OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

April 23, 2025

Rick Cox
rick.c@ocion.com
OCION WATER SCIENCES INC.

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - Addition of already approved uses, and revision to current directions for use on food and non-food sites.
Product Name: POLYDEX
Admin Number: 88901-1
EPA Receipt Date: 02/11/2019
Action Case Number: 00605844

Dear Rick Cox:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA’s Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact James Orrock via email at orrock.james@epa.gov.

Sincerely,

Kristy Crews, Ph.D., Product Manager 22
FB, RD
Office of Pesticide Programs

Certified to NSF/ANSI 60

ACCEPTED
04/23/2025
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 88901-1

[Note to reviewer: Text in brackets is optional.]

COPPER	GROUP	NOT CLASSIFIED	FUNGICIDE

MASTER LABEL

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

OCION PX10

ALGICIDE*

Use in lakes, reservoirs, lagoons, swimming pools, ponds, decorative water features, livestock watering ponds, aquacultural ponds, and potable water supplies[+].

Use in irrigation systems (pumping stations, conveyance systems, distribution and field application systems), irrigation reservoirs, rice fields, ditches, canals, and to control tadpole shrimp in rice fields.

BACTERIAL ODOR CONTROL

Use in lakes, reservoirs, swimming pools, ponds, decorative water features, aquacultural ponds, sewage lagoons, pits, other organic sludge and crop and non-crop irrigation conveyance systems, ditches, canals and laterals[+].

MOLLUSCICIDE[Δ]

For Control of mollusk pests including Zebra, Quagga and Asian Mussels and Apple Snails in impounded waters including lakes, ponds, reservoirs, canals, ditches, tanks, raceways and fish hatcheries.

OCION BD41

BACTERIAL ODOR CONTROL*

Use in sewage lagoons[Δ], feedlot run-off pits[Δ], and other organic sludge conveyance systems, ditches, canals and laterals.

OCION PF91

BACTERICIDE*/FUNGICIDE

Use to reduce the bacteria* and fungi that cause spoilage in listed 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 registered for use by CA.]

[ΔΔNot registered for use by CA on listed plants.]

Commercial use only. Not for residential/homeowner use.

ACTIVE INGREDIENT

Copper Sulfate Pentahydrate*	20.3%
Other Ingredients	79.7%
Total	100.0%

* METALLIC COPPER CONTENT 5.16%.

One gallon of product contains 0.516 lb of metallic copper (Equivalent to 0.516 pounds of active

ingredient per US gallon).
CAS No. 7758-99-8

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

Complete First Aid Instructions affixed to front panel. See [Leaflet] [Booklet] for complete Precautionary Statements and Directions for Use.

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: XXX

Ocion Water Sciences Inc.
109 – 19347-24th Ave.,
Surrey, BC V3Z 3S9

EPA Reg. No. 88901-1
EPA Establishment No. XXX

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. Not for mollusk control in potable water supplies. **DO NOT** apply more than 1.0 ppm as metallic copper in these waters.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Long sleeved shirt
- Long pants
- Shoes plus socks
- Chemical-resistant gloves, such as butyl rubber ≥ 14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or Viton ≥14 mils
- Protective eyewear such as goggles, face shield or safety glasses.

User Safety Requirements

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 material that have been drenched or heavily contaminated with the product's concentrate. **DO NOT** reuse them.

ENGINEERING CONTROLS STATEMENTS

Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40 CFR 170.305].

USER SAFETY RECOMMENDATIONS

Users must:

- Wash hands after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing / PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove 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

This pesticide is toxic to fish and aquatic invertebrates. This product has a 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.

Fish Advisory Statement: This copper product is toxic to fish and aquatic organisms. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

Discharge Warning: DO NOT discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. **DO NOT** discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA

Discharge Direction for [Commercial] and [Residential} [Pool] and [Fountain Uses]: Before draining a treated [pool,] [spa,] [hot tub,] or [fountain] contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

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 fiberglass, PVC, polypropylene, Viton, corrosion resistant plastics, 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 (WPS), 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, butyl rubber ≥ 14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride ≥ 14 mils, or Viton ≥14 mils, 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 must take precautions, including refraining from rubbing their eyes
   - That they must keep the residues out of their eyes
   - That if they do get residues in their eyes, they must 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.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Polydex contains a Group M1 fungicide/bactericide. Any fungal/bacterial population may contain individuals naturally resistant to Polydex and other Group M1

fungicides/bactericides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Follow appropriate resistance-management strategies.

To delay fungicide/bactericide resistance, take one or more of the following steps:

- Rotate the use of Polydex or other Group M1 fungicides/bactericides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide/bactericides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide/bactericide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effective time fungicide/bactericide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal/bacterial populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Ocion Water Sciences Inc at Toll-free + 1-800-567-1191. You can also contact your pesticide distributor or university extension specialist to report resistance.

AQUATIC USES

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 biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, **DO NOT** treat more than ½ of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation.

Wait at least 14 days between treatments. Begin treatment along the shore and proceed outward 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. Application of algaecides to high density blooms of cyanobacteria can result in the release of intracellular contents into the water. Some of these intracellular compounds are known mammalian hepato- and nervous system toxins. Therefore, to minimize the risk of toxin leakage, manage cyanobacteria effectively in order to avoid applying this product when blooms of toxin producing cyanobacteria are present at high density. In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper at intervals shorter than 14 days.

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. The application rates on this label are appropriate for water with pH values > 6.5, DOC levels >3.0 mg/L, and alkalinity greater than 50 mg/L. Avoid treating waters with pH values <6.5,

DOC levels >3.0, and alkalinity less than 50 ppm (e.g., soft or acid waters), as trout and other sensitive species of fish may be killed under such conditions if present.

Consult your state department of natural resources or fish and game agency before applying this product to public waters. Permits may be required before treating such waters.

PRE-APPLICATION DOSE DETERMINATION:
For algae and aquatic plant treatments, conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

MAXIMUM ANNUAL APPLICATION RATE
For direct applications to whole water bodies for products containing directions for use in ponds, lakes and reservoirs, the maximum annual application rate is 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm). This rate/frequency is calculated based on staggering the treatment of each half of the water body every 14 days (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) for eight months (244 days). In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm).

For direct applications water management units (waterbody sections), the maximum annual application rate is 46.6 lbs. of metallic copper per acre-foot per year (17 applications per year at up to 1 ppm). This rate/frequency is calculated based on the maximum number of possible applications allowed based on a 14-day minimum (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) retreatment interval for eight months (244 days). **DO NOT** apply more than 46.6 lbs. of metallic copper to a water management unit, regardless of the pest(s) targeted by applications. In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 46.6 lbs. of metallic copper per acre-foot per year for a single water management unit.

Application directions for maintenance treatments targeting mussels
For treatments to whole waterbodies, administer copper at a rate of up to 1 ppm (2.74 lbs metallic copper per acre foot) at a maximum annual rate of 21.9 lbs. metallic copper per acre foot. Monitor the copper concentration and when it falls below the desired concentration, apply additional copper to bring the concentration back up to the desired concentration. Monitor mussel populations and terminate the additional applications once mussels are dead or 14 days have passed since the initial application. Applicators must wait at least 14 days after the last application before making any additional applications.

Application directions for maintenance treatments targeting parasites in aquaculture
Applicators must administer copper at a rate of 0.1 to 0.25 mg/L (0.27 to 0.69 lbs metallic copper per acre-foot = 0.1 to 0.25 ppm). Applicators must monitor the copper concentration and when it falls below the desired concentration, apply additional copper to bring the concentration back up to the desired concentration. Copper can be applied once daily for 5 to 11 consecutive days. **DO NOT** apply to water more than 11 days before waiting at least 14 days before retreating. **DO NOT** apply more than 46.6 lbs. metallic copper per acre-foot in one year.

Application directions for applying copper to control ich in earthen catfish ponds as a static bath treatment

Administer 0.27 to 0.69 lbs metallic copper per acre-foot (0.1 to 0.25 ppm or mg/L based on metallic copper=0.4 to 1 ppm or mg/L by product) per 100 mg/L total alkalinity (as $CaCO_3$) as an indefinite exposure once daily for 5 to 11 consecutive days.

Application directions for applying copper to water mold of eggs in the hatchery

Water molds of catfish eggs are treated inside the hatchery at the flow-through hatching trough. Administer a rate of 6.9 lbs metallic copper per acre foot (2.5 ppm or mg/L based on metallic copper = 10 ppm or mg/L by product) to the water of a flow-through hatching trough once daily until the embryos (eggs) develop eyes; set flow rate to allow for 1 exchange every 30 minutes.

Maximum annual application rate for rice

Directions for use for tadpole shrimp: The maximum annual application rate must no greater than be 13.7 lbs of metallic copper per acre-foot per year for control of tadpole shrimp.

Directions for use to control algae: The maximum annual application rate must be no greater than 5.48 lbs of metallic copper per acre-foot per for control of algae control in water-seeded rice.

Direction for use for simultaneous control both tadpole shrimp and algae: The maximum annual application rate must be no greater than 13.7 lbs of metallic copper per acre-foot per year.

ANNUAL MAXIMUM ANNUAL RATES IN TERMS OF METALLIC Cu/A/yr:

Pecan: 6.3 lbs/A/yr
Strawberry: 6 lbs/A/yr
Tobacco: 4 lbs/A/yr

SINGLE APPLICATION RATES IN TERMS OF METALLIC Cu/A:

Apples: 6 lbs/A
Pears: 6 lbs/A

RECREATIONAL WATER TREATMENT STATEMENT

Before draining a treated pool, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. **DO NOT** discharge treated pool to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

RESISTANCE MANAGEMENT RECOMMENDATIONS

Aquatic Herbicide Resistance Management

- Apply 5.3 gallons of product per acre-foot (2.74 pounds of metallic copper per acre-foot).
- For Whole waterbodies: **DO NOT** apply more than 42.5 gallons of product per acre-foot per year (21.9 pound of metallic copper per acre-foot per year).
- For Localized areas of waterbody or Water management units: **DO NOT** apply more than 46.6 pounds of metallic copper per acre-foot per year.
- **DO NOT** make applications less than 14 days apart.

Scout water bodies or management units prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Scout water bodies or management units after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Ocion Water Sciences Inc. retailer, representative or call 1-800-567-1191. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further reproduction.

Implement the Early Detection, Rapid Response practice and Maintenance Control by using the following practices where possible:

- Identify weeds present in a management unit through scouting or history of the water body and understand the biology of target species.
- Make applications to target weeds when populations are small and there is low biomass, early in the season to maximize efficacy.
- Make applications so that the herbicide contacts the weed. Use the appropriate application method for the use site/weed/chemical combination.
- **DO NOT** allow weed escapes to go to seed or produce asexual vegetative propagules.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed control practices such as mechanical control, biological management practices, and rotation of MOAs.
- Time applications to have the highest probability for control and minimize need for follow-up control measures. Apply during conditions that minimize herbicide degradation (light/temperature/microbes) and/or dissipation (water exchange).

Contact your local sales representative, local water management agency, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.

MANDATORY SPRAY DRIFT REQUIREMENTS

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft. above the vegetative canopy or water, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speed exceeds 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the application area.
- **DO NOT** apply during temperature inversions.

Ground Boom Applications:

- Apply with the spray release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, orient nozzles parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage For ground equipment, keep the boom level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

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 favors 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 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 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 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. Face the printed side of the sign 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, discharge the water from the public water system 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 AND AQUATIC PLANTS IN LAKES, RESERVOIRS, LAGOONS, PONDS (FARM, GOLF COURSE, ORNAMENTAL, AQUACULTURE), DECORATIVE WATER FEATURES (FOUNTAINS, DECORATIVE POOLS).

CONTROL OF ALGAE AND BACTERIAL ODOR IN SWIMMING POOLS.

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.

Pre-Application Dose Determination: For algae and aquatic plant treatments, conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

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, maintain the proper chemical concentration 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 pond 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. Mount boat mounted booms 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 shoreline 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 1/2 of the water body at once and wait at least 14 days between treatments.

DIRECT POUR:

For small ponds, decorative water features (fountains and decorative pools) 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.

Discharge Directions for [Commercial] and [Residential] [Pool,] and [Fountain] Uses:
Before draining a treated [pool,] [fountain] [or decorative water feature], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. **DO NOT** discharge treated water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

Maximum annual application rate of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm). This rate/frequency is calculated based on staggering the treatment of each half of the water body every 14 days (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) for eight months (244 days). In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm).

Restrictions:

DO NOT apply more than 2.74 lb metallic copper per application.
DO NOT apply less than 14 days between treatments.
DO NOT apply more than 8 treatments per year at up to 1 ppm metallic copper.
DO NOT apply more than 21.9 lbs of metallic copper per area-foot per year.

CONTROL OF ALGAE, AND NON-PUBLIC HEALTH BACTERIAL ODOR IN DITCHES, 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.

Pre-Application Dose Determination: For algae and aquatic plant treatments, conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

DRIP SYSTEM

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. Make this measurement three to four times and average the results. 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.

Restrictions:

Slug delivery and pulse application method for irrigation systems: Maximum annual application rate of 13 lbs (25 gallons of POLYDEX) metallic copper per year per 5 miles of conveyance. Apply copper into irrigation conveyance system or lateral at up to a maximum rate 0.5 lbs metallic copper per cubic foot per second of water per 5 to 30-mile treatment depending upon water hardness, alkalinity and algae concentration. This method may only be used in constructed irrigation conveyance systems, laterals and aqueducts.

Maximum annual application rate of 46.6 lbs. of metallic copper per acre-foot per year (17 applications per year at up to 1 ppm). This rate/frequency is calculated based on the maximum number of possible applications allowed based on a 14-day minimum (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) retreatment interval for eight months (244 days). **DO NOT** apply more than 46.6 lbs. of metallic copper to a water management unit, regardless of the pest(s) targeted by applications. In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 46.6 lbs. of metallic copper per acre-foot per year for a single water management unit.

Restrictions:

DO NOT apply more than 2.74 lb metallic copper (1 ppm) per application.
DO NOT apply less than 14 days between treatments.
DO NOT apply more than 17 treatments per year at up to 1 ppm metallic copper.
DO NOT apply more than 46.6 lbs of metallic copper per acre-foot per year.

CONTROL OF ALGAE AND NON-PUBLIC HEALTH BACTERIAL ODOR 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.

Pre-Application Dose Determination: For algae and aquatic plant treatments, conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

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 bacterial odor in stock watering ponds, tanks, and troughs, add 1/4 tsp **POLYDEX** to 30 gallons of water for a final ppm of 0.7 ppm. **DO NOT** exceed 1 ppm (1/4 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. Adjust systems 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.

Restrictions:

For labels containing direction for user for simultaneous control for both tadpole shrimp and algae (this direction also covers water seeded rice): The maximum annual application rate must be no greater than 13.7 lbs of metallic copper per acre-foot per year.

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. If shrimp are not present follow minimum application rates shown below.

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.

Restrictions:

For labels containing direction for user for simultaneous control for both tadpole shrimp and algae (this direction also covers water seeded rice): The maximum annual application rate must be no greater than 13.7 lbs of metallic copper per acre-foot per year.

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 3/4 tsp per 1000 gallons of water), and for copper tolerant fish species **DO NOT** exceed 0.4 ppm metallic copper (0.85 oz or 1 ¾ 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.

Restrictions:

For labels containing direction for user for simultaneous control for both tadpole shrimp and algae (this direction also covers water seeded rice): The maximum annual application rate must be no greater than 13.7 lbs of metallic copper per acre-foot per year.

For labels containing direction for use to control algae in catfish ponds: Applications are no longer needed in the fall after fish are harvest or the average water temperatures fall below 70°F. Apply mid-morning at a rate of 0.31 lbs metallic copper per acre-foot (0.11 ppm metallic copper). Place copper crystals in a cloth bag and then put the filled bag into another cloth bag to slow the rate at which the copper dissolves. Suspend the double bagged unit of copper about 20 feet in front of a paddlewheel aerator. Run the aerator until all the copper sulfate is dissolved; this usually requires an hour or two. Use copper only if you plan to harvest fish before fall and anticipate problems with off-flavoring algae.

Do not make routine copper treatments for algae control in fingerling ponds or in broodfish ponds because off-flavors are not a problem in those fish. Do not use this treatment regimen in waters of low hardness and alkalinity (less than 50 ppm as CaCO3) because copper may stress or kill fish.

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 BACTERIAL ODOR, AND AQUATIC PLANTS IN LAKES, RESERVOIRS, LAGOONS, PONDS (GOLF COURSE, ORNAMENTAL, AQUACULTURE) AND DECORATIVE WATER FEATURES (FOUNTAINS, DECORATIVE POOLS).

Restrictions:

- Refer to Directions for Use for additional product use restrictions

- Maximum Single Application Rate: 1.0 ppm (equivalent to 2.74 lb ai/acre-ft metallic copper)
- Maximum Annual Application Rate:
    - 21.9 lbs cu/acre-ft (equivalent to 8 applications per year at 1.0ppm) for whole water bodies
    - 46.6 lbs cu/acre-ft (equivalent to 17 applications per year at 1.0ppm) for waterbody sections
- Minimum Retreatment Interval: 14 days

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.

Restrictions:

- Refer to Directions for Use for additional product use restrictions
- Maximum Single Application Rate: 0.074 lbs metallic copper/gallon (equivalent to 8766 ppm copper)
- Maximum Annual Application Rate: 2.74 lbs metallic copper/acre-ft (equivalent to 1.0 ppm)
- Minimum Retreatment Interval: 14 days

CONTROL OF MUSSELS AND SNAILS

In Open Waters (Lake, Pond, Reservoir): In early spring or when any form of mussel's presence detected in water, apply **POLYDEX** at a preventative rate of 0.06 to 0.30 ppm ionic copper for maintenance. Apply 0.12 to 0.50 ppm ionic copper to effectively control of adult, juvenile, larva mussels and eggs for a heavily infected site. The eggs and larval stages are microscopic and free floating, they can be killed by lower doses though the higher doses are required to kill adult mussels. After initial or re-treatment, allow at least 4 days for mortality of adult mussels occur.

Female mussels start spawning at 10°C, **POLYDEX** is as effective in early spring – colder temperature conditions as it is at normal temperatures. **POLYDEX** has ionic diffusion properties therefore the applied product self-disperses effortlessly throughout the water column. Depending on where mussels present occurs, product can be sprayed using hose pipes, delivered using under water pumps to the depth sites and surfaces of worst infestation. A larger area can be treated with gaps no greater than 200 feet. **DO NOT** treat fish containing waters more than one-half of the water body at a time, that will allow fish to move away from treated area. **DO NOT** exceed 1.0 ppm copper in any single application or during the re-treatment.

Effective control can also be achieved by longer exposures (e.g.: 5 – 30 days) at lower doses to yield a rate of 0.06 to 0.30 ppm ionic copper. The lower doses are safe for most fishes and other non-target organisms. Repeat doses are permissible and may be required for severe infestations. **DO NOT** exceed a resulting concentration of 1.0 ppm ionic copper in the treated water (background + applied). Routine monitoring

of the ionic copper level in water is highly recommended to avoid outbreaks or overuse of the product. As an added bonus, this treatment keeps algae out of the water body and does not produce any disinfection by products to ecosystem.

Restrictions – open waters:

- Refer to Directions for Use for additional product use restrictions
- Maximum Single Application Rate: 1.0 ppm (equivalent to 2.74 lb ai/acre-ft metallic copper)
- Maximum Annual Application Rate:
  - 21.9 lbs cu/acre-ft (equivalent to 8 applications per year at 1.0ppm) for whole water bodies
  - 46.6 lbs cu/acre-ft (equivalent to 17 applications per year at 1.0ppm) for waterbody sections
- Minimum Retreatment Interval: 5 days

In Flowing Close Waters (canal, ditches, laterals): In early spring or when any form of mussel's presence detected, apply **POLYDEX** at a preventative dose of 0.06 – 0.30 ppm ionic copper. In flowing water, **POLYDEX** can be applied continuously at a preventative rate for stopping further spreading and colonization of mussels and mollusks. Continuous dosing can be easily applied using metering pump at the inlet or intake. Continuous application can be stopped when mussels are no longer present in the flowing water. Allow at least 4 days for mortality of adult mussels/mollusks, longer days might require for highly populated invasion where adults appear in clumps and covered/blocked all the holes in the equipment and structures. After initial treatment, manual cleaning of dead cells is required. Once the initial infiltration has been cleared from the site, a continuous maintenance dose of 0.06 – 0.12 ppm ionic copper can be used to prevent further colonization. **DO NOT** exceed a resulting concentration of 1.0 ppm ionic copper in the treated water (background + applied) at any time. **POLYDEX** is equally effective in colder temperature as normal temperature, therefore it can be applied from early spring to fall.

Restrictions – Flowing waters:

- Refer to Directions for Use for additional product use restrictions
- Maximum Application Rate: 1.0 ppm (equivalent to 2.74 lb ai/acre-ft metallic copper) or 16.7 gallons Polydex per million gallons of water.
- Minimum Retreatment Interval: Can apply continuously until mussels are no longer present, as long as the maximum application rate is not exceeded.

CONTROL OF BACTERIAL ODORS IN SEWAGE LAGOONS[Δ], FEEDLOT RUN-OFF PITS[Δ], OTHER ORGANIC SLUDGE CONVEYANCE SYSTEMS

[ΔNot registered for use by 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.
[ΔNot registered for use by CA.]

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.

Restrictions:
- Refer to Directions for Use for additional product use restrictions
- Maximum Single Application Rate: 1 gallon POLYDEX/60,000 gallons sewage ~1.0 ppm (equivalent to 2.74 lb ai/acre-ft metallic copper)
- Maximum Annual Application Rate: N/A
- Minimum Retreatment Interval: N/A

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

[ΔNot registered for use by 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.

Restrictions:
- Refer to Directions for Use for additional product use restrictions
- Maximum Single Application Rate: 1.86 fl. oz. POLYDEX/100 gallons water; ~9.0 ppm (equivalent to 24.66 lb ai/acre-ft metallic copper)
- Maximum Annual Application Rate: 1.86 fl. oz. POLYDEX/100 gallons water; ~9.0 ppm (equivalent to 24.66 lb ai/acre-ft metallic copper)
- Minimum Retreatment Interval: N/A; apply product only once to produce

CONTROL OF LISTED PLANT DISEASES IN 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.

[ΔNot registered for use by CA.] [ΔΔ Not registered for use by CA on Listed Plants.]

POLYDEX is an algicide and a systemic fungicide / bactericide* that controls the diseases listed on this label. Apply as an aerial or ground dilute spray with application equipment that ensures 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

Maximum single and annual application rate for rice – foliar applications: Copper may be applied at a maximum rate of 0.9 lbs of metallic copper per application for 2 applications per year (1.8 lbs metallic copper annual maximum).

Adjust application of **POLYDEX** 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 the crop prior to full-scale commercial application is recommended.

Plant injury (phytotoxicity): Higher concentrations may damage some tender, open blooms and soft young foliage. 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.

When spraying outdoors, refer to the MANDATORY SPRAY DRIFT REQUIREMENTS AND SPRAY DRIFT ADVISORIES IN THIS LABEL.

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 of **POLYDEX** applied, and concentration of the spray, are dependent on the specific crops as designated in the following rate tables, as described above.

Mixing Directions: Pour one half of specified volume of water into spray or mix tank. Add specified volume of **POLYDEX** as listed for the crop being treated, 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.

Increase the volume of spray used for crops with dense foliage.

ORNAMENTAL 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[¥] below. For all other non-food crops, **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[Δ]

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. **[Δ Not registered for use by CA.]**

SHRUBS AND VINES

Use **POLYDEX** to treat the following shrubs and vines for Botrytis:
Barberry[Δ], Bougainvillea[Δ], Cornus[Δ], Euonymus, Forsythia[Δ], Holly[Δ], Paeonia[Δ], Philadelphus[Δ], Physocarpus[Δ], Potentilla, Ribes[Δ], Rosa, Spirea[Δ], Viburnum[Δ], Weigela[Δ], and Wisteria[Δ].
[ΔNot registered for use by CA.]

DECIDUOUS[Δ]

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.
[ΔNot registered for use by CA.]

CONIFERS[Δ]

Use **POLYDEX** to treat the following conifers for Botrytis:
Abies, Juniper, Picea, Pinus, Pittosporum, Pseudotsuga, Taxus, Thuja, Tsuga.
[ΔNot registered for use by CA.]

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

Restrictions:

- Refer to Directions for Use for additional product use restrictions
- Maximum Single Application Rate:
    - All Non-Food Crops Except Easter lilies and turfgrass 11.5 fl. oz. POLYDEX/1000 sq ft (equivalent to 0.046 lbs metallic copper/1000 sq ft)
    - For Easter lilies 14.2 fl oz POLYDEX/1000 sq ft (equivalent to 0.057 lbs metallic copper/1000 sq ft)
    - For Turfgrass 6.0 fl oz POLYDEX/1000 sq ft (equivalent to 0.024 lbs metallic copper/1000 sq ft)
- Maximum Annual Application Rate:
    - All Non-Food Crops Except Easter lilies and turfgrass 3.87 gallons POLYDEX/A/year (equivalent to 2.00 lbs metallic copper/A/year)
    - For Easter lilies 145 gallons POLYDEX/A/year (equivalent to 74.82 lbs metallic copper/A/year)
        - **DO NOT** apply any additional copper pesticide to this land for 36 months.
    - For Turfgrass 62 gallons POLYDEX/A/year (equivalent to 31.99 lbs metallic copper/A/year)
- Minimum Retreatment Interval: 7 days

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 registered for use by 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 registered for use by 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

[ΔNot registered for use by 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 registered for use by CA.]

[GREENHOUSE [FOOD CROP [Δ]] SPRAY APPLICATION]

[[Δ]Not registered for use by CA.]

[Greenhouses] [(AND OTHER COVER)], [NURSERIES], [AND] [LANDSCAPES]:

For use on listed ornamental plants, herbs, spices, vegetables, melons, strawberries, tobacco, and other food crops raised to harvest, for transplanting to production fields, for commercial resale, or nursery stock, including listed bearing and nonbearing fruit trees and grapevines, and crops grown hydroponically.

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 listed application rates are appropriate for high disease pressure.

Foliar (Spray) Application	For control of powdery mildew, downey mildew, botrytis, phytophthora, erwinia, rust, pseudomonas, xanthomonas, cylindrocladium	Apply to plants using pressurized spray equipment (such as backpack sprayer, tractor-mounted spray boom, hand-held spray gun or wand), mist blower, or other application. Spray sufficient volume to achieve thorough coverage of leaves, flower, fruit and other above-ground plant parts with minimal runoff

[OUTDOOR][FIELD] FOOD CROP [Δ] SPRAY APPLICATIONS.

[[Δ]Not registered for use by CA]

FOR ALL OUTDOOR-GROWN FOOD, AND NON-FOOD CROPS, including bearing and non-bearing fruit trees, (pome and stone fruits, citrus, grapes, and tree nuts), strawberries, sweet corn, leafy vegetables, melons and other cucurbits, potatoes, beans, herbs, spices, tobacco, cut flowers and other field-grown ornamental plants.

Foliar (Spray) Application	For control of powdery mildew, downey mildew, botrytis, phytophthora, erwinia, rust, pseudomonas, xanthomonas, cylindrocladium	Apply to plants using pressurized spray equipment (such as backpack sprayer, tractor-mounted spray boom, hand-held spray gun or wand), mist blower, or other application. Spray sufficient volume to achieve thorough coverage of leaves, flower, fruit and other above-ground plant parts with minimal runoff

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[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
CITRUS					
Citrus	Canker (*Xanthomonas citri*), Melanose (*Diaporthe citri),* Brown Rot, Greasy Spot, Pink Pitting, Scab, Alternaria	Post Bloom	25-60 (0.101-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 11.9 gallons/A/year (x lbs CU/A/year) (6.140 lbs CU/A/year (x lbs CU/A/year)) • Max No. of Applications/year: 2 • Min RTI:7 days • Min PHI: DO NOT apply more than 3 weeks after petal fall	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 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) • Max Annual Application Rate: 0.5 gallons/A/year (0.258 lbs CU/A/year) • Max No. of Applications/year: 3 • Min RTI:30 days • Min PHI: N/A	
Cereal Grains (Wheat, Oats, Barley)	*Helminthosporium* spot, Blotch, *Septoria* Leaf Blotch	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) • Max Annual Application Rate: 1.0 gallons/A/year (0.516 lbs CU/A/year) • Max No. of Applications/year: 6 • Min RTI:10 days • Min PHI: N/A	
Chives	Downy Mildew	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 1 gallon of product per acre per application.
Coriander	Powdery Mildew	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs	

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
(Cilantro)				CU/100 gal) • Max Annual Application Rate: 1.3 gallons/A/year (0.671 lbs CU/A/year) • Max No. of Applications/year: 8 • Min RTI:10 days • Min PHI: N/A	
Corn (Field, Pop, sweet)[1]	Bacterial stalk rot	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 2 gallons Polydex/A (1.032 lbs CU/A) • Max Annual Application Rate: 4.0 gallons/A/year (2.064 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 2 gallons of product per acre per application.
Dill	*Phoma* Leaf Spot, *Rhizoctonia* Foliage Blight	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gallons Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 3.7 gallons/A/year (1.909 lbs CU/A/year) • Max No. of Applications/year: 24 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 1.5 gallons of product per acre per application.
Leek	Mildew (*Peronospora destructor*), White tip (*Phytophthora porri*)	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) • Max Annual Application Rate: 5.5 gallons/A/year (2.838 lbs CU/A/year) • Max No. of Applications/year: 37 • Min RTI:7 days • Min PHI: N/A	
Lettuce, Endive (Escarole)	Downy mildew (*Bremia lactucae*), Ring spot (*Marssonina panattoniana*), Anthracnose, Leaf Spot	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.9 gallons Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 7.6 gallons/A/year (3.922 lbs CU/A/year) • Max No. of Applications/year: 51 • Min RTI:5 days	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.

[1] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
				• Min PHI: N/A	
Mint	Powdery Mildew	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1 gallon Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:10 days • Min PHI: N/A	**DO NOT** exceed 1 gallon of product per acre per application.
Parsley	*Pseudomonas sp.*	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) • Max Annual Application Rate: 1.9 gallons/A/year (0.980 lbs CU/A/year) • Max No. of Applications/year: 12 • Min RTI:10 days • Min PHI: N/A	
Peanut	Cercospora leaf spot	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gallons Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 4.4 gallons/A/year (2.270 lbs CU/A/year) • Max No. of Applications/year: 29 • Min RTI:7 days • Min PHI: N/A	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.
Potato	Early Blight (*Alternaria solani*), Late Blight (*Phytophthora infestans*), Grey mould (*Botrytis cinerea*), Dry rot (*Sclerotium rolfsii*)	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) • Max Annual Application Rate: 23.6 gallons/A/year (12.178 lbs CU/A/year) • Max No. of Applications/year: 73 • Min RTI:5 days • Min PHI: 2 weeks	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 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 3.8 gallons/A/year	**DO NOT** exceed 1.5 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
				(1.961 lbs CU/A/year) • Max No. of Applications/year: 25 • Min RTI:7 days • Min PHI: N/A	
Rosemary	Botrytis Blight	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.0 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:10 days • Min PHI: N/A	**DO NOT** exceed 1 gallon of product per acre per application.
Rutabaga	Powdery mildew	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 7.6 gallons/A/year (3.922 lbs CU/A/year) • Max No. of Applications/year: 51 • Min RTI:10 days • Min PHI: N/A	**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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal)and 3.8 gal Polydex/A (1.961 lbs CU/A) • Max Annual Application Rate: 9.5 gallons/A/year (4.902 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	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[2]	Bacterial Canker, Fruit rot, *Phomopsis* Twig Blight	Fall / Late Dormant	19-50 (0.077-0.202)	• Max Single Application Rate: 50 fl. oz./100 gal (0.202 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 8.0 gallons/A/year (4.128 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 4 gallons of product per acre per application.

[2][Δ Not registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
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 (0.101-0.202)	• Max Single Application Rate: 50 fl. oz./100 gal (0.202 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 11.8 gallons/A/year (6.089 lbs CU/A/year) • Max No. of Applications/year: 3 • Min RTI:10 • Min PHI: N/A	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 (0.101-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 15.0 gallons/A/year (7.740 lbs CU/A/year) • Max No. of Applications/year: 36 • Min RTI:10 days • Min PHI: N/A	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.
Strawberry[3]	Leaf spot (*Mycosphaerella fragariae*), Leaf Blight, Downy Mildew, Angular Leaf Spot (*Xanthomonas*), Leaf Scorch	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) • Max Annual Application Rate: 11.6 gallons/A/year (5.986 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	Apply when plants are established and reapply no more frequently than in one week intervals throughout the season. NOTE: Discontinue if phytotoxicity occurs.
TREE[4] CROPS					

[3] [Δ Not registered for use by CA]

[4] [Δ Not registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Almond	Bacterial Blast (P*seudomonas*), Bacterial Canker, *Coryneum* Blight (Shot Hole), Blossom Brown Rot	Dormant / Late dormant	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 17.0 gallons/A/year (8.772 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: **DO NOT** apply after 50% bloom or when trees are in leaf	Bacterial Blast, Bacterial Canker, Shot Hole: Make the first application before fall rains and a second at late dormant. Use higher specified 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. Bacterial Blast: In sprinkler irrigated orchards or where disease is severe, apply at 2 week intervals or just before irrigation.
		Bloom / Growing season	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 17.0 gallons/A/year (8.772 lbs CU/A/year) • Max No. of Applications/year: 73 • Min RTI:5 days • Min PHI: . **DO NOT** apply after 50% bloom or when trees are in leaf	
Atemoya (Sugar apple)	Anthracnose	Growing season	25-40 (0.101-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) • Max Annual Application Rate: 12.1 gallons/A/year (6.244 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	
Avocado	Anthracnose, Blotch, Scab	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 17.8 gallons/A/year (x lbs CU/A/year) • Max No. of Applications/year: 4 • Min RTI:14 days • Min PHI: N/A	Spray first when buds open. Make 2 to 4 applications per season. Use higher specified rates when conditions favor disease development.
Banana	Sigatoka (black and yellow), Black Pitting	Early season / Growing season	11-32 (0.044-0.129)	• Max Single Application Rate: 32 fl. oz./100 gal (0.129 lbs CU/100 gal) and 2.0 gal Polydex/A (1.032 lbs CU/A) • Max Annual Application Rate: 18.1 gallons/A/year (9.340 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days	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.

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
				• Min PHI: N/A	
Betel Nut	Leaf Spot (*Bacterium betle, Glomeralla cingulata*), Foot rot (*Phytophthora colocasiae*), Leaf rot (*Phytophthora parasitica*)	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.4 gal Polydex/A (0.722 lbs CU/A) • Max Annual Application Rate: 8.1 gallons/A/year (4.180 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 1.4 gallons of product per acre per application.
Cacao	Black Pod	Growing season	19-60 (0.077-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.3 gal Polydex/A (2.219 lbs CU/A) • Max Annual Application Rate: 15.1 gallons/A/year (7.792 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:14 days • Min PHI: N/A	**DO NOT** exceed 4.3 gallons of product per acre per application.
Carambola (star fruit)	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 10.1 gallons/A/year (5.212 lbs CU/A/year) • Max No. of Applications/year: 32 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 4 gallons of product per acre per application.
Chestnut[5]	Blight (*Endothia parasitica*), Ink disease (*Phytophthora cambivora*)	Growing season	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 8.1 gallons/A/year (4.180 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:14 days • Min PHI: N/A	**DO NOT** exceed 4 gallons of product per acre per application.

[5] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Coffee[6]	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 (0.077-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 12.1 gallons/A/year (6.244 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:14 days • Min PHI: N/A	**DO NOT** exceed 4 gallons of product per acre per application.
Guava	Anthracnose, Red Algae	Growing season	40-70 (0.161-0.282)	• Max Single Application Rate: 70 fl. oz./100 gal (0.282 lbs CU/100 gal) and 2.4 gal Polydex/A (1.238 lbs CU/A) • Max Annual Application Rate: 4.7 gallons/A/year (2.425 lbs CU/A/year) • Max No. of Applications/year: 15 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 2.4 gallons of product per acre per application.
Litchi	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 2.4 gal Polydex/A (1.238 lbs CU/A) • Max Annual Application Rate: 4.7 gallons/A/year (2.425 lbs CU/A/year) • Max No. of Applications/year: 15 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 2.4 gallons of product per acre per application.
Macadamia	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.5 gal Polydex/A (2.322 lbs CU/A) • Max Annual Application Rate: 9.1 gallons/A/year (4.696 lbs CU/A/year) • Max No. of Applications/year: 31 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 4.5 gallons of product per acre per application.
Mamey Sapote	Algal leaf spot, Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A)	**DO NOT** exceed 4 gallons of product per acre per application.

[6] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
				• Max Annual Application Rate: 8.1 gallons/A/year (4.180 lbs CU/A/year) • Max No. of Applications/year: 25 • Min RTI:14 days • Min PHI: N/A	
Mango	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 45.3 gallons/A/year (23.375 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	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 (0.242-0.282)	• Max Single Application Rate: 70 fl. oz./100 gal (0.282 lbs CU/100 gal) • Max Annual Application Rate: 17.0 gallons/A/year (8.772 lbs CU/A/year) • Max No. of Applications/year: 2 • Min RTI:30 days • Min PHI: Only apply post-harvest and in early spring	Apply post-harvest before winter rains. A second application in early spring can be made if disease is severe. Apply at the high rate if heavy disease pressure or when conditions favor disease development.
Papaya	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 5.0 gal Polydex/A (2.580 lbs CU/A) • Max Annual Application Rate: 20.2 gallons/A/year (10.423 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 5 gallons of product per acre per application.
Passion Fruit	Anthracnose	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.5 gal Polydex/A (2.322 lbs CU/A) • Max Annual Application Rate: 9.1 gallons/A/year (4.696 lbs CU/A/year) • Max No. of Applications/year: 29 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 4.5 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Pecan	Kernel Rot, Shuck Rot (*Phytophthora cactorum*), Zonate Leaf Spot (*Cristulariella pyramidalis*)	Growing season	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 12.2 gallons/A/year (6.295 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:14 days • Min PHI: **DO NOT** apply after shucks open	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 specified 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 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 1.9 gal Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 5.5 gallons/A/year (2.838 lbs CU/A/year) • Max No. of Applications/year: 17 • Min RTI:14 • Min PHI: N/A	**DO NOT** exceed 1.9 gallons of product per acre per application.
Pistachio[7]	*Botryosphaeris* Panicle and Shoot Blight, Botrytis Blight, Late Blight (A*lternaria alternata*), *Septoria* Leaf Blight	Growing season	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application Rate: 8.1 gallons/A/year (4.180 lbs CU/A/year) • Max No. of Applications/year: 26 • Min RTI:14 days • Min PHI: N/A	**DO NOT** exceed 4 gallons of product per acre per application.
Pome Fruit: Apple Pear, Quince[8]	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 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 11.6 gallons/A/year (5.986 lbs CU/A/year) • Max No. of Applications/year: 1 • Min RTI:N/A; make only one application per year • Min PHI: Apply only after harvest	Quince use not permitted in California. Anthracnose: 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.

[7] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Pome Fruit: Apple Quince[8]	Apple Scab, Fire Blight	Between silver tip and green tip	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 11.6 gallons/A/year (5.986 lbs CU/A/year) • Max No. of Applications/year: 1 • Min RTI:N/A; make only one application per year • Min PHI: Apply only between silver-tip and green-tip	Fire Blight: Make application between silver-tip and green-tip. NOTE: Phytotoxicity may occur from late application
Pome Fruit: Pear	Apple Scab, Fire Blight	Bloom, growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) • Max Annual Application Rate: 11.6 gallons/A/year (5.986 lbs CU/A/year) • Max No. of Applications/year: 73 • Min RTI:5 days • Min PHI: N/A	NOTE: **DO NOT** apply to d'Anjou pears. High dosages may cause fruit russet. Pears- Fire Blight: Apply at 5 day intervals throughout bloom period
Stone Fruit (Apricot, cherry, nectarine, peach, plum, prune[9]**)**	*Pseudomonas*, Bacterial Canker, *Xanthomonas*, *Coryneum* Blight, Leaf Curl	Dormant / Late Dormant, up to pink bud	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 17.0 gallons/A/year (8.772 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: N/A	
	Bacterial Spot, Blossom Brown Rot, *Coryneum* Blight Leaf Curl	Bloom, growing season	30-60 (0.121-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 17.0 gallons/A/year (8.772 lbs CU/A/year) • Max No. of Applications/year: 72 • Min RTI:5 days • Min PHI: N/A	

[8] [ΔNot registered for use by CA]

[9] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Walnut	Walnut Blight	Early season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) • Max Annual Application Rate: 30.2 gallons/A/year (15.583 lbs CU/A/year) • Max No. of Applications/year: 52 • Min RTI:7 days • Min PHI: **DO NOT** apply after early nutlet stage	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 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.0 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 1 gallon of product per acre per application.
Asparagus	Rust (*Puccinia asparagi*)	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 2.0 gal Polydex/A (1.032 lbs CU/A) • Max Annual Application Rate: 4.8 gallons/A/year (2.477 lbs CU/A/year) • Max No. of Applications/year: 32 • Min RTI:10 days • Min PHI: N/A	**DO NOT** exceed 2 gallons of product per acre per application.
Beans (dry, Green)	Brown spot, Common Blight, Halo Blight	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 4.4 gallons/A/year (2.270 lbs CU/A/year) • Max No. of Applications/year: 29 • Min RTI:7 days • Min PHI: N/A	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.

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Beets (Table, Beet[10] Greens)	Cercospora Leaf Spot, Downy Mildew, Leaf Blight	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 2.5 gal Polydex/A (1.290 lbs CU/A) • Max Annual Application Rate: 7.5 gallons/A/year (3.870 lbs CU/A/year) • Max No. of Applications/year: 36 • Min RTI:10 days • Min PHI: N/A	Apply when disease first appears and repeat every 10 days. **DO NOT** exceed 2.5 gallons of product per acre per application.
Carrot	*Alternaria* Leaf Spot, *Cercospora* Leaf Spot	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.9 gal Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 4.7 gallons/A/year (2.425 lbs CU/A/year) • Max No. of Applications/year: 31 • Min RTI:7 days • Min PHI: **DO NOT** apply once green-tip is ½ inch	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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.9 gal Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 5.0 gallons/A/year (2.580 lbs CU/A/year) • Max No. of Applications/year: 33 • Min RTI:7 days • Min PHI: N/A	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.

[10] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

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Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Crucifers (broccoli, brussel sprouts, cabbage, cauliflower, collard greens, mustard greens, turnip greens[11])	*Alternaria, Xanthomonas*, Downy Mildew, Black Rot	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.0 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:7 days • Min PHI: N/A	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 specified 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.
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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 2.0 gal Polydex/A (1.032 lbs CU/A) • Max Annual Application Rate: 4.9 gallons/A/year (2.528 lbs CU/A/year) • Max No. of Applications/year: 33 • Min RTI:5 days • Min PHI: N/A	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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 7.5 gallons/A/year (3.870 lbs CU/A/year) • Max No. of Applications/year: 50 • Min RTI:7 days • Min PHI: N/A	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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.9 gal Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 5.6 gallons/A/year (2.890 lbs CU/A/year) • Max No. of Applications/year: 37 • Min RTI:7 days • Min PHI: N/A	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.

[11] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Okra	Anthracnose, Bacterial Leaf Spot, Leaf Spots, Pod Spot, Powdery Mildew	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) • Max Annual Application Rate: 5.0 gallons/A/year (2.580 lbs CU/A/year) • Max No. of Applications/year: 33 • Min RTI:5 days • Min PHI: N/A	
Onion[12]	Bacterial Blight, Downy Mildew, Purple Blotch	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.9 gal Polydex/A (0.980 lbs CU/A) • Max Annual Application Rate: 5.6 gallons/A/year (2.890 lbs CU/A/year) • Max No. of Applications/year: 37 • Min RTI:7 days • Min PHI: N/A	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 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 3.7 gallons/A/year (1.909 lbs CU/A/year) • Max No. of Applications/year: 24 • Min RTI:7 days • Min PHI: N/A	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 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 11.2 gallons/A/year (5.779 lbs CU/A/year) • Max No. of Applications/year: 75 • Min RTI:7 days • Min PHI: N/A	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.

[12] [ΔNot registered for use by CA]

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
Spinach	Anthracnose, Blue Mold, *Cercospora* Leaf Spot, White Rust, Downy Mildew	Growing Season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 3.7 gallons/A/year (1.909 lbs CU/A/year) • Max No. of Applications/year: 24 • Min RTI:7 days • Min PHI: N/A	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.
Tomato	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Gray Leaf Mold, Late Blight, *Septoria* Leaf Spot	Growing season	19-40 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.0 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 7.6 gallons/A/year (3922 lbs CU/A/year) • Max No. of Applications/year: 51 • Min RTI:3 days • Min PHI: N/A	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 (0.077-0.202)	• Max Single Application Rate: 50 fl. oz./100 gal (0.202 lbs CU/100 gal) • Max Annual Application Rate: 18.8 gallons/A/year (9.701 lbs CU/A/year) • Max No. of Applications/year: 121 • Min RTI:3 days • Min PHI: N/A	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 (0.077-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 1.0 gal Polydex/A (0.516 lbs CU/A) • Max Annual Application Rate: 2.5 gallons/A/year (1.290 lbs CU/A/year) • Max No. of Applications/year: 16 • Min RTI:10 • Min PHI: 2 weeks	**DO NOT** exceed 1 gallon of product per acre per application. **DO NOT** apply within 2 weeks of harvest.
Kiwi	*Erwinia herbicola, Pseudomonas fluorescens, Pseudomonas syringae*	Growing season	40-60 (0.161-0.242)	• Max Single Application Rate: 60 fl. oz./100 gal (0.242 lbs CU/100 gal) and 4.0 gal Polydex/A (2.064 lbs CU/A) • Max Annual Application	Apply in 200 gallons of water per acre. **DO NOT** exceed 4 gallons of product per acre per application.

FOLIAR APPLICATION RATES FOR FOOD CROPS[Δ]

***Max No. of Applications assumes use of minimum solution concentration and an application rate of 100 gal/A or is based on Max number of RTI's per year or specific instructions in the comments; 1 gallon of POLYDEX provides 0.516 lb of metallic copper**

Crop	Disease	Season	Application rate in fl. oz. POLYDEX per 100 gallons (lbs copper /100gal)	Use Restrictions RTI= Retreatment Interval PHI= Preharvest Interval Max No. of Applications*	Comments
				Rate: 6.0 gallons/A/year (3.096 lbs CU/A/year) • Max No. of Applications/year: 9 • Min RTI:30 days • Min PHI: N/A	
MISCELLANEOUS					
Ginseng[13]	*Alternaria* Leaf Blight, Stem Blight	Growing season	25-40 (0.101-0.161)	• Max Single Application Rate: 40 fl. oz./100 gal (0.161 lbs CU/100 gal) and 2.0 gal Polydex/A (1.032 lbs CU/A) • Max Annual Application Rate: 5.0 gallons/A/year (2.580 lbs CU/A/year) • Max No. of Applications/year: 25 • Min RTI:7 days • Min PHI: N/A	**DO NOT** exceed 2 gallons of product per acre per application.
Soybeans	Blight	Growing season	19-30 (0.077-0.121)	• Max Single Application Rate: 30 fl. oz./100 gal (0.121 lbs CU/100 gal) and 1.5 gal Polydex/A (0.774 lbs CU/A) • Max Annual Application Rate: 4.5 gallons/A/year (2.322 lbs CU/A/year) • Max No. of Applications/year: 30 • Min RTI:7 days • Min PHI: N/A •	**DO NOT** exceed 1.5 gallons of product per acre per application.
Tobacco[14]	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 (0.101-0.202)	• Max Single Application Rate: 50 fl. oz./100 gal (0.202 lbs CU/100 gal) and 3.8 gal Polydex/A (1.961 lbs CU/A) • Max Annual Application Rate: 7.8 gallons/A/year (4.025 lbs CU/A/year) • Max No. of Applications/year: 36 • Min RTI:10 days • Min PHI: N/A	**DO NOT** exceed 3.8 gallons of product per acre per application.

[13] [ΔNot registered for use by CA]

[14] [ΔNot registered for use by CA]

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal. Open burning and dumping are 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, fiberglass, 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 1/4 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 1/4 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.