88901-1 10/30/2013 1/39

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL, SAFETY
AND POLLUTION PREVENTION

Ocion Water Sciences Group Ltd.
c/o Megan Pletka
Technology Sciences Group Inc
1150 18th St, Suite 1000
Washington, DC 20036

OCT 30 2013

Subject: Labeling Amendment to Polydex
EPA Registration No. 88901-1
Decision No. 481567
Submission Date: 7/16/13 and a final resubmission of 10/18/13

Dear Ms Pletka:

The labeling referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended to add food uses, revise application rates and make other minor changes, is unconditionally acceptable under FIFRA 3(c)5. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions, please contact Dominic Schuler at (703) 347-0260 or via email at schuler.dominic@epa.gov.

Sincerely,

Tony Kish
Product Manager 22
Fungicide Branch
Registration Division (7504P)

MASTER LABEL

Certified to NSF/ ANSI 60

POLYDEX [Alternate Brand Names: OCION™ PX10, OCION™ BD41, OCION™ PF91, OCION™ PT81]

OCION PX10

ALGICIDE / BACTERICIDE*

Use in lakes, reservoirs, lagoons, swimming areas, ponds, decorative water features, livestock watering systems, potable water supplies[+].
Use in irrigation systems (pumping stations, conveyance systems, distribution and field application systems), irrigation reservoirs, rice fields, ditches, streams, canals, and to control tadpole shrimp in rice fields.

OCION BD41

BACTERICIDE*

Use in sewage lagoons[Δ], feedlot run-off pits[Δ], animal confinement facilities, waste tanks, digesters, manure pits and similar applications.

OCION PF91[Δ]

BACTERICIDE*/FUNGICIDE

Use to reduce the bacteria* and fungi that cause spoilage in post-harvest raw fruits and vegetables.

OCION PT81

ALGICIDE / BACTERICIDE*/ FUNGICIDE

For listed food and non-food crops[ΔΔ], tropical foliage plants[ΔΔ], annual/perennial plants[ΔΔ], potted flowering plants[ΔΔ], shrubs and vines[ΔΔ], trees[ΔΔ], and turfgrass[Δ] in nurseries, greenhouses, and fields.

*Non-public Health Bacteria.
[+] Waters destined for use as Drinking Water.
[Δ] Not for use in CA.
[ΔΔ]Not for use in CA on Listed Plants.

Intended for Commercial use only. Not intended for residential/homeowner use.

ACTIVE INGREDIENT

Copper Sulfate Pentahydrate*	20.3%
Other Ingredients	79.7%
Total	100%

* METALLIC COPPER CONTENT 5.16%
One gallon of product contains 0.516 lbs of metallic copper.
CAS No. 7758-99-8

ACCEPTED
OCT 30 2013
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 83901-11

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

See attached label booklet for Use Directions

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue to rinse eye. Call a poison control center or doctor for treatment advice

If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice
If swallowed	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.
Note: Have the product container or label with you when calling a poison control center or doctor for treatment. Contact your poison control center at 1-800-222-1222. For help with a spill, leak, fire or exposure involving this material call CHEMTREC 1-800-424-9300. **Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.**	

NET CONTENTS: 2.64 Gallons (10 L)

Ocion Water Sciences Group Ltd.
350-3771 Jacombs Road
Richmond, BC V6V 2L9

EPA Reg. No. 88901-1
EPA Establishment No. 88901-01-CAN

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin.

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

PERSONAL PROTECTIVE EQUIPMENT

Mixers, loaders, applicators and other handlers must wear:

- Long sleeved shirt
- Long pants
- Shoes plus socks
- Chemical-resistant gloves, and
- Protective eyewear such as goggles, face shield or safety glasses.

Some materials that are chemical-resistant to this product are: barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

AQUATIC USES

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10-14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required. Certain water conditions including low pH (≤6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

ENVIRONMENTAL HAZARDS – continued

TERRESTRIAL USES

For terrestrial uses, this pesticide is toxic to aquatic invertebrates and may contaminate water through runoff. This product has the potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. For terrestrial uses, 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 washwater or rinsate.

APPLICATION AND HANDLING EQUIPMENT

FABRICS CONTAINING COTTON OR NYLON WILL DISSOLVE ON CONTACT WITH UNDILUTED PRODUCT. Do not allow clothing to come in contact with concentrated or dilute product. Application, handling and storage equipment MUST be fibreglass, PVC, polypropylene, viton, most plastics, aluminum or stainless steel. NEVER use nylon, copper or brass or mild steel parts / components in contact with product. Wash spray equipment thoroughly with fresh clean water after each use.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labelling 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), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Notify workers of the application by warning them orally OR by posting warning signs at entrances to treated areas.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, chemical-resistant gloves made of any waterproof material (See Personal Protective Equipment section of this label), shoes plus socks, and protective eyewear such as goggles, face shield or safety glasses.

GREENHOUSE USE

The Restricted Entry Interval (REI) for greenhouses is 24 hours providing the following conditions are met:

For at least seven days following the application of copper sulfate pentahydrate in greenhouses

1. At least one container or station designed specifically for flushing eyes is available in operating condition with the WPS-required decontamination supplies for workers entering the treated area, and
2. Workers must be informed orally, in a manner they can understand:
    - That residues in the treated area may be highly irritating to their eyes
    - That they should take precautions, such as refraining from rubbing their eyes
    - That they should keep the residues out of their eyes
    - That if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies
    - How to operate the eye flush container or eye wash station.

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.

Do not enter or allow others to enter until sprays have dried.

SPRAY DRIFT MANAGEMENT

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

Droplet Size

Apply only as a medium or coarser spray (ASAE Standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favours on-target deposition (approximately 3 to 10 mph) and there are no sensitive areas within 250 feet down wind.

Temperature Inversions

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

Other State and Local Requirements

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

Equipment

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

For Aerial Application

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for safety. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

For Groundboom Application

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

CHEMIGATION

GENERAL CHEMIGATION INSTRUCTIONS:

- Apply this product only through one or more of the following types of systems: Sprinkler - including center pivot, lateral move, end row, side (wheel) roll, traveler, big gun, solid set or hand move; flood (basin); furrow; border or drip (trickle) Irrigation and system(s).
- Apply through chemigation only in the diluted form. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- Do not apply product when wind speed favours drift beyond the area intended for treatment.
- Follow the directions for the crop to be treated. NEVER exceed the recommended concentrations per acre.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety device for public water systems are in place.

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

POSTING AREAS TO BE CHEMIGATED IS REQUIRED WHEN:

1. Any part of a treated area is within 300 feet of sensitive areas such as a 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 chemigated area is open to the public such as golf course 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 area. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other locations affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area toward the sensitive areas. 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 letter of at least 2.2 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. This sign is in addition to any sign posted to comply with the Workers Protection Standard.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction.

As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top of the 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 liquid back toward the injection.

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 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 the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (i.e. 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, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the product last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

The product may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. This product readily disperses and needs no agitation.

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 back flow.

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 dosed, 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, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the product last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures.

The product may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. This product readily disperses and needs no agitation.

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- 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 back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid 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 shutdown.
- The system must contain functional interlocking controls that 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 (i.e. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

When-mixing, agitation is not necessary. If using stickers, spreaders, insecticides, nutrients, etc., add the product last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products used in the mixtures. The product may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems.

DRIP (TRICKLE) 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 back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of liquid 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 (i.e. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

When mixing, agitation is not necessary. If using stickers, spreaders, insecticides nutrients, etc., add the product last. If compatibility is in question, use a compatibility jar test before mixing a whole tank. Because of a wide variety of possible product combinations, observe all cautions and limitations on the label of all products

used in the mixtures. The product may be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems.

SPECIFIC DIRECTIONS FOR USE

CONTROL OF ALGAE, NON-PUBLIC HEALTH BACTERIA, AND AQUATIC PLANTS IN LAKES, RESERVOIRS, LAGOONS, SWIMMING AREAS, PONDS (FARM, INDUSTRIAL, GOLF COURSE, ORNAMENTAL, AQUACULTURE) AND DECORATIVE WATER FEATURES (FOUNTAINS, WATERFALLS ETC.)

POLYDEX is an innovative product that does not precipitate or stratify. When label rates are applied, POLYDEX disperses evenly throughout the water column to provide algae control in the water.

Apply in late spring or early summer when algae first appear. Application rates vary; higher application rates are needed for lower water temperatures, higher algae concentrations, hard or turbid waters, and flowing water. If there is uncertainty about the dosages, begin with a lower dose and increase until control is achieved, or until the maximum allowable level has been reached.

When possible, treat algae on a sunny day when the heavy mats of filamentous algae are most likely to be floating on the surface where they can be sprayed directly. Physical removal of large mats prior to application of POLYDEX gives the best results.

Treatment of algae and aquatic weeds can result in oxygen loss when the dead algae/ weeds start to decompose. This oxygen loss can suffocate fish and other pond life. To minimize this hazard, do not treat more than 1/2 of the water body at once and wait at least 14 days between treatments to allow oxygen levels to recover. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. For applications in waters containing fish, do not exceed 0.06 ppm copper in total water body.
For applications in waters destined for eventual use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters. Applications may be repeated at 14 day intervals.

CALCULATION OF AREA TO BE TREATED

1. Obtain surface area by measuring regular shaped ponds or mapping irregular ponds or by use of previously recorded data or maps.
2. Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by use of previously recorded data.

APPLICATION RATES

USING ACRE FEET:

Once the surface area in acres of the body of water has been calculated, use the chart below, to determine how many gallons of POLYDEX are required. For example, if the water to be treated has a surface area of 7 acres and a depth of 4 feet, and the algae growth is moderate, you will need: 7 acres x 14.8 gallons/acre (see table below) = 103.6 gallons to treat the area. If you have a 12 acre pond that is 3 feet deep and heavy algae growth, you will need 12 x 15.9 = 190.8 gallons. Application rates for depths greater than 4 feet may be obtained by adding the rates below to give proper depth. The application rates in the chart below are based on static or low flow conditions. For effective control, the proper chemical concentration should be maintained for a minimum of three hours duration to assure adequate uptake. When significant dilution occurs from inflow of untreated waters within the three-hour period the chemical may need to be metered (see Drip System Application section). Do not exceed a concentration of 0.06 ppm in the total water body. Minimum retreatment interval is 14 days.

APPLICATION RATES IN GALLONS PER SURFACE ACRE

Relative Density & Growth Stage	ppm copper	Average Depth in Feet			
		1	2	3	4
Low Density (Early Season)	0.4	2.1 gal	4.2 gal	6.3 gal	8.4 gal
Moderate Density (Mid Season)	0.7	3.7 gal	7.4 gal	11.1 gal	14.8 gal
Heavy Density (Late Season)	1.0	5.3 gal	10.6 gal	15.9 gal	21.2 gal

USING CUBIC FEET:

1. First calculate total gallons of water:

Shape of Pond	Formula for gallons (measurement in feet)
Rectangular	Length x Width x Depth x 7.5 = Gallons
Circle	Diameter x Diameter x Depth x 5.9 = Gallons
Oval	Length x Width x Depth x 6.7 = Gallons

For example: If you have a rectangular ponds that has a length of 1000 feet and a width of 70 feet and a depth of 5 feet, then the calculation would be: 1000 x 70 x 5 x 7.5 = 525,000 gallons of water in the pond. The diameter of a round pond is the measurement from one side of the pond to the opposite side going through the midpoint of the pond.

2. Once the total gallons of the pond have been calculated, use the following application rates:

APPLICATION RATES IN QUARTS PER GALLON OF WATER

Relative Density & Growth Stage	ppm copper	Application Rate
Low Density (Early Season)	0.4	1 qt per 38,500 gallons
Moderate Density (Mid-Season)	0.7	1 qt per 22,000 gallons
Heavy Density (Late Season)	1.0	1 qt per 15,500 gallons

Apply POLYDEX as a concentrate or dilute spray from either the shoreline or from a boat. Pre-dilution of POLYDEX in a 1:4 ratio before application will result in faster dispersion of POLYDEX within the body of water.

NOTE: Carefully read the **PRECAUTIONARY STATEMENTS** and **SPRAY DRIFT MANAGEMENT** sections of this label before application.

METHODS OF APPLICATION

BOAT APPLICATION

In larger bodies of water, the best way to apply POLYDEX is by boat. Use minimal speed during application to allow the prop wash to disperse and mix the product into the treated waters.

SUBMERGED HOSES:

A small pump mounted in the boat can easily be used for this purpose. When using this method, POLYDEX is pumped from either its original container or a nurse tank into a hose (or manifolded gang of hoses) where hose(s) are trailing over the side or back of the boat and where the hose outlet is just below the surface of the water. Application through hoses eliminates or minimizes the risk of drift.

SURFACE SPRAY:

POLYDEX may be applied as a surface spray by boat mounted booms. Boat mounted booms should be mounted so nozzle tips are no more than 2 feet above the water's surface. POLYDEX can either be pumped from its original container or a nurse tank.

SHORELINE APPLICATION

In smaller lakes, ponds, and reservoirs, POLYDEX is most easily applied by using either an electrically or manually operated hand sprayer. For small ponds or decorative water features, a direct pour is advised.

USING A SPRAYER:

REMOVE THE SPRAY NOZZLE from the sprayer so that, when activated, the spray device dispenses a straight stream rather than a spray pattern. This will minimize or eliminate the potential for any drift and enable you to project the dispensed stream of POLYDEX further away from the shore line than if the spray nozzle were attached. Always use a sprayer that is constructed of materials listed in the **STORAGE AND HANDLING EQUIPMENT** section of this label. Never use this method of application when you must stand down wind of the direction of application or in any position that could expose you to drift. Pre-dilution of POLYDEX in a 1:4 ratio before application will result in faster dispersion of POLYDEX within the body of water.

1. Based on your developed knowledge of the body of water, mark two points on opposing shorelines where, when drawing an imaginary line between them, ½ the volume of water is on each side of the line. Verify your water volume calculations.
2. Determine the amount of POLYDEX required to treat the portion of the body of water selected in #1 above. Dilution of POLYDEX 1: 4 with clean water prior to application may be done so that uniform distribution is more easily accomplished.
3. Beginning at one mark on the shoreline, simultaneously begin walking towards the other mark while projecting a stream of POLYDEX or POLYDEX solution to a point approximately 5 feet from the shoreline.
4. When the opposing mark has been reached, reverse course and while walking back to the beginning mark, project a stream approximately 10 feet from the shoreline.
5. Repeat steps 3 and 4 above, increasing the distance of stream projection from the shoreline by 5 feet each time, until all POLYDEX is dispensed.
6. Do not treat more than ½ of the water body at once and wait at least 14 days between treatments.

DIRECT POUR:

For small ponds, decorative water features (fountains and waterfalls) apply by pouring POLYDEX directly from the container into the water around half of the perimeter of the body of water. Several evenly-spaced application points will speed up dispersal.

CONTROL OF ALGAE, AND NON-PUBLIC HEALTH BACTERIA IN DITCHES, STREAMS, IRRIGATION RESERVOIRS AND IRRIGATION SYSTEMS (PUMPING STATIONS, CONVEYANCE SYSTEMS, DISTRIBUTION, AND FIELD APPLICATION SYSTEMS)

Effective control of most algae species can be obtained when POLYDEX is used according to label directions. Calculate the water flow and follow drip system application rates as outlined below.

DRIP SYSTEM APPLICATION

CALCULATION OF WATER FLOW:

In ditches, streams, and canal type irrigation systems, the amount of water flow in cubic feet per second is found by means of a weir or other measuring device. If no weir or other measuring device is available, water flow and volume can be estimated as: Average Width X Depth X Velocity in Feet/Sec = Cubic Feet per Second (CFS). Velocity can be determined by the time it takes for a floating object to move a given distance. This measurement should be made three to four times and the results should be averaged. Note: 1 CFS. per hour = 27,000 gals per hour.

DRIP-SYSTEM APPLICATION RATES:

Calculate the continuous application rate of POLYDEX from the chart below (based on heavy algae growth - 1 ppm application).

Water Flow Rate		Application Rates		
CFS	gal / min	qt / hr	ml / min	fl oz / min
1	450	1.75	28	1
2	900	3.50	56	2
3	1350	5.25	84	3
4	1800	7.00	112	4
5	2250	8.75	140	5

Calculate the amount of POLYDEX needed to maintain the drip rate for a period of 4 hours by multiplying qt/ hr by 4, **OR** ml / min by 240, **OR** fl. oz. / min by 240. **This dosage will maintain the copper level at 1.0 ppm for 4 hours (to be used as a general reference rate to control heavy algae growth). Effective control of most algae species can be obtained with copper levels between 0.5 – 1.0 ppm maintained for 4 – 6 hours.** Begin continuous addition of product when water is first turned into the system. The chemical must be introduced at a point of turbulence. Re-adjust as required if flows change. Distance of control will vary. For conveyance systems longer than 10 miles, it is recommended that the above dosage be dispersed among injection points every 10 miles. Do not exceed total labeled dosage. Periodic maintenance treatments may be required.

This table is also used for the section **CONTROL OF ALGAE IN RICE (DOMESTIC AND WILD) FIELDS** for metering-in POLYDEX during the flooding of rice fields.
Irrigation water treated with this product may be hazardous to aquatic organisms. Treated water must be held on the irrigated field until absorbed by the soil.

CONTROL OF ALGAE AND NON-PUBLIC HEALTH BACTERIA IN RESERVOIRS & TANKS FOR WATER DESTINED FOR USE AS DRINKING WATER

POLYDEX is certified to NSF/ ANSI 60 for use in waters destined for use as drinking water, these waters must receive additional and separate potable water treatment. **DO NOT** apply more than 1.0 ppm as metallic copper.

WATER INTENDED FOR HUMAN USE IN MUNICIPAL WATER RESERVOIRS AND TANKS

Use POLYDEX to control algae in municipal water supplies before they are purified for drinking. Apply 2 fluid ounces per 125 cubic feet (1/4 tsp per 20 gallons) of water for 1 ppm of copper.

RESERVOIRS OF WATER INTENDED FOR DRINKING WATER USE

For the control of algae in water reservoirs destined for use as drinking, refer to the **CALCULATION OF AREA TO BE TREATED** section above to determine area to be treated and for specific application rates. Treated water must receive additional and separate potable water treatment. Applications may be repeated in 14 days.

STOCK WATERING PONDS, TANKS AND TROUGHS

For the control of algae and non-public health bacteria in stock watering ponds, tanks, and troughs, add ¼ tsp POLYDEX to 30 gallons of water for a final ppm of 0.7 ppm. Do not exceed 1 ppm (¼ tsp per 20 gallons).

FOR DRIP-SYSTEM USE IN LIVESTOCK WATERING TANKS

Tanks fed by a continuous flow of spring or well water may be equipped with a chemical drip system designed to meter-in POLYDEX based upon water flow rates. Systems should be adjusted to maintain a concentration of 0.7 ppm copper in incoming stock water (0.15 fl oz of product per minute to a water flow of 100 gallon per minute). Treat continuously or as needed to control and prevent algae re-growth.

CONTROL OF ALGAE IN RICE (DOMESTIC AND WILD) FIELDS

Apply POLYDEX when algae has formed on the soil surface of the flooded field. Applications are most effective when made prior to the algae leaving the soil surface and rising to the water surface. Factors such as water depth, temperature, pH and the amount of algae can affect the amount of POLYDEX required. Do not exceed 1 ppm metallic copper. POLYDEX can be metered into the rice field as water is being applied, slug fed into each paddy when water is being held, or applied by plane. Read **Aerial Application** instructions in the **SPRAY DRIFT MANAGEMENT** *section of this label for specific instructions for aerial applications. Applications may be* repeated after 14 day intervals.

For application during the flooding of rice fields: Apply by metering-in using the **DRIP SYSTEM APPLICATION** table on the previous page. This table provides a rate of 1.0 ppm.

For spray application: Apply 0.44 gallons of POLYDEX per inch of flood depth per acre of land, or 2.64 gallons of POLYDEX per half acre foot (6 inch flood depth). This results in a copper concentration of 1.0 ppm. For example, apply 1.32 gallons of POLYDEX per acre, if there is a 3 inch water depth.

CONTROL OF TADPOLE SHRIMP IN RICE FIELDS

Apply to the flooded fields as soon as pest is detected; anytime from planting time until the seedlings are well rooted and have emerged through the water. Apply a minimum of 5.32 gallons per acre foot to a maximum of 13.3 gallons per acre foot. Do not exceed 2.5 ppm metallic copper per application.

Minimum Rates: To apply at 1.0 ppm copper with a flood depth of 3 inches, apply 1.33 gallons per acre. To apply at 1.0 ppm copper with a flood depth of 6 inches, apply 2.66 gallons per half acre foot.

Maximum Rates: To apply at 2.5 ppm copper with a flood depth of 3 inches, apply 3.33 gallons per acre. To apply at 2.5 ppm copper with a flood depth of 6 inches, apply 6.66 gallons per half acre foot.

CONTROL OF ALGAE IN AQUACULTURE PONDS

Before treating ponds containing fish with POLYDEX, measure total alkalinity (NOT HARDNESS OR PH). The toxicity of copper to fish increases as the total alkalinity decreases. If the total alkalinity is less than 50 ppm, copper treatments are not recommended because of the high risk of killing fish. Alkalinity can be raised by the addition of sodium bicarbonate. Sensitivity to copper varies between on fish species. When algae concentrations are high, to avoid suffocation of fish after treatment, either treat in a series of smaller doses over time or have emergency aeration available.

When fish are present in aquaculture ponds, for copper sensitive fish species do not exceed 0.06 ppm metallic copper (0.12 oz or ¾ tsp per 1000 gallons of water), and for copper tolerant fish species do not exceed 0.3 ppm metallic copper (0.62 oz or 1 ¼ Tbsp per 1000 gallons of water) in total water body. Apply to aquaculture ponds in 4 sections with 48 hours between sections.

To begin, dilute 1 part POLYDEX in up to 10 parts water (depending on the type of spray equipment used) up to your calculated volume of POLYDEX based on the total water volume of the pond.

The minimum retreatment interval for the complete treatment is 14 days.

CONTROL OF ROOTED AND SUBMERGED PLANTS

Rooted and submerged plants such as Hydrilla and Potomogeton can be controlled using POLYDEX at 0.4 - 1.0 ppm. Application rates are dependent on the density, stage of growth and the water depth. Only treat one half of the body of water at one time. Applications may be repeated in 14 days. For application instructions, refer to section: CONTROL OF ALGAE, NON-PUBLIC HEALTH BACTERIA, AND AQUATIC PLANTS IN LAKES, RESERVOIRS, LAGOONS, SWIMMING AREAS, PONDS (FARM, INDUSTRIAL, GOLF COURSE, ORNAMENTAL, AQUACULTURE) AND DECORATIVE WATER FEATURES (FOUNTAINS, WATERFALLS ETC.).

CONTROL OF FLOATING AQUATIC PLANTS

Water hyacinth and other floating aquatic vegetation can be suppressed BUT NOT ERADICATED by using a mixture of 1 gallon of POLYDEX per 7 gallons of water. Apply this solution as a coverage spray to thoroughly wet all exposed vegetation. In areas of heavy infestation, multiple applications may be required. Applications may be repeated in 14 days. Do not exceed 5.3 gallons of product per acre foot of water.

CONTROL OF NON-PUBLIC HEALTH BACTERIA, AND BACTERIAL ODORS IN SEWAGE LAGOONS[Δ], FEEDLOT RUN-OFF PITS[Δ], ANIMAL CONFINEMENT FACILITIES, WASTE TANKS, DIGESTERS, MANURE PITS

[Δ]Not for use in CA.

Application rates of POLYDEX may vary depending on the amount of organic matter, characteristics of manure or sewage, extent of bacterial activity, and the degree of odor reduction desired.

Calculate the total gallons of waste to be treated. Apply by pouring POLYDEX directly from the container into the pit or lagoon. Several evenly-spaced application points will speed up dispersal. Bacterial odors will be noticeably reduced in 1-2 weeks. Additional applications may be required when odor reoccurs or when new waste is added to the lagoon.

SEWAGE LAGOONS[Δ] AND PITS[Δ]: Use a maximum of one gallon of POLYDEX per 60,000 gallons of sewage. Bacterial odors should be noticeably reduced in 1 or 2 weeks. Repeat application when odors reoccur.
[Δ]Not for use in CA.

ANIMAL CONFINEMENT FACILITIES: Use a maximum of one gallon of POLYDEX per 60,000 gallons of liquid waste. If pits are located under confinement buildings, add POLYDEX directly to pits. If pits are outside, insert or inject POLYDEX into the transfer line to pit.

OTHER ORGANIC SLUDGE: Apply at the rate of one gallon POLYDEX to 60,000 gallons of sludge. POLYDEX must be thoroughly mixed with the sludge.

REDUCTION OF THE BACTERIA* AND FUNGI THAT CAUSE SPOILAGE IN POST-HARVEST RAW FRUITS[Δ] AND VEGETABLES[Δ]

[Δ]Not for use in CA. *Non Public Health Bacteria.

POLYDEX is a post-harvest wash / spray to reduce spoilage and extend the shelf life of the raw agricultural commodities on this label. Apply with any type of application equipment that gives uniform and thorough coverage. Devices may include, but are not limited to, dunk and dip tanks, spray applicators or fogging.

Add between 0.62 fl. oz. (1 ¼ tablespoons) and 1.86 fl. oz. (3 ¾ tablespoons) of POLYDEX per 100 gallons of water to clean and control bacteria* and fungi that cause spoilage and contamination. This results in an application concentration of between 3 ppm and 9 ppm copper. Several application points speed up dispersal. Wash fruit or vegetables in solution by immersion, spraying, soaking or other similar method. Drain solution from fruit or vegetables. Fruits and vegetables must remain refrigerated to ensure effectiveness.

CONTROL OF LISTED PLANT DISEASES IN FOOD AND NON-FOOD CROPS$^{\Delta\Delta}$, TROPICAL FOLIAGE PLANTS$^{\Delta\Delta}$, ANNUAL / PERENNIAL PLANTS$^{\Delta\Delta}$, POTTED FLOWERING PLANTS$^{\Delta\Delta}$, SHRUBS AND VINES$^{\Delta\Delta}$, TREES$^{\Delta\Delta}$, AND TURFGRASS$^{\Delta}$ IN NURSERIES, GREENHOUSES, AND FIELDS.

$^{\Delta}$Not for use in CA. **$^{\Delta\Delta}$ Not for use in CA on Listed Plants.**

POLYDEX is an algicide and a systemic fungicide / bactericide* that prevents / cures the diseases listed on this label. Apply as an aerial or ground dilute spray with application equipment that gives uniform coverage of all foliage. Product may also be applied through chemigation, and greenhouse irrigation systems. Complete coverage is essential to ensure good product performance. To avoid plant injury, do not apply undiluted product to plants.

* Non-Public Health Bacteria

FOLIAR APPLICATIONS

Application of POLYDEX should be adjusted according to local practice and local weather conditions but annual maximum application per acre must not be exceeded.

Because the properties of local water may affect the efficacy of the product, always try lower concentrations first and move up to higher concentrations as needed. Typically, preventative programs can be maintained at the lower concentrations whereas initial or corrective applications require higher concentrations.

Testing for compatibility and crop tolerance on a small portion of land prior to full-scale commercial application is recommended.

Plant injury (phytotoxicity): Higher concentrations may damage some tender, open blooms and soft young foliage. The user should determine if POLYDEX can be used safely prior to commercial use. Apply the recommended concentration of POLYDEX to a small group of test plants of the same species requiring treatment and observe for 7 to 10 days for symptoms of phytotoxicity.

To avoid higher wind speeds and daytime temperatures, apply spray in early morning.

SPRAY SOLUTION PREPARATION:

Determine water to product ratios according to the following sections:

- Non-Food Crop Spray Application.
- Greenhouse Food Crop Application.
- Field Food Crop Spray Application.

The volume applied and concentration of the spray are dependent on the specific crops as designated in the sections below.

Mixing Directions: Pour one half of specified volume of water into spray or mix tank. Add specified volume of POLYDEX, and then add remainder of water. This procedure alone ensures complete mixing of the solution. If agricultural-type foliar spray oil is added, agitate the mixture for even distribution.

Amount of spray may need to be increased on crops with dense foliage.

NON-FOOD CROP SPRAY APPLICATION

Mix 0.083 fl. oz. (i.e. ½ tsp) to 20 fl. oz. of POLYDEX into 40 gallons of water and spray to wet all leaf and stem surfaces. See specific application directions for Easter lilies and turfgrass$^{\Delta}$ below. Do not exceed 11.5 fl oz of

product per 1000 sq feet per application. Do not exceed 115 fl oz (0.9 gallons) of product per 1000 sq ft per year. The minimum retreatment interval is 7 days.

Maximum single treatment = 3.87 gallons of POLYDEX per acre.
Maximum annual treatment = 38.7 gallons of POLYDEX per acre.

For Easter Lilies*:

Maximum single treatment = 4.84 gallons of POLYDEX per acre
Maximum annual treatment = 145 gallons of POLYDEX per acre
*Do not apply any additional copper pesticide to this land for 36 months.

TURFGRASS$^{\Delta}$

Use POLYDEX to treat turfgrass for black algae and moss at the following rate: Apply 6 fluid ounces of POLYDEX per 10 gallons of water. Apply spray mix to 1000 square feet of infested grass. Do not exceed 62 gallons of product per acre per year. $^{\Delta}$ **Not for use in CA.**

SHRUBS AND VINES

Use POLYDEX to treat the following shrubs and vines for Botrytis: Barberry$^{\Delta}$, Bougainvillea$^{\Delta}$, Cornus$^{\Delta}$, Euonymus, Forsythia$^{\Delta}$, Holly$^{\Delta}$, Paeonia$^{\Delta}$, Philadelphus$^{\Delta}$, Physocarpus$^{\Delta}$, Potentilla, Ribes$^{\Delta}$, Rosa, Spirea$^{\Delta}$, Viburnum$^{\Delta}$, Weigela$^{\Delta}$, and Wisteria$^{\Delta}$. $^{\Delta}$**Not for use in CA.**

DECIDUOUS$^{\Delta}$

Use POLYDEX to treat the following deciduous varieties for Botrytis: Acer, Betula, Celtis, Cercis, Crataegus, Ficus, Fraxinus, Ginko, Gleditsia, Magnolia, Malus, Populus, Prunus, Pyrus and Tilia. $^{\Delta}$**Not for use in CA.**

CONIFERS$^{\Delta}$

Use POLYDEX to treat the following conifers for Botrytis: Abies, Juniper, Picea, Pinus, Pittosporum, Pseudotsuga, Taxus, Thuja, Tsuga. $^{\Delta}$ **Not for use in CA.**

Refer to the tables below for the specific diseases by plant type (non-food) that can be treated by POLYDEX.

TROPICAL FOLIAGE PLANTS

Plant	Disease
Dracaena	Rust
Ferns	Rhizoctonia, Botrytis, Erwinia
Philodendron Selloum	Fireblight
Ivy	Botrytis, Xanthomonas
Palms[Δ]	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Tropical foliage (most all)	Botrytis, Powdery Mildew, Erwinia, Pseudomonas, Xanthomonas

[Δ] Not for use in CA

ANNUAL / PERENNIAL FLOWERING PLANTS

Plant	Disease
Alyssum	Botrytis, Downy Mildew
Anemone[Δ]	Powdery Mildew
Aster	Powdery Mildew
Begonia	Botrytis, Powdery Mildew, Xanthomonas
Carnation[Δ]	Powdery Mildew
Chrysanthemum	Pseudomonas
Coleus[Δ]	Powdery Mildew
Columbine[Δ]	Powdery Mildew
Coneflower[Δ]	Powdery Mildew
Coreopsis[Δ]	Powdery Mildew
Cuphea[Δ]	Powdery Mildew
Dahlia	Powdery Mildew
Daisy[Δ]	Powdery Mildew
Dianthus[Δ]	Powdery Mildew
Daylily	Powdery Mildew
Delphinium	Powdery Mildew
Echinacea[Δ]	Powdery Mildew
Fuchsia	Botrytis, Powdery Mildew
Geranium	Botrytis, Rust, Pseudomonas, Xanthomonas
Hollyhock[Δ]	Powdery Mildew
Hosta	Botrytis, Erwinia
Impatiens	Botrytis, Powdery Mildew, Phytophthora, Alternaria, Pseudomonas
Lantana[Δ]	Powdery Mildew
Liatris[Δ]	Powdery Mildew
Lisianathus	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Lobelia[Δ]	Powdery Mildew
Lupine[Δ]	Powdery Mildew
Marigold[Δ]	Powdery Mildew
Monarda[Δ]	Powdery Mildew
New Guinea Impatiens	Botrytis, Powdery Mildew
Pansy	Botrytis, Phytophthora
Pentas[Δ]	Powdery Mildew

ANNUAL / PERENNIAL FLOWERING PLANTS

Plant	Disease
Periwinkle	Botrytis, Phytophthora
Petunia[Δ]	Powdery Mildew
Phlox[Δ]	Powdery Mildew
Poppy[Δ]	Powdery Mildew
Primrose (Primula)	Powdery Mildew, Botrytis, Erwinia
Ranunculus	Powdery Mildew
Rudbeckia[Δ]	Powdery Mildew
Salvia	Powdery Mildew
Sedum[Δ]	Powdery Mildew
Snapdragon	Botrytis, Downy Mildew, Rust
Verbena	Powdery Mildew
Veronica[Δ]	Powdery Mildew
Vinca	Powdery Mildew
Viola[Δ]	Powdery Mildew
Zinnia	Botrytis, Powdery Mildew, Pseudomonas, Xanthomonas

[Δ]Not for use in CA

NURSERY PLANTS

Plant	Disease
Cherry Laurel[Δ]	Xanthomonas
Conifers[Δ]	Botrytis, Dipldia
Crape Myrtle[Δ]	Botrytis, Powdery Mildew
Dogwood	Botrytis, Powdery Mildew
Elm[Δ]	Erwinia
Hydrangea	Botrytis, Powdery Mildew
Indian Hawthorne	Botrytis, Entemosporium
Japanese Maple	Botrytis, Verticillum, Pseudomonas
Lilac	Botrytis, Pseudomonas, Powdery Mildew
Oak[Δ]	Anthracnose
Photinia[Δ]	Entemosporium
Pinus[Δ]	Dothistroma
Cotoneaster, Malus	Apple Scab
Mountain Ash	Botrytis
Ornamental Crab-apple	Fireblight
Rhododendron	Botrytis, Cylindrocladium, Rhizoctonia
Silver Buttonwood[Δ]	Powdery Mildew
Sycamore[Δ]	Anthracnose, Botrytis

[Δ]Not for use in CA

POTTED FLOWERING PLANTS

Plant	Disease
African Violet[Δ]	Botrytis, Powdery Mildew
Calla Lilly	Botrytis, Erwinia
Chrysanthemum	Botrytis, Crown Gall, Erwinia, Powdery Mildew
Cineraria[Δ]	Botrytis
Cyclamen	Botrytis, Erwinia
Daffodil	Botrytis
Easter Lilly	Botrytis
Exacum[Δ]	Botrytis
Gerbera	Botrytis, Powdery Mildew
Gloxinia[Δ]	Botrytis
Hibiscus[Δ]	Botrytis, Pseudomonas, Xanthomonas
Holiday Cactus[Δ]	Botrytis, Erwinia, Pseudomonas, Xanthomonas
Hyacinth[Δ]	Botrytis
Hydrangea	Botrytis, Powdery Mildew
Iris[Δ]	Botrytis, Erwinia
Kalanchoe	Botrytis, Erwinia, Powdery Mildew
Poinsettia	Botrytis, Powdery Mildew, Erwinia, Scab, Xanthomonas
Rose Bush	Botrytis, Cylindrocladium, Downy Mildew, Powdery Mildew, Black Spot
Spathiphyllum[Δ]	Cylindrocladium, Phytophthora, Botrytis, Cylindrocladium
Tulip	Botrytis
Azalea	Anthracnose, Botrytis, Cylindrocladium

[Δ]Not for use in CA

GREENHOUSE FOOD CROP SPRAY APPLICATION

Dependent on disease pressure, mix between 0.41 oz (2.5 teaspoons), and 3.4 oz.(6.8 tablespoons) POLYDEX per 40 US gallons of water (for a concentration of between 5 ppm and 40 ppm of copper). The minimum retreatment interval for greenhouse crops is 7 days.

Stage of disease in crops: Lower application rates are appropriate for preventative treatment and low disease pressure. Higher application rates are appropriate for high disease pressure.

FIELD FOOD CROP SPRAY APPLICATIONS

POLYDEX PER VOLUME OF WATER BY CONCENTRATION OF ACTIVE INGREDIENT (A.I.)

Concentration of A.I. in ppm*	Aerial Spray		Ground Spray					
	Gallons of Water per Acre							
	10 gal	50 gal	30 gal	50 gal	100 gal	125 gal	250 gal	500 gal
	Fluid Ounces of POLYDEX							
50	1.0	5.2	3.1	5.2	10.3	12.9	25.8	51.7
75	1.6	7.8	4.7	7.8	15.5	19.4	38.8	77.5
100	2.1	10.3	6.2	10.3	20.7	25.8	51.7	103.4
125	2.6	12.9	7.8	12.9	25.8	32.3	64.6	129.2
150	3.1	15.5	9.3	15.5	31.0	38.8	77.5	155.0
175	3.6	18.1	10.9	18.1	36.2	45.2	90.4	180.9
200	4.1	20.7	12.4	20.7	41.3	51.7	103.4	206.7
225	4.7	23.3	14.0	23.3	46.5	58.1	116.3	232.6
250	5.2	25.8	15.5	25.8	51.7	64.6	129.2	258.4

* Parts per million (mg/L) by weight of A.I. (copper).

Each US gallon of POLYDEX contains 0.516 lb of copper.

FOLIAR APPLICATION RATES FOR FOOD CROPS

1 gallon of POLYDEX provides 0.516 lb of metallic copper

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
CITRUS								
Citrus	Canker (*Xanthomonas citri*), Melanose (*Diaporthe citri),* Brown Rot, Greasy Spot, Pink Pitting, Scab, Alternaria	Post Bloom	25	-	60	11.9	7	Brown Rot, Alternaria, Scab, Pink Pitting, Greasy Spot, Melenose: Apply as pre-bloom and post-bloom sprays. Scab Suppressions: Make two applications, one just before trees begin to flush and repeat at 2 /3 petal fall. Wettable Sulfur may be included in the spray. Greasy Spot and Pink Pitting: Summer spray. Melanose: Apply 1-3 weeks after petal fall and repeat 14 days later if necessary. **NOTE:** Do not use in areas where copper injury is known to occur.
FIELD CROPS								
Alfalfa	Cercospora Leaf Spot, *Leptosphaerulina* Leaf Spot	Growing season	19	-	30	0.5	30	
Cereal Grains (Wheat, Oats, Barley)	*Helminthosporium* spot, Blotch, *Septoria* Leaf Blotch	Growing season	19	-	30	1.0	10	
Chives	Downy Mildew	Growing season	19	-	40	2.5	7	Do not exceed 1 gallon of product per acre per application.
Coriander (Cilantro)	Powdery Mildew	Growing season	19	-	30	1.3	10	
Corn (Field, Pop, sweet)	Bacterial stalk rot	Growing season	19	-	40	4.0	7	Do not exceed 2 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS

1 gallon of POLYDEX provides 0.516 lb of metallic copper

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Dill	*Phoma* Leaf Spot, *Rhizoctonia* Foliage Blight	Growing season	19	-	30	3.7	7	Do not exceed 1.5 gallons of product per acre per application.
Leek	Mildew (*Peronospora destructor*), White tip (*Phytophthora porri*)	Growing season	19	-	40	5.5	7	
Lettuce, Endive (Escarole)	Downy mildew (*Bremia lactucae*), Ring spot (*Marssonina panattoniana*), Anthracnose, Leaf Spot	Growing season	19	-	30	7.6	5	Begin treatment when disease appears. Repeat at 5 to 10 day intervals as needed, depending on rainfall and disease pressure. Do not exceed 1.9 gallons of product per acre per application.
Mint	Powdery Mildew	Growing season	19	-	30	2.5	10	Do not exceed 1 gallon of product per acre per application.
Parsley	*Pseudomonas sp.*	Growing season	19	-	30	1.9	10	
Peanut	Cercospora leaf spot	Growing season	19	-	30	4.4	7	Begin spraying 35-40 days after planting or when disease symptoms first appear. Use sufficient water for adequate coverage. Continue applications at 10-14 day intervals. Reduce interval to 7 days when weather is humid. Do not exceed 1.5 gallons of product per acre per application.

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FOLIAR APPLICATION RATES FOR FOOD CROPS

1 gallon of POLYDEX provides 0.516 lb of metallic copper

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Potato	Early Blight (*Alternaria solani*), Late Blight (*Phytophthora infestans*), Grey mould (*Botrytis cinerea*), Dry rot (*Sclerotium rolfsii*)	Growing season	19	-	40	23.6	5	Early and Late Blight: Begin treatment when plants are 6 inches high and repeat at 5 to 10 day intervals until 2 weeks before harvest.
Rhubarb	Downy mildew (*Peronospora jaapiana*)	Growing season	19	-	30	3.8	7	Do not exceed 1.5 gallons of product per acre per application.
Rosemary	Botrytis Blight	Growing season	19	-	30	2.5	10	Do not exceed 1 gallon of product per acre per application.
Rutabaga	Powdery mildew	Growing season	19	-	30	7.6	10	Do not exceed 1.5 gallons of product per acre per application.
BERRIES								
Blackberry	Anthracnose, Cane Spot, Leaf Spot, *Pseudomonas* Blight, Purple Blotch, Yellow Rust	Growing season / Fall Late Dormant	19	-	40	9.5	7	Make fall application after harvest. Apply delayed dormant spray after training in the spring. **NOTE:** Crop injury may occur under certain environmental conditions such as hot or prolonged moist conditions. If noticed, discontinue applications. Do not exceed 3.8 gallons of product per acre per application.
Blueberry	Bacterial Canker, Fruit rot, *Phomopsis* Twig Blight	Fall / Late Dormant	19	-	50	8.0	7	Do not exceed 4 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS **1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Cranberry	Fruit Rot, Rose Blossom, Bacterial Stem Canker, Leaf Blight, Red Leaf Spot, Stem Blight, Tip Blight	Growing season, Post harvest / dormant, fall / late dormant,	25	-	50	11.8	10	Bacterial Canker: Make first application in late bloom. Make one or two additional applications at 10 to 14 days intervals depending on disease severity. Rose Bloom: Apply 3 sprays on a 10-14 day schedule as soon as symptoms are observed. Bacterial Stem Canker: Apply post harvest and again in spring before bud burst. Make one or two additional applications at 10-14 day intervals depending on disease severity. Leaf Blight, Red Leaf Spot, Stem Blight, Tip Blight: Apply delayed dormant spray in spring and repeat at 10-14 day intervals as needed through pre-bloom. Do not exceed 4 gallons of product per acre per application.
Currant, Gooseberry (Ribes)	Anthracnose, Leaf Spot	Growing season	25	-	60	15.0	10	Make applications starting after harvest, before bloom and after petal fall. Repeat on 10-14 day intervals during wet conditions in the spring. Make an additional application after harvest. Gooseberry Leaf Spot: Apply at full bloom, two weeks later, and after harvest.

FOLIAR APPLICATION RATES FOR FOOD CROPS **1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Strawberry	Leaf spot (*Mycosphaerella fragariae*), Leaf Blight, Downy Mildew, Angular Leaf Spot (*Xanthomonas*), Leaf Scorch	Growing season	19	-	30	7.7	7	Apply when plants are established and reapply no more frequently than in one week intervals throughout the season. NOTE: Discontinue if phytotoxicity occurs.
TREE CROPS								
Almond	Bacterial Blast (*Pseudomonas*), Bacterial Canker, *Coryneum* Blight (Shot Hole), Blossom Brown Rot	Dormant / Late dormant	30	-	60	17.0	7	<u>Bacterial Blast, Bacterial Canker, Shot Hole:</u> Make the first application before fall rains and a second at late dormant. Use higher rates when rain fall is heavy and disease pressure is high. 16 oz of agricultural-type foliar spray oil per 100 gallons of water may be added. Do not apply after 50% bloom or when trees are in leaf. <u>Bacterial Blast:</u> In sprinkler irrigated orchards or where disease is severe, apply at 2 week intervals or just before irrigation.
		Bloom / Growing season	30	-	60		5	
Atemoya (Sugar apple)	Anthracnose	Growing season	25	-	40	12.1	7	
Avocado	Anthracnose, Blotch, Scab	Growing season	40	-	60	17.8	14	Spray first when buds open. Make 2 to 4 applications per season. Use higher rates when conditions favor disease development.

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FOLIAR APPLICATION RATES FOR FOOD CROPS

1 gallon of POLYDEX provides 0.516 lb of metallic copper

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Banana	Sigatoka (black and yellow), Black Pitting	Early season / Growing season	11	-	32	18.1	7	Can be used with agricultural-type foliar spray oils at 5 gallons oil per 100 gallons water. The application rate is based on 100 gallons diluted product per acre. Do not exceed 2 gallons of product per acre per application.
Betel Nut	Leaf Spot (*Bacterium betle, Glomeralla cingulata*), Foot rot (*Phytophthora colocasiae*), Leaf rot (*Phytophthora parasitica*)	Growing season	19	-	40	8.1	7	Do not exceed 1.4 gallons of product per acre per application.
Cacao	Black Pod	Growing season	19	-	60	15.1	14	Do not exceed 4.3 gallons of product per acre per application.
Carambola (star fruit)	Anthracnose	Growing season	40	-	60	10.1	7	Do not exceed 4 gallons of product per acre per application.
Chestnut	Blight (*Endothia parasitica*), Ink disease (*Phytophthora cambivora*)	Growing season	30	-	60	8.1	14	Do not exceed 4 gallons of product per acre per application.

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FOLIAR APPLICATION RATES FOR FOOD CROPS

1 gallon of POLYDEX provides 0.516 lb of metallic copper

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Coffee	Coffee Berry Disease (*Colletotrichum coffeanum*), Bacterial Blight (*Pseudomonas syringae*), Leaf Rust (*Hemileia vastatrix*), Iron Spot (*Cercospora coffeicola*), Pink Disease (*Cortium salmonicolor*)	Early season / Growing season	19	-	60	12.1	14	Do not exceed 4 gallons of product per acre per application.
Guava	Anthracnose, Red Algae	Growing season	40	-	70	4.7	7	Do not exceed 2.4 gallons of product per acre per application.
Litchi	Anthracnose	Growing season	40	-	60	4.7	7	Do not exceed 2.4 gallons of product per acre per application.
Macadamia	Anthracnose	Growing season	40	-	60	9.1	7	Do not exceed 4.5 gallons of product per acre per application.
Mamey Sapote	Algal leaf spot, Anthracnose	Growing season	40	-	60	8.1	14	Do not exceed 4 gallons of product per acre per application.
Mango	Anthracnose	Growing season	40	-	60	45.3	7	Begin sprays when panicles are about 2 inches long. One gallon of agricultural-type foliar oil per 100 gallons of spray may increase effectiveness.
Olive	Leaf Spot (*Cycloconium oleaginum*), Peacock Spot, Olive Knot	Fall, late dormant	60	-	70	17.0	30	Apply post-harvest before winter rains. A second application in early spring should be made if disease is severe. Apply at the high rate if heavy disease pressure or when conditions favor disease development.

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Papaya	Anthracnose	Growing season	40	-	60	20.2	7	Do not exceed 5 gallons of product per acre per application.
Passion Fruit	Anthracnose	Growing season	40	-	60	9.1	7	Do not exceed 4.5 gallons of product per acre per application.
Pecan	Kernel Rot, Shuck Rot (*Phytophthora cactorum*), Zonate Leaf Spot (*Cristulariella pyramidalis*)	Growing season	30	-	60	7.9	14	Shuck and Kernel Rot: Apply in sufficient water for good coverage at 2-4 week intervals staring at kernel growth and continue until shucks open. Zonate Leaf Spot: Use higher rate and shorter intervals if frequent rainfall. Do not exceed 4 gallons of product per acre per application.
Persimmon	Canker (*Phomopsis diospyri*)	Growing season	40	-	60	5.5	14	Do not exceed 1.9 gallons of product per acre per application.
Pistachio	*Botryosphaeris* Panicle and Shoot Blight, Botrytis Blight, Late Blight (*Alternaria alternata*), *Septoria* Leaf Blight	Growing season	30	-	60	8.1	14	Do not exceed 4 gallons of product per acre per application.

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Pome Fruit (Apple, Pear, Quince)	Anthracnose, Blossom Blast, European Cancer, Shoot Blast, Brooks Spot, Black Rot, Black Pox, Powdery Mildew, Sooty Blotch, Flyspeck, Summer Scab, White Rot, Fire Blight	Fall, late dormant	40	-	60	15.1	One application per season	**Quince use not permitted in California.** Antracnose: Apply after harvest before rains. Brooks Spot, Black Rot, Black Pox, Powdery Mildew, Sooty Blotch, Flyspeck, Summer Scab, and White Rot: Recommended for processing apples only, as fruit russeting and leaf spotting are likely to occur. Fire Blight: Make application between silver-tip and greentip. **NOTE:** Phytotoxicity may occur from late application.
	Apple Scab, Fire Blight	Between silver tip and green tip	40	-	60			**Pears**- Fire Blight: Apply at 5 day intervals throughout bloom period.
	Apple Scab, Fire Blight	Bloom, growing season	19	-	30		5	**NOTE:** Do not apply to d'Anjou pears. High dosages may cause fruit russet.
Stone Fruit (Apricot, cherry, nectarine, peach, plum, prune)	*Pseudomonas*, Bacterial Canker, *Xanthomonas*, *Coryneum* Blight, Leaf Curl	Dormant / Late Dormant, up to pink bud	40	-	60	17.0	7	
	Bacterial Spot, Blossom Brown Rot, *Coryneum* Blight Leaf Curl	Bloom, growing season	30	-	60		5	

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FOLIAR APPLICATION RATES FOR FOOD CROPS

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Walnut	Walnut Blight	Early season	40	-	60	30.2	7	Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Additional applications at 7-10 day intervals during bloom and early nutlet stage. Thorough coverage of catkins, leaves, and nutlets is essential for effective control. When applied as a dilute spray, 16 oz of agricultural-type foliar spray oil may be added per 100 gallons of water.
VEGETABLES								
Artichoke (Globe)	*Ramularia cynarae*	Growing season	19	-	30	2.5	7	Do not exceed 1 gallon of product per acre per application.
Asparagus	Rust (*Puccinia asparagi*)	Growing season	19	-	40	4.8	10	Do not exceed 2 gallons of product per acre per application.
Beans (dry, Green)	Brown spot, Common Blight, Halo Blight	Growing season	19	-	30	4.4	7	Angular Leaf Spot, Brown Spot, Bacterial Blight. Downey Mildew: Begin treatment when plants are about 6 inches tall and repeat at 7-14 day intervals depending on environmental conditions. Use highest rates when conditions favor disease development. Do not exceed 1.5 gallons of product per acre per application.
Beets (Table, Beet Greens)	Cercospora Leaf Spot, Downy Mildew, Leaf Blight	Growing season	19	-	40	7.5	10	Apply when disease first appears and repeat every 10 days. Do not exceed 2.5 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS **1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Carrot	*Alternaria* Leaf Spot, *Cercospora* Leaf Spot	Growing season	19	-	40	4.7	7	Alternaria, Cercospora: Begin treatment when disease first appears and repeat at 7 day intervals as needed. Use on yellow varieties may cause discoloration. Fireblight: Apply before silver-tip and green-tip. **NOTE:** Phytotoxicity may occur from late application. Discontinue when green-tip is 1/2 inch. Do not exceed 1.9 gallons of product per acre per application.
Celery, Celeriac	Bacterial Blight, *Cercospora* Early Blight, *Septoria* Late Blight	Growing season	19	-	40	5.0	7	Begin applications when plants are first established in the field. Repeat every 7 days depending on disease severity. Do not exceed 1.9 gallons of product per acre per application.
Crucifers (broccoli, brussel sprouts, cabbage, cauliflower, collard greens, mustard greens, turnip greens)	*Alternaria, Xanthomonas*, Downy Mildew, Black Rot	Growing season	19	-	40	2.5	7	Downy Mildew: Apply at higher rates. Reapply at no shorter than 7-10 day intervals. Alternaria, Black Rot: Begin applications after transplants are set in the field or when conditions favor disease development. Use higher rates when conditions favor disease development. **NOTE:** Reddening of older leaves may occur on broccoli and flecking of wrapper may occur on cabbage. Do not exceed 1 gallon of product per acre per application.

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Cucurbits (Cantaloupe, Cucumber, Honeydew, Watermelon, Muskmelon, Pumpkin, Squash)	Angular Leaf Spot, Anthracnose, Leaf *Alternaria*, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (supression)	Growing season	19	-	40	4.9	5	Begin treatment when conditions are favorable for disease development and repeat every 5 to 10 days. A ground application before emergence may help decrease disease pressure after emergence. **NOTE:** Crop injury may occur from higher rates and shorter intervals. Do not exceed 2 gallons of product per acre per application.
Eggplant	*Alternaria* Blight, Anthracnose, *Phomopsis*		19	-	40	7.5	7	Apply to plant beds or fields before disease appears. Repeat at 7-10 day intervals, as needed. Do not exceed 1.5 gallons of product per acre per application.
Garlic	Bacterial Blight, Downy Mildew, Purple Blotch	Growing season	19	-	40	5.6	7	Apply when plants are 4 to 6 inches at 7-10 day intervals depending on disease pressure. **NOTE:** Can cause phytotoxcity to leave. Do not exceed 1.9 gallons of product per acre per applications.
Okra	Anthracnose, Bacterial Leaf Spot, Leaf Spots, Pod Spot, Powdery Mildew	Growing season	19	-	40	5.0	5	

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Onion	Bacterial Blight, Downy Mildew, Purple Blotch	Growing season	19	-	40	5.6	7	Apply when plants are 4 to 6 inches at 7-10 day intervals depending in disease pressure. **NOTE:** Can cause phytotoxcity to leaves. Do not exceed 1.9 gallons of product per acre per application.
Pea	Powdery Mildew, Downy Mildew, Leaf Spot	Growing season	19	-	30	3.7	7	Begin spraying when disease first appears and repeat at 7 to 10 day intervals as needed. Do not exceed 1.5 gallons of product per acre per application.
Pepper	Anthracnose, Bacterial Spot	Growing season	19	-	30	11.2	3	Start treatment when conditions favor disease development and continue at 7-10 day intervals as needed. Do not exceed 1.5 gallons of product per acre per application.
Spinach	Anthracnose, Blue Mold, *Cercospora* Leaf Spot, White Rust, Downy Mildew	Growing Season	19	-	30	3.7	7	Begin treatment when disease first appears and repeat as 7 to10 day intervals as needed. **NOTE:** Flecking may occur on leaves. Do not exceed 1.5 gallons of product per acre per application.

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FOLIAR APPLICATION RATES FOR FOOD CROPS **1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons			Maximum gallons of POLYDEX per Acre per year	Minimum retreatment interval in days	Comments
			Minimum Rate	to	Maximum Rate			
Tomato	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, *Septoria* Leaf Spot	Growing season	19	-	40	7.6	3	Anthracnose, Bacterial Spot, Leaf Mold, Leaf Spot, Late Blight: When disease threatens, apply at 3-10 day intervals. Early Blight: Apply before it rains. May cause discoloration on yellow varieties. Bacterial Speck: Apply at 10-30 day intervals when disease threatens. Increase frequency when disease pressure is high. Do not exceed 1 gallon of product per acre per application.
VINES								
Grape	Black Rot, Downy Mildew, *Phomopsis*, Powdery Mildew	Black Rot, Downy Mildew, Phomopsis: Bloom Growing Season, Powdery Mildew: Fall, Late Dormant	19	-	50	18.8	3	Apply at late dormant to bud break. Repeat depending on disease severity. NOTE: Foliage injury may occur on Concord Delaware, Niagara and Rosetta.
Hops	Downy Mildew	Late Dormant	19	-	40	2.5	10	Do not exceed 1 gallon of product per acre per application. Do not apply within 2 weeks of harvest.

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			Minimum Rate	to	Maximum Rate			
Kiwi	*Erwinia herbicola, Pseudomonas fluorescens, Pseudomonas syringae*	Growing season	40	-	60	6.0	30	Apply in 200 gallons of water per acre. Do not exceed 4 gallons of product per acre per application.
MISCELLANEOUS								
Ginseng	*Alternaria* Leaf Blight, Stem Blight	Growing season	25	-	40	5.0	7	Do not exceed 2 gallons of product per acre per application.
Soybeans	Blight	Growing season	19	-	30	4.5	7	Do not exceed 1.5 gallons of product per acre per application.
Tobacco	Brown spot/ Red rust (*Alternaria longipes*), Leaf spot (*Ascochyta nicotianae*), Frog eye (*Cercospora nicotianae*), Downy Mildew (*Peronospora tabacina*), Wildfire (*Pseudomonas tabacum*)	Growing season	25	-	50	7.6	10	Do not exceed 3.8 gallons of product per acre per application.

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STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep pesticide in original container. Do not put concentrate or dilutions of concentrate in food or drink containers. Always store this product above 40°F. Freezing may cause separation. Bulk product must be stored & handled in: stainless steel, fibreglass, polypropylene, PVC or plastic equipment. Do not allow product to come in contact with any galvanized steel, brass, copper, nylon or aluminum storage or handling equipment.

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

CONTAINER HANDLING: (For containers ≤ 5 gal) Non-refillable Containers: Do not reuse or refill this container. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times.

CONTAINER HANDLING: (For containers > 5 gal) Non-refillable container. Do not reuse or refill this container. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip back and forth several times. Turn the container over onto its other end and tip back and tip back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat procedure two more times.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour the pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

LIMITED WARRANTY AND LIMITATION OF REMEDIES

To the extent consistent with applicable law, Ocion Water Sciences Group Ltd. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose stated on such label when used in accordance with label directions under normal conditions for use. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the seller. To the extent consistent with applicable law, the seller makes no other warranties of fitness or merchantability, expressed or implied, or any other warranty if the product is used contrary to the label instructions, or under abnormal conditions or under conditions not foreseeable to the seller. Seller makes no warranty for the performance of product that has been frozen.

To the extent consistent with applicable law, the exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product. To the extent consistent with applicable law, in no event will the seller be liable for any consequential, special or indirect damages connected with the use or handling of this product. To the extent consistent with applicable law, this product is offered and the buyer or user accepts it subject to the foregoing terms which may not be varied.