with frequent rains. One pint of summer oil emulsion may be added per 100 gallons of spray. Do not apply more than 12.5 lbs per acre per application.

WATERMELON: Anthracnose & Downy Mildew - Apply as soon as plants become established and at weekly intervals thereafter. Anthracnose - Use at 2 lbs per acre. Downy Mildew - Use at 1.5 to 3 lbs per acre, according to disease severity.

WHEAT AND BARLEY: Septoria Leaf Blotch, Helminthosporium Spot Blotch - Apply 1.5 to 2 lbs per acre. Make first application at early heading and follow with second application 10 days later.

Conditions of Sale:

1. Seller warrants that this product consists of the ingredients specified and is reasonably fit for use as directed on the label. No one, other than an officer of Seller, is authorized to make any other warranty, guarantee or direction concerning this product.

2. Because the time, place, rate of application and other conditions of use are beyond Seller's control, Seller's liability from the handling, storage and use of this product is limited to replacement of product or refund of purchase price.

BRAVO Reg. TM of Fermenta ASA Corp.