UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PM 23

10163-107

1 of 14

FEB 27 1991

Ms. Anne Stout
Gowan Company
P.O. Box 5569
Yuma, AZ 85366-5569

Dear Ms. Stout:

Subject: Label Amendment- Addition of Chemigation
Gowan Procop R
EPA File Symbol 10163-107
Your Submissions Dated February 6, 1991

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following changes:

1. Under Sprinkler Chemigation, add in paragraph four "vacuum relief valve" so it reads, The system must contain a functional check valve, vacuum relief valve and low pressure drain..."

2. Under Pears; delete "3 to", so it reads "Apply at 5 day intervals throughout the bloom period." also delete "Use the shorter interval under blight conducive weather conditions."

A stamped copy of the accepted label is enclosed for your records. Please submit three (3) copies of final printed labeling incorporating the changes above.

Sincerely yours,

Joanne I. Miller
Acting Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

CONCURRENCES								
SYMBOL	H7505C							
SURNAME	Robbins							
DATE	2/26/91							

EPA Form 1320-1 (12-70) OFFICIAL FILE COPY

*U.S. GPO : 1985-467-853

February 5, 1991
A:procopr

GOWAN PROCOP R

	% by Weight
ACTIVE INGREDIENT: Copper Hydroxide.	77%
INERT INGREDIENTS:.	23%
TOTAL	100%

Metallic copper equivalent. 50%

ACCEPTED
with COMMENTS
In EPA Letter Dated:

KEEP OUT OF REACH OF CHILDREN
DANGER-PELIGRO

Precaucion al Usuario: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicado ampliamente.

FEB 27 1991
Under the Federal Insecticide, Fungicide, ... Act as amended, for pesticide registered under EPA Reg. No. 10163-107

STATEMENT OF PRACTICAL TREATMENT

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

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

IF INHALED: Remove victim to fresh air. If not breathing, apply artificial respiration.

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

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

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
DANGER-PELIGRO

Corrosive. Causes irreversible eye damage. Wear goggles, face shield, or safety glasses. Causes skin irritation. Harmful if swallowed, absorbed through the skin, or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with the skin, eyes, or clothing. Avoid breathing dust. Protective clothing should be worn. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

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 sites. Do not allow rinsate from cleaning of equipment or disposed material to enter surface or ground water.

GOWAN COMPANY

EPA Reg. No. 10163-107
EPA Est. No. 10163-AZ-1

P.O. Box 5569
Yuma, AZ 85366

NET CONTENTS _____ POUNDS

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 enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry 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. 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 and oral warnings must include the following information: DANGER--Area treated with copper hydroxide on (date of application.) Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, follow instructions under Statement of Practical Treatment section.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

STORAGE: Store in ventilated, cool area away from sources of heat and flame. Keep in tightly closed original container.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Completely empty bag into application equipment by tapping sides and bottom to loosen clinging particles. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burnng. If burned, stay out of smoke.

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, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniforn distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any location affording maximum visibility to the sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

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.

When mixing, fill nurse tank half full of water. Add Gowan ProCop R 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 labels of all products used in the mixture.

Gowan ProCop R 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 functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is not a 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.

The system must contain a functional check 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 injections 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 injections 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.

When mixing, fill nurse tank half full of water. Add Gowan ProCop R 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 labels of all products used in the mixture.

Gowan ProCop R 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.

GENERAL INSTRUCTIONS

Use Gowan ProCop R as noted below. Gowan ProCop R is adaptable to spraying from aircraft and ground equipment. Depending on the equipment used and the specific crop, the volume applied per acre will differ. Refer to the table below for minimum recommended spray volume application rates per acre.

Minimum Recommended Spray Volume in Gallons per Acre (GPA) to be used when applying Gowan ProCop R

		Ground	
	Aerial	Dilute	Concentrate
Vegetables & Field Crops	3	20	5
Tree Crops & Vines	5	150	25
Citrus	10	400	25

When mixing, fill spray tank one-half full with water. Add Gowan ProCop R slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers, insecticides, nutrients, etc, should be added after Gowan ProCop R. ProCop R is compatible with most commercially formulated spreader-stickers, oils, insecticides such as carbaryl and parathion, and other fungicides. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Observe all cautions and limitations on labels of all products used in mixtures.

Gowan ProCop R may be applied as an aerial, ground dilute or ground concentrate spray unless specifically directed otherwise by crop.

When selecting a use rate for Gowan ProCop R, do not apply less than the label recommended minimum amount. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. In addition, use the higher rates for large mature tree crops.

The per acre use rate of Gowan ProCop R is applicable for both dilute and concentrate spraying. Consult the ProCop R label for specific rates and timing of application by crop.

Complete spray coverage is essential to assure optimum performance from Gowan ProCop R. When treating on a concentrate basis or by aerial application,

unless you have had specific previous experience, it it advisable to test for compatibility and crop tolerance prior to full scale commercial utilization.

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

NOTE: GOWAN PROCOP R SHOULD NOT BE APPLIED IN A SPRAY SOLUTION HAVING A pH LESS THAN 6.5 OR GREATER THAN 9.0 AS PHYTOTOXICITY MAY OCCUR.

Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of Gowan ProCop R resulting in possible phytotoxicity or loss of effectiveness.

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

FROST INJURY PROTECTION

Bacterial Ice Nucleation Inhibitor:
Application of Gowan ProCop R made to all crops listed on this label at rates and stages of growth indicated on this label, at least 24 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (Pseudomonas syringae, Erwinia herbicola, and Pseudomonas fluorescens) and may therefore provide some protection against light frost. Not recommended for those geographical areas where weather conditions favor severe frost.

CITRUS (Grapefruit, Lemon, Lime, Orange, Tangelo, and Tangerine)
Melanose, Scab, Pink Pitting: Use 4 to 12 lbs. per acre. Apply as pre-bloom and post-bloom sprays. Greasy Spot: Use 2 to 6 lbs. per acre. Use higher rates when conditions favor disease. Brown Rot: Use 4 to 8 lbs. per acre. Begin application in fall and continue as needed. Apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground one foot beyond skirt. Use higher rates when conditions favor disease. NOTE: In California, in areas subject to copper injury, add 1/3 to 1 pound of high quality lime per pound of Gowan ProCop R. Phytophthora: Use 1 lb. per acre. Mix with 1 gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs. Apply in May prior to summer rains and/or in the fall prior to wrapping trees for freeze protection. Treatment serves for protection for up to one year, but does not cure existing infections. Citrus Canker (Suppression Only): Use 12 lbs. per acre. Spray flushes 7-14 days after shoots begin to grow. Young fruit may require an additional application. Number and timing of application will be dependent upon disease pressure. Under heavy pressure, each flush of new growth should be sprayed.

FIELD CROPS

ALFALFA
Cercospora and Leptosphaerulina Leaf Spots: Use 2 lbs. per acre. Apply 10-14 days before each harvest or earlier if disease threatens. NOTE: Spray injury may occur in sensitive varieties such as Lahontan.

CANTALOUPES, HONEYDEWS, MUSKMELONS
Downy Mildew: Use 2 lbs. per acre. Begin application before disease appears and repeat at 5 to 7 day intervals as needed depending on disease severity.

PEANUT
Cercospora Leaf Spot: Use 1.5 to 3 lbs. per acre. Begin spraying at 35-40 days after planting or when disease symptoms first appear and repeat at 10-14 day intervals as needed. Reduce sprays to 7 day intervals during humid weather. Use higher rates when conditions favor disease. One to 2 quarts per acre of a 6 pound flowable sulfur may be added.

POTATOES
Early and Late Blight: Apply at 7 to 10 day intervals starting when plants are six inches high until 2 weeks before harvest. In locations where disease is light, use 1 to 1.5 lbs. per acre and up to 3 to 4 pounds per acre where disease is more severe.

STRAWBERRIES
Leaf Spot, Leaf Blight: Use 2 to 3 lbs. per acre. Begin application when plants are established and continue on a weekly schedule throughout the season. NOTE: Discontinue applications if signs of phytotoxicity occur.

SUGAR BEETS
Cercospora Leaf Spot: Use 2 to 5 lbs. per acre. Begin spraying when disease development threatens and repeat at 10-14 day intervals as needed. Use the higher rate when disease is severe. Addition of a suitable agricultural spray oil is recommended at 2 quarts per acre.

WATERMELON
Anthracnose: Use 2 lbs. per acre. Apply as soon as plants become established in the field and repeat at weekly intervals as needed depending upon disease severity. Downy Mildew: Use 1.5 to 3 lbs. per acre. Apply as soon as plants become established in the field and repeat at weekly intervals as needed depending on disease severity. Use higher rates when conditions favor disease.

WHEAT, BARLEY
Septoria Leaf Blotch, Helminthosporium Spot Blotch: Use 1.5 to 2 lbs. per acre. Make first application at early heading and follow with a second spray 10 days later. Use the higher rate when disease threatens.

TREE CROPS

ALMONDS
Coryneum Blight, Blossom Brown Rot: Use 8 to 12 lbs. per acre. Dormant application: Apply before foliage buds begin to swell. Use higher rates when rainfall is heavy and disease pressure is high. Use 6 to 8 lbs. per acre for early bloom (popcorn) application: Apply before full bloom. Use higher rates when rainfall is heavy and disease pressure is high. NOTE: To avoid plant injury, do not use the above rate after full bloom. Bacterial Blast (Pseudomonas): Use 12-16 lbs. per acre. Apply at dormant to early pink bud. For control in sprinkler irrigated orchards or where disease is severe, apply 1 pound per acre at 2 week post-bloom intervals or just before sprinkling. NOTE: Injury may occur from post-bloom sprays, especially on Neplus varieties.

APPLE (NORTHWEST STATES) (EXCEPT CALIFORNIA)
Anthracnose, European Canker, Pseudomonas: Use 12 to 16 lbs. per acre. Apply before fall rains. Use higher rates under severe disease conditions. NOTE: Use on yellow varieties may cause discoloration. To avoid, pick before spraying. Fireblight: Apply 8 to 16 lbs. per acre. Make application between silver-tip and green-tip. Apply as a full cover spray. NOTE: Crop injury may occur from late application; discontinue use when green-tip reaches 1/2 inch. Crown or Collar Rot: Use 4 lbs. in 100 gallons of water. Drench lower trunk area of each tree using no more than 4 gallons of suspension per tree. Apply either in early spring or in late fall after harvest. NOTE: Do not use if soil pH is below 5.5 since copper toxicity may result.

APPLE (CENTRAL AND NORTHEAST STATES)
Anthracnose, European Canker, Pseudomonas: Use 12 to 16 lbs. per acre. Apply before fall rains. Use higher rates under severe disease conditions. NOTE: Use on yellow varieties may cause discoloration. To avoid, pick before spraying. Fireblight: Apply 6 to 12 lbs. per acre. Make application between silver-tip and green-tip. Apply as a full cover spray. NOTE: Crop injury may occur from late application; discontinue use when green-tip reaches 1/2 inch. Crown or Collar Rot: Use 4 lbs. in 100 gallons of water. Drench lower trunk area of each tree using no more than 4 gallons of suspension per tree. Apply either in early spring or in late fall after harvest. NOTE: Do not use if soil pH is below 5.5 since copper toxicity may result.

APRICOTS
Coryneum Blight (Shot Hole), Blossom Brown Rot: Use 8 to 12 lbs. per acre. Apply at popcorn to full bloom and again in the fall as a post-harvest application after approximately 50% leaf drop. Use higher rate when conditions favor disease. NOTE: Applications after bloom and before harvest will result in crop injury.

AVOCADOS
Scab: Use 8 to 12 lbs. per acre. Apply when bloom buds begin to swell and continue application at monthly intervals for 5 to 6 applications. Use higher rate when conditions favor disease. Follow recommendations of State Agricultural Experiment Stations.

BANANAS
Sigatoka: Use 2 lbs. per acre. Apply by air in 3 gallons of water combining 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: Use 4 lbs. per acre. Mix in 100 gallons of water (4 pounds per acre) directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.

CACAO
Black Pod: Use 2 to 4.5 lbs. per acre. 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 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 pounds per acre, according to disease incidence and planting density.

CHERRY
Dead Bud (Pseudomonas syringae), Coryneum Blight: Use 8 to 12 lbs. per acre. Make first application in fall before heavy rains and a second at late dormant. In orchards where the disease is severe, a spray should also be applied shortly

after harvest. Brown Rot, Blossom Blight: Use 8 to 12 lbs. per acre. Apply a full cover spray at popcorn stage and a second application at full bloom.

COFFEE

Coffee Berry Disease (Collectotrichum coffeanum): Use 6 to 8 lbs. per acre. Apply first spray after flowering and before onset of long rains and then at 21-28 days interval until picking. Use higher rates when rainfall is heavy and disease pressure is high. Bacterial Blight (Pseudomonas syringae): Use 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 when rainfall is heavy and disease pressure is high. Leaf Rust (Hemileia vastatrix): Use 2 to 4 lbs. per acre. Apply before the onset of rain and then at 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high. Iron spot (Cercospora coffeicola) and Pink Disease (Corticium salmonicolor): Use 2 lbs. per acre. Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.

FILBERTS

Bacterial Blight: Use 16 to 24 lbs. per acre. Apply as a post-harvest spray. In seasons of heavy rainfall, apply a second spray when three-fourths of the leaves have dropped. Add 1 pint of superior type oil per 100 gallons of water.

MANGO (FLORIDA)

Anthracnose: Use 8 lbs. per acre. Apply monthly after fruit set until harvest. Consult State Extension Service for recommendations.

OLIVES (CALIFORNIA)

Peacock Spot: Use 8 to 12 lbs. per acre. Make first application before winter rains fall. A second application in early spring should be made if disease is severe. Apply the higher rate for heavy disease pressure or when conditions favor such.

PEACHES, NECTARINES

Leaf Curl, Coryneum Blight (Shothole): Use 8 to 16 lbs. per acre. Apply at leaf fall as a dormant application. Use the highest rate when rainfall is very heavy and disease pressure is high. May be used with agricultural spray oil. Brown Rot, Blossom Blight: Use 8 to 12 lbs. per acre. Full cover spray at pink bud. Application at this time affords some control of Leaf Curl and Coryneum Blight. Bacterial Spot: Use 1 lb. per acre. Post Bloom application applied at first and second cover sprays. Use 8 lbs. per acre applied as a dormant spray. (NOTE: Do not spray three weeks prior to harvest. Use only recommended rates. Spotting of leaves and defoliation may occur from use in cover sprays.)

PEARS

Fire Blight: Use 1 lb. per acre. Apply at 3 to 5 day intervals throughout the bloom period. Use the shorter interval under blight conducive weather conditions. Pseudomonas Blight: Use 12 to 16 lbs. per acre. Apply before fall rains and again during dormancy before spring growth starts. Use the higher rate when disease pressure is high or when conditions favor development of such. NOTE: Excessive dosages may cause fruit russet.

PLUMS, PRUNES
Coryneum Blight (Shothole): Use 8 to 16 lbs. per acre. Apply as a dormant spray. Use the higher rate when rainfall is heavy and/or disease pressure is high. Brown Rot, Blossom Blight: Use 8 to 12 lbs. per acre. Apply full cover application at pink, red, or early white bud stage. Use the higher rate when disease pressure is heavy or conditions favor the development of such.

WALNUT
Walnut Blight: Use 8 to 12.5 lbs. per acre. Apply first application spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage or as needed if frequent rainfall occurs. One pint of summer oil emulsion may be added per 100 gallons of spray.

VEGETABLES

BEANS
Bacterial Blight (Halo & Common): Use 1 to 3 lbs. per acre. Use the higher rate for more severe disease. For protective sprays, make first application when plants are six inches high, repeat on a 7-14 day schedule depending on local conditions.

BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER
Black Rot (Xanthomonas), Black Leaf Spot (Alternaria): Use 2 lbs. per acre. Apply at 7 to 10 day intervals. For control of disease of 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. Downy Mildew: (Cabbage Only): Use 1/2 to 1 lb. per acre. Use higher rate when conditions favor disease. NOTE: Reddening of older leaves may occur on broccoli and a flecking of wrapper leaves may occur on cabbage.

CARROTS
Cercospora Leaf Spot: Use 2 lbs. per acre. Begin application when disease first threatens and repeat at 7-14 day intervals as needed depending on disease severity.

CELERY
Cercospora Early Blight, Septoria Late Blight, Bacterial Blight: Use 2 lbs. per acre. Begin applications as soon as plants are first established in the field, repeating at 5-7 day intervals depending on disease severity and environmental conditions.

CUCUMBER
Angular Leaf Spot, Downy Mildew: Use 1.5 to 2 lbs. per acre. Apply weekly when plants begin to vine.

EGGPLANT (Except California)
Alternaria Blight, Anthracnose, Phomopsis Blight: Use 2 lbs. per acre. Begin applications prior to development of disease symptoms. Repeat sprays at 7-10 day intervals or as needed depending on disease severity.

LETTUCE
Downy Mildew: Use 1 to 2 pounds per 100 gallons of water. Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease.

ONION
Purple Blotch, Downy Mildew: Use 2 lbs. per acre. Begin when plants are 4-6 inches high and repeat at 7-10 day intervals as needed depending on disease pressure.

PEAS
Powdery Mildew: Use 1.5 to 3 lbs. per acre. Begin applications when disease symptoms first appear and repeat at weekly intervals as needed. Use higher rate for more severe disease.

PEPPERS
Bacterial Spot: Use 2 to 3 lbs. per acre. Begin applications when conditions first favor disease development and repeat at 5-10 day intervals as needed depending on disease severity. Use higher rates for severe disease.

PUMPKIN, SQUASH
Powdery Mildew: Use 1.5 to 3 lbs. per acre. Begin applications when plants are three weeks old or when disease symptoms first appear and repeat at 7 day intervals as needed to maintain control. Use the higher rates if disease is heavy or conditions favor such.

TOMATOES
Early Blight, Late Blight: Use 2 to 3 lbs. per acre. Begin when disease first threatens and repeat at 7-10 day intervals or as needed depending on disease severity. Use higher rate for severe disease. Bacterial Speck: Use 2 lbs. per acre. Begin applications when disease first threatens and repeat at 10-30 day intervals or as needed depending on disease severity. Bacterial Spot, Anthracnose, Gray Leaf Mold, Septoria Leaf Spot: Use 2 to 4 lbs. per acre. Begin applications when disease first threatens and repeat at 7-10 day intervals or as needed depending on disease severity. Use higher rate for severe disease. NOTE: May be combined with 1.5 to 2 pounds per acre maneb or combination product of maneb and zinc (80% active compound). When maneb or the combination product of zinc and maneb is used in a tank mixture with Gowan ProCop R, do not apply within 5 days of harvest.

VINES

BLACKBERRIES
Leaf and Cane Spot: Use 4 lbs. per acre. Apply delayed dormant spray after training in the spring. Make fall application after harvest. Add 1 quart of crop oil per acre

CRANBERRY
Fruit Rot: Use 8 lbs. per acre. Make first application in late bloom. One or two additional applications at 10-14 day intervals may be required depending on disease severity. Follow the advice of the State Agricultural Extension Service.

CURRANTS, GOOSEBERRIES
Leaf Spot: Use 10 lbs. per acre. Make three applications starting after harvest, before bloom, and after petal fall.

GRAPES
Black Rot, Powdery Mildew, Downy Mildew: Use 2 lbs. per acre. Begin application at bud break with subsequent applications throughout the season depending on disease severity. NOTE: Slight to severe foliage injury may occur on copper-sensitive varieties such as Concord, Delaware, Niagara, and Rosette. Either test for sensitivity or add 2 to 6 lbs. of hydrated lime per per acre.

HOPS
Downy Mildew: Use 2 lbs. per acre. Make crown treatment after pruning, but before training. After training, additional treatments are needed at about 10 day intervals. Discontinue use two weeks before harvest.

RASPBERRIES (EXCEPT CALIFORNIA)
Leaf and Cane Spot: Use 4 lbs. per acre. Apply delayed dormant spray after training in the spring. Make fall application after harvest. Add 1 quart of crop oil per acre.

MISCELLANEOUS

LIVE OAK (TEXAS AND FLORIDA)
Ball Moss: Use 6 lbs. per acre. Apply in the spring when ball moss is actively growing, using 1.5 gallons of spray per foot of tree height. Make sure to wet ball moss tuffs thoroughly. A second application may be required after 12 months. Gowan ProCop R may be injurious to ornamentals grown under Live Oaks.

SYCAMORE
Anthracnose: Use 2 to 3 lbs. per acre. Apply as a full cover spray. Apply in 100 gallons of water or sufficient volume for thorough coverage. Make first application at bud crack and second application 7-10 days later at 10% leaf expansion.

ORNAMENTALS

For control of disease on ornamentals listed below in greenhouses, field and nurseries: Apply as a thorough coverage spray using 1 pound Gowan ProCop R per 100 gallons of water. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist.

One level tablespoon of Gowan ProCop R per gallon of water is equivalent to one pound per 100 gallons.

Gowan ProCop R may be used as a maintenance spray. It can also be used alone or in combination with other fungicides such as the dithiocarbamates.

Crop	Diseases
Aralia	Xanthonas and Cercospora Leafspots, Alternaria
Azalea *	Cercospora Leafspot, Botrytis Blight, Phytophtora dieback, Powdery Mildew
Begonia	Xanthomonas Leafspot
Bulbs (Easter Lily, Tulip, Gladiolus)	Anthracnose, Botrytis Blight
Carnation *	Alternaria Blight, Pseudomonas Leafspot, Botrytis Blight
Chrysanthemum *	Septoria Leafspot, Botrytis Blight
Cotoneaster	Botrytis Blight
Euonymus	Botrytis Blight, Anthracnose
Ivy *	Xanthomonas Leafspot
Pachysandra	Volutella Leaf Blight
Periwinkle	Phomopsis Stem Blight
Philodendron	Bacterial Leaf Spot
Pyracantha	Fireblight, Scab
Rose *	Powdery Mildew, Black Spot
Yucca (Adam's needle)	Cercospora and Septoria Leafspot

* Discoloration of foliage and/or blooms have been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.

NOTE: Phytotoxicity may depend on varietal differences. If unfamiliar with the use of copper hydroxide, apply the recommended rate to a few plants and observe after 7 to 10 days for symptoms of phytotoxicity.

NOTICE ON CONDITIONS OF SALE

Our recommendations for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.