



5905-566 8.13.2010 1/29

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

AUG 13 2010

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Cheryl Wagner
Agent for Helena Chemical Company
C/o Wagner Regulatory Associates, Inc.
P.O. Box 640
Hockessin, DE 19707

RE: Product Name: HM-0201 -A Systemic PGR & Fungicide
EPA Reg. No: 5905-566
Application for Label Notification Dated August 03, 2010 to update the storage
and disposal statement per PR Notice 2007-4

Dear Mrs. Wagner:

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under Pesticide Registration (PR) Notice 98-10 dated above. A preliminary screen of this request has been conducted for its applicability under PR Notice 98-10 and it has been determined that the action(s) requested falls within the scope of PR Notice 98-10. Our records have been duly noted, and the label submitted with this application has been stamped "Notification Accepted" and will be placed accordingly in our records.

If you have any questions concerning this action, please feel free to contact Ms. Menyon Adams at (703) 347-8496 or email at adams.menyon@epa.gov.

Sincerely,

Linda Hollis

Linda Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution Prevention
Division (7511P)

<p>United States Environmental Protection Agency Washington, DC 20460</p>	<input checked="" type="checkbox"/> Registration	OPP Identifier Number
	<input type="checkbox"/> Amendment	
	<input type="checkbox"/> Other	

Application for Pesticide - Section I

1. Company/Product Number 5905-566	2. EPA Product Manager Andrew Bryceland	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) HM-0201-A Systemic PGR & Fungicide	PM# BPPD 91	
5. Name and Address of Applicant (Include Zip Code) Helena Chemical Company c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. Product Name	

Notification Accepted

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated Date: <u>AUG 13 2010</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application. Reviewer: <u>M Adams</u>
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
 Notification of label change per PR Notice 2007-4. This notification is consistent with the provisions of PR Notice 2007-4 and EPA Regulations at 40 CFR 156.10, 154.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per Unit Packaging wgt. container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" No. per Package wgt container	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) HDPE lined bags

*** Certification must be submitted**

3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s)/Retail Container 2.5 gal., 5 gal., 30 gal., 55 gal.	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
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6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other ___ adhesive backed label ___ <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Cheryl Wagner	Title Agent for Helena Chemical Company	Telephone No. (Include Area Code) (302) 234 8551
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <div style="text-align: center;">(Stamped)</div>
2. Signature 	3. Title Agent for Helena Chemical Company	
4. Typed Name Cheryl Wagner	5. Date August 3, 2010	

August 3, 2010



Wagner Regulatory Associates, Inc.
P.O. Box 640
7460 Lancaster Pike, Suite 9
Hockessin, Delaware 19707

Document Processing Desk (NOTIF)
ATTN: Mr. Andrew Bryceland
Biopesticides and Pollution Prevention Division (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, Virginia 22202-4501

Dear Mr. Bryceland:

Re: HM-0201-A Systemic PGR & Fungicide
EPA Registration Number 5905-566
Notice of Revised Storage & Disposal Label Language

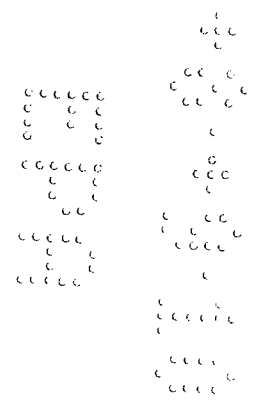
Wagner Regulatory Associates, Inc., on behalf of Helena Chemical Company, hereby notifies the Agency that the storage and disposal section of the subject label as been revised in accordance with PR Notice 2007-4. Enclosed for the Agency's file is:

- Letter from Helena Chemical Company authorizing Wagner Regulatory to serve as Agent
- EPA Notification form (EPA Form 8570-1)
- One copy of revised labeling

Please feel free to contact me at (302) 234-8551 if you have any questions or require additional information.

Respectfully submitted,

Cheryl Wagner
Agent for Helena Chemical Company



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SPECIMEN LABEL

HM-0201-A

SYSTEMIC /PGR & FUNGICIDE:

FOR NUT,POD,FRUIT SET AS WELL AS RIPENING AND FOR EFFECTIVE CONTROL OF VARIOUS PLANT DISEASES INCLUDING BLACK SPOT OR SCAB IN APPLE, ROOT ROT IN AVOCADO, BUD ROT AND NUT FALL IN COCONUT, ROOT ROT IN CITRUS AND CUCURBITS, DOWNY MILDEW IN CUCURBITS, GRAPE, LETTTUCE, AND ONIONS, ANTHRACNOSE IN MANGO, ROOT AND HEART ROT IN PINEAPPLE, LATE BLIGHT IN POTATO, ROOT AND COLLAR ROT IN STONEFRUIT, LEATHER ROT AND PHYTOPHTHORA DISEASES IN STRAWBERRY, LATE BLIGHT IN TOMATO, DOWNEY MILDEW, PHYTOPHRA & PYTHIUM IN ORNAMENTALS & BEDDING PLANTS, PHYTOPHTHORA IN CONIFERS, PYTHIUM IN TURF, AND PYTOPHTHORA AND PYTHIUM DISEASES ASSOCITATED WITH STEM AND CANKER BLIGHT(SUDDEN OAK DEATH) AND GENERAL BEECH DECLINE.

ACTIVE INGREDIENTS:

Mono-and di-potassium salts of Phosphorus Acid*.....56.00 %
Indolle -3-butyric Acid.....0.0139%

OTHER INGREDIENTS:.....43.9861.0%

TOTAL:.....100.0%

*Contains 6.87 lbs/gallon of the active ingredients, mono- and di-potassium salts of Phosphorus Acid.
Equivalent to 5.67 lbs Phosphorus Acid/gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

PRECAUTIONARY STATEMENTS
Hazards to Humans & Domestic Animals
CAUTION
Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing vapors or spray mist. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

IF SWALLOWED:
• Call a 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 by a poison control center or doctor.
• Do not give anything to an unconscious person.

IF ON 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 rinsing.
• Call a poison control center or doctor for 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 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

SEE INSIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA REG. NO. 5905-566 EPA EST. NO.
SN

MANUFACTURED BY
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300
COLLIERVILLE, TN 38017

Notification Accepted

Date: AUG 13 2010

Reviewer: M. Adams

Disclaimer: Always refer to the label on the product before using Helena or any other product.

SPECIMEN LABEL

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks, protective eyewear, and waterproof gloves.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for maintaining/cleaning personal protective equipment (PPE). If no such instructions for washables, use hot water and detergent. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). 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 workers entry into treated areas during the restricted entry interval of 4 hours.

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:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks and
- Protective eyewear

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 protect agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

Pesticide Storage: Keep this product in containers stored upright and secured with the original closure. Do not store this product near any heat source. Do not store near strong oxidants. If transfer to another container becomes necessary, ensure that the container is clearly labeled, the container is a type suitable for the product, and is clean and free of other materials.

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 hazardous waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. 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

SPECIMEN LABEL

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rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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 the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

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 or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
In the event of a major spill, fire or other emergency, call 800-424-9300 day or night.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.

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 agency responsible for pesticide regulations.

APPLICATION THROUGH SPRINKLER IRRIGATION SYSTEMS

Use of **HM-0210-A** through chemigation is not permitted in California.

Apply this product through drip, microjet, solid set and center pivot sprinkler irrigation systems. Do not apply this product through any other type of irrigation system.

PREPARATION OF INJECTION EQUIPMENT: Remove pesticide, scale residues and other foreign matter from the chemical tank and entire injection system. Flush with clean water.

APPLICATION INSTRUCTIONS: Fill tank with one half to three quarters the desired amount of water. Start hydraulic or mechanical agitation. Add the required amount of **HM-0210-A** then the remaining volume of water. Set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the solution of **HM-0210-A** into the irrigation water line so as to deliver the rate per acre. Inject the **HM-0210-A** solution with a positive displacement pump into the main line before a right angle turn to ensure adequate mixing. For other questions about calibration, contact equipment manufacturers, State Extension Service specialists or other experts.

NOTE: For Microjet and Drip Irrigation Systems: After treatment with **HM-0210-A** has been completed, avoid further irrigation or the treated area for 24 hours to 48 hours.

For Solid Set and Center Pivot Irrigation Systems: After treatment with **HM-0210-A** has been completed, avoid further irrigation of the treated area until foliage is dry to prevent washing the chemical off the crop.

GENERAL PRECAUTIONS FOR APPLICATION THROUGH SPRINKLER IRRIGATION SYSTEMS

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

Maintain continuous agitation in mix tank during mixing and application to assure solution uniformly. The irrigation system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards 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 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

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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, when system connection or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of chemigation water.

Allow sufficient time for pesticide to be flushed through all lines and nozzles before turning off irrigation water. A person knowledgeable in chemigation system and responsible for its operation shall shut down and adjust the system as needed.

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

GENERAL APPLICATION INSTRUCTIONS

HM-0210-A may be applied by various application methods, including foliar spray, soil drench, soil incorporation and bare root dip. For foliar sprays, apply HM-0210-A with sufficient water volumes for adequate coverage of foliage, according to crop and growth stage. To ensure good coverage, spray to wetness, but avoid run-off.

MIXING INSTRUCTIONS

1. Fill the spray tank with ¼ - ½ of the volume of water required before adding HM-0210-A.
2. Add HM-0210-A slowly to the tank and agitate by mechanical or hydraulic means.
3. Continue agitating as tank fills with water to the desired volume.
4. Maintain agitation during application.

COMPATIBILITY

HM-0210-A is compatible with most products used in agriculture. However, individual crop sensitivity to these mixtures may vary. Mixtures of HM-0210-A with some foliar fertilizers and copper products may not be compatible or may cause phytotoxicity to some plants. If these combinations or others have not been used previously, do not tank mix without first testing the compatibility of the tank mix. Do not apply tank mixture without first assessing its safety to the crop (phytotoxicity).

Due to HM-0210-A acidic nature, the use of acidifying-type compatibility agents are not recommended. If spray adjuvants are used they must be tested before use to confirm compatibility with HM-0210-A.

A jar test should be used to confirm compatibility with HM-0210-A in a clean jar using the same water source that is normally used to fill spray tank, add the same proportions of each product and the appropriate quantity of water and mix thoroughly. Let stand for 3 minutes. If mixture remains in solution or can be remixed readily the tank mix is compatible. The solution that resulted from the above compatibility test should be sprayed onto a few plants and inspected for visual effects of phytotoxicity (leaf burn) 3 to 7 days later.

CARRIERS AND DILUENTS

CORON® (Controlled Released Nitrogen) products can be used as a sole carrier or diluent for HM-0210-A applications. General use rate would be 3 to 6 ounces of CORON® per 1,000 sq. ft. Use rate of specific CORON® products may be dictated by local use patterns and /or historical findings.

AGRICULTURAL APPLICATIONS

ALFALFA

HM-0210-A may be used for effective control of Downy Mildew, Phytophthora spp., and Pythium spp. in Alfalfa in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy Mildew	Foliar	1.25 pts to 2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.25 pts to 2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as

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Phytophthora spp.	Foliar	1.25 pts to 2.5 pints per acre	needed. Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.25 pts to 2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.
Pythium spp.	Foliar	1.25 to 2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.25 to 2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.

ALMONDS*

HM-0210-A may be used for effective control of root and collar rot and almond pruning-wound canker disease in Almonds and other nut crops such as walnuts grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Root and collar rot (Phytophthora spp)	Foliar	1.5 pints/acre in 125 gallons water to 3 pints in 250 gallons water	These treatments are required 1. Spring 2. Mid summer 3. Fall, post Harvest
Almond-pruning Wound cankers (Phytophthora syringae)	Paint or spray	3 pints per acre in 100 gallons water	Apply to pruning wound and surrounding area, ensure area is thoroughly wet. In high disease situations use higher rate.

*Not for use in California.

ASPARAGUS*

HM-0210-A may be used for effective control of crown rot & asparagus spear slime disease in asparagus crops grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Crown rot & Asparagus spear slime (Phytophthora spp)	Foliar	1.5 pints/acre in 100 gallons water to 3 pints/acre in 200 gallons water	Apply to ferns that have 2 to 3 inches of new growth. Do not apply to ferns that are starting to die down (senesce). Established plantings, start applications when conditions are favorable to disease (cool wet conditions). Ensure thorough coverage.

*Not for use in California.

APPLES, CRAB APPLES, LOQUATS, PEARS, ORIENTAL PEARS & QUINCE*

HM-0210-A may be used for effective control of black spot, root and collar rot and fire blight in apples, crab apples, loquats, pears, Oriental pears, and quinces grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Apple black spot or scab (Venturia inaequalis)	Foliar spray	2.5 pints/acre in 150 gallons water/acre	First application at open cluster. Last application at fifth cover or fruit

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			at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.
Root and collar rot (Phytophthora cactorum) Fire Blight (Erwinia amylovora)	Foliar spray	Apply at 1.5 to 3 pints/acre with a maximum of 500 gallons water/acre.	One to two month intervals between treatments. Under high disease pressure use application rate and shorter spray interval. Ensure thorough coverage.

*Not for use in California.

AVOCADOS

HM-0210-A may be used for effective control of root rot, trunk cankers and downy mildew in Avocado grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Root rot (Phytophthora cinnamomi)	Tree injection	Skeletal trees 1st year: 1/4 fl oz undiluted product/yard of canopy diameter Other situations: 1/8 fl oz diluted with 1/2 fl oz of water/yard Of canopy diameter.	Inject trees at spring flush maturity. Repeat treatment in February or March Drill holes 3/16 inch (5 mm) in diameter and 1 inch (25 mm) to 2 inches (50 mm) deep with slight downward angle in trunk. Syringes should be placed in the main trunk of the tree and spaced evenly around the circumference of the trunk. Suitable for use with Chemjet tree injectors. Ag-murf gun, or hydraulic tree injection. Do not prune back trees before injection process as burning of new growth may occur. Do not inject trees in winter months. Do not cut back the canopy of injected trees. Do not add any material, other than water, to HM-0210-A by trunk injection. Do not inject more liquid in a lesser number of syringes than directed.
	Foliar spray	1/4 fl oz/gallon water, 2.5-3.2 pints of product/acre	Spray to run off at 2-2 1/2 gallons of spray solution per adult tree. Start applications in spring, up to 4

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			applications a year at two-month intervals. Ensure coverage.
Canker (Phytophthora citricola)	Trunk spray	1.5-3 pints mixed with 5 gallons water	Apply to trunk lesions using sufficient spray volume to completely wet the trunk and lesions. If lesions absent, apply to trunk from soil level to two feet up trunk. If lesions present use higher rate.
Downy mildew	Foliar spray	2.25 pints in 500 gallons water	Spray to run-off, as required for disease control.

BLUEBERRY*

HM-0210-A may be used for effective control of root rot disease in blueberry crops grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Root rot (Phytophthora spp)	Foliar	1.5 pints/acre in 100 gallons water to 3 pints/acre in 200 gallons water.	First application in spring at pink bud and then on a regular schedule of application at two to three intervals.

*Not for use in California.

BRASSICAS*

HM-0210-A may be used for effective control of downy mildew in Broccoli, Broccoli Raab (rapini), Brussels sprouts, Broccolo, Cabbage, Cauliflower, cavalo broccoli, collards, Chinese Broccoli (gai ion), Chinese cabbage (Bok Choy) (Napa), Chinese mustard cabbage (Gai choy), kale, kohlrabi, mizuna, mustard greens, mustard spinach and rape greens grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy mildew (Peronospora parasitica)	Foliar spray	1.5 pints /acre in 100 gallons water to 3 pints/acre in 185 gallons water.	1 to 3 weeks intervals between applications when conditions favor disease development (cool, moist weather). Use higher rates and shorter intervals when disease pressure increases.

*Not for use in California.

CANE BERRIES*

HM-0210-A may be used for effective control of root rot in blackberry, loganberry, raspberry (red, black, hybrids/cultivars) grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Root rot (Phytophthora sp.)	Foliar spray	A minimum of 3 pints in at least 150 gallons water/acre. Ensure foliage is completely wet.	New plantings: start application when new growth is 2 to 3 inches long. established plantings start applications when cool wet conditions occur which favor disease. West of Rocky Mountains: Autumn applications, apply when conditions favor disease, repeat in 4 weeks. Spring applications, first application after bud break and

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repeat in 4 weeks.
 East of Rocky Mountains: First application spring post bud break (2 to 3 inches new growth) and repeat at 50 to 60 day intervals. Do not exceed 4 applications per season.

*Not for use in California.

CHERRY

HM-0210-A may be used for effective control of Downy Mildew, Phytophthora spp., and Pythium spp. in Alfalfa in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy Mildew	Foliar	1.25 to 2.5 pints per acre	First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.
Phytophthora spp.	Foliar	1.25 to 2.5 pints per acre	First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.
Pythium spp.	Foliar	1.25 to 2.5 pints per acre	First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately.

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immediately.
 Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.

CITRUS-Mature Trees

HM-0210-A may be used for effective control of root rot and collar rot diseases in citrus grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Brown rot and foot rot (Phytophthora spp)	Foliar spray	3 pints /acre in a maximum of 500 gallons water.	When conditions favor disease. Spray trees to run off ensure even coverage. Do not apply at high temperatures (above 95°F) particularly if humidity is low or to moisture-stressed trees.
Root rot and collar rot (Phytophthora spp and Phytophthora citrophthora)	Trunk spray	Mix 1.5 to 3 pints in a minimum of 5 gallons water	Spray trunk lesions with enough spray volume to ensure lesions are completely wet. When disease levels are high use higher rate.

CLOVER

HM-0210-A may be used for effective control of Downy Mildew, Phytophthora spp., and Pythium spp. in Alfalfa in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy Mildew	Foliar	1.25 to 2.5 pints per acre	First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.
Phytophthora spp.	Foliar	1.25 to 2.5 pints per acre	First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately.

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			<p>immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.</p>
Pythium spp.	Foliar	1.25-2.5 pints per acre	<p>First application at open cluster. Last application at fifth cover or fruit at 2" to 2 1/2" diameter. Total of 10 applications at 10 to 12 day intervals. When conditions are conducive to a black spot outbreak, an application of HM-0210-A should be made immediately. Note: After 4 to 5 consecutive applications some yellowing of extension growth may be observed. If yellowing occurs use another fungicide until yellowing of leaves disappears.</p>

COCONUTS

HM-0210-A may be used for effective control of bud rot and nut fall in coconuts grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Bud rot-Nut fall (Phytophthora palmivora)	Injection	Between .25 fl oz and .75 fl oz/tree	Dilute HM-0210-A with water to give final injection volume of 1 fl oz to 2 fl oz of water and HM-0210-A. Inject into the trunk or root system.

CUCURBITS

Such as cucumber, Chinese waxgourd, citron melon, gherkin rock melon, honeydew melon, pumpkin, zucchini, watermelon and squash (summer and winter), momordica spp balsam apple, balsam pear, bitter melon, and Chinese cucumber. HM-0210-A may be used for effective control of sudden wilt, gummy stem blight, and downy mildew diseases in cucurbits grown in field situations.

Disease	Application Method	Rate	Application Program
Sudden wilt-Root and fruit rot (Phytophthora spp)	Foliar	Light to medium foliage spray cover: Apply 1.6 pints /acre in 100 gallons water to 2.5 pints /acre in 150 gallons/water. Heavy foliage cover: Apply 3.6 pints /acre in 225 gallons water.	Entire spray coverage of plant is required. Do not exceed a total of 6 applications per season.
Gummy stem blight (Mycosphaerella Melonis)	Foliar spray	Light to medium foliage cover: Apply 1.6 pints /acre in 100 gallons water to 2.5 Pints /acre in 150 gallons water. Heavy foliage cover: Apply 3.6 pints /acre in 200 gallons water.	Apply when disease is evident. Continue applications at 21 day intervals until cure is apparent. Do not exceed a total of 6 applications per season.
Downy mildew (Pseudoperonospora cubensis)	Foliar spray	Light to medium foliage cover: Apply 1.6 pints/acre in 100 gallons water to 2.5 pints /acre in 150 gallons water.	Apply within 7 to 10 days of infestation. Repeat as necessary. Do not exceed a total of

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Heavy foliage cover: Apply 3.6 pints/acre in 225 gallons water.	6 applications per season.
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CUCRBIT, TANK MIXTURES*

For the effective control of downy mildew diseases HM-0210-A should be tank mixed with Dithane® fungicide and applied to cucurbits grown in commercial plantations.

Product	Disease	Rate	Application Program
HM-0210-A + DITHANE®	Downy mildew	Light to medium foliage cover: Apply 1.6 to 2.5 pints of product/acre Heavy foliage cover: Apply 3.6 pints of product/acre + Rohm Haas recommended rate of DITHANE®**	Apply as a foliar spray the recommended quantity and dilution rates with water of both products. For best results apply HM-0210-A as a tank mix with protectant fungicides such as Mancozeb/ Dithane®, copper oxychloride, etc., to ensure both pre- and post- infection activity.

*Not for use in California

GINSENG*

HM-0210-A may be used for effective control of foliar and root rot in ginseng grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Foliar and root rot (Phytophthora cactorum)	Foliar spray	3 pints in 100 gallons of spray solution.	In cool wet conditions that favor Phytophthora, applications should be made at 7 day intervals. Do not exceed a total of 8 applications per season.

*Not for use in California.

GRAPES

HM-0210-A may be used for effective control of downy mildew diseases in grapes grown in commercial vineyards.

Disease	Application Method	Rate	Application Program
Downy mildew (Plasmopara viticola)	Foliar spray	Early season small canopy, 1.6 pints /acre in 100 gallons water. Late season/large canopy, 2.5 pints/acre in 150 gallons water to 3.2 pints /acre in 200 gallons water.	It is essential that the rate of HM-0210-A be adjusted to the vine-row volume, i.e., the volume of vine foliage per acre. Spray timing is critical. HM-0210-A should be applied at times of high disease risk, especially between the time that conditions are conducive to downy mildew infection and the appearance of oil spots. Ensure spray coverage is adequate and that the appropriate
			rate of HM-0210-A is applied to match vine growth, particularly from mid-season onwards, and
			especially where grapes are grown on root stock.

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GRAPES, TANK MIXTURES*

For the effective control of downy mildew diseases HM-0210-A should be tank mixed with Dithane® fungicide and applied to grapes grown in commercial vineyards.

Product	Disease	Rate	Application Program
HM-0210-A + DITHANE®**	Downy mildew	Early season small canopy, 1.6 pints /acre in 100 gallons water. Late season/large canopy, 2.5 pints /acre in 150 gallons water to to 3.2 pints /acre in 200 gallons water + Rohm & Haas recommended rate of DITHANE®**.	Apply as a foliar spray the recommended quantity and dilution rates with water of both products. For best results apply HM-0210-A as a tank mix with protectant fungicides such as Mancozeb/ Dithane®**, copper oxychloride, etc., to ensure both pre- and post-infection activity.

*Not for use in California.

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HOPS*

HM-0210-A may be used for effective control of downy mildew in hops grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy mildew	Foliar Spray by ground only	1.5 pints in 100 gallons water/acre.	When conditions favor disease, applications should occur when A. Shoots are ½ to 1 foot long, B. Post-training when vines are 6 feet high, C. 21 days post-application (B), and D. During bloom.

*Not for use in California

LEAFY VEGETABLES*

HM-0210-A may be used for effective control of downy mildew in leafy vegetables such as amaranth, arugula, cardoon, celery, chervil, corn salad, Cress, Dandelion, Dock(sorrel), endive(Escarole), fenne(Florence), Lettuce(Head & Leaf), parsley, radicchio, rhubarb, spinach, and Swiss chard grown in commercial plantations. Excludes Brassica vegetables. **Note:** Do not exclude seven applications per year.

Disease	Application Method	Rate	Application Program
Downy mildew (Brenia lactucae)	Foliar spray	2.5 pints/acre in 150 gallons water	Ensure spray coverage is adequate to wet the whole plant. During warm, wet conditions, application at 7 to 10 day intervals may be required.

*Not for use in California

LEGUMES:

For the effective control of damping-off and root rot diseases in legumes(succulent and dried) suchas, green beans,soybeans,wax beans, field beans, navy beans, lima beans, fava beans(with a nice Chianti), kidney beans, pinto beans, mung beans, broad beans, lentils, chickpeas, English peas, sugar snap peas, black-eyed peas, cow peas,and pigeon peas.

Disease	Application method	Rate	Application Program
Phytophthora and	Foliar Spray	1.5 tsp. to 1.25 Oz per gallon Water	Apply at 14-day intervals after plant emergence, As needed. Assure good coverage.

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LETTUCE

HM-0210-A may be used for effective control of downy mildew diseases in lettuce grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy mildew (Brenia lactucae)	Foliar spray	2.5 pints/acre in 150 gallons water	Ensure spray coverage is adequate to wet the whole plant. During warm, wet conditions, application at 7 to 10 day intervals may be required.

MACADAMIA NUTS

HM-0210-A may be used for effective control of raceme blight in macadamia nuts grown with good cultural practices in commercial plantations.

Disease	Application Method	Rate	Application Program
Raceme blight (Phytophthora spp)	Foliar spray	4 pints/acre in 200 gallons water	Apply when disease is first seen and re-apply at 3 week intervals. Spray to the point of run-off.

MANGOS

HM-0210-A may be used for effective control of anthracnose in mangos grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Anthracoese (Colletotrichum Gloeosporoides)	Foliar spray	.25 fl oz/gallon water	Spray tree every 14 days during blossom period, then monthly until harvest. Spray to the point of run-off.

Non-Grass Animal Feed*

HM-0210A may be used for effective control of damping-off and root rot diseases in non-grass animal feed.

Disease	Application Method	Rate	Application Program
Phytophthora And Pythium spp.	Foliar spray	1 ½ quarts per acre in 25 gallons of water To 2 quarts per acre Acre in 250 gallons Of water	Apply at 14-day intervals after plant emergence, as needed. Assure good coverage.

*Not for use in California

Okra*

HM-0210A may be used for effective control of damping-off and root rot diseases in okra.

Disease	Application Method	Rate	Application Program
Phytophthora And Pythium spp.	Foliar spray	1 ½ quarts per acre in 25 gallons of water To 2 quarts per acre Acre in 250 gallons Of water	Apply at 14-day intervals after plant emergence, as needed. Assure good coverage.

*Not for use in California

NUT CROPS (Almonds, Chestnut, Walnut, & Other Nut Crops)

HM-0210-A may be used for effective control of raceme blight in Nut Crops grown with good cultural practices in commercial plantations.

Disease	Application Method	Rate	Application Program
Raceme blight (Phytophthora spp)	Foliar spray	4.5 pints/acre in 250 gallons water	Apply when disease is first seen and re-apply at 3 week intervals. Spray

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to the point of run-off.

ONIONS

HM-0210-A may be used for effective control of downy mildew disease in onions, garlic and shallots grown in commercial plantations. Use as a preventative control program for best results.

Disease	Application Method	Rate	Application Program
Downy mildew (Peronospora destructor)	Foliar spray	2.5 pints/acre in 100 gallons water/acre.	As a regular preventative control program or when disease first appears.

ONIONS, TANK MIXTURES*

For the effective control of downy mildew diseases HM-0210-A should be tank mixed with Dithane® fungicide and applied to onions, garlic and shallots in commercial plantations.

Product	Disease	Rate	Application Program
HM-0210-A + Dithane®**	Downy mildew	2.5 pints/acre in 100 gallons water/acre + Rohm & Haas recommended rate of Dithane®**	Apply as a foliar spray the recommended quantity and dilution rates with water of both products. For best results, apply HM-0210-A as a tank mix with protectant fungicides such as Mancozeb/ Dithane®** to ensure both pre- and post-infection activity.

*Not for use in California

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PEANUTS*

HM-0210A may be used for effective control of damping-off and root rot diseases in okra.

Disease	Application Method	Rate	Application Program
Phytophthora And Pythium spp.	Foliar spray	1 ¼ quarts per acre in 25 gallons of water To 2 quarts per acre Acre in 250 gallons Of water	Apply at 14-day intervals as needed. Assure good coverage.

*Not for use in California

2 pints in 25 gals to 2.5 pints in 250 gals

PINEAPPLES

HM-0210-A may be used for effective control of Phytophthora root and heart rot diseases in pineapples grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Phytophthora root and heart rot (Phytophthora cinnamomi and parasitica)	Foliar spray	3.2 pints in 25-50 gallons water/acre	Apply to tops, 14 days prior to harvest of planting material.
	Preplant dip	1.5 pints in 100 gallons water	Will treat enough slips to plant one acre.
	Foliar spray	2.5 pints in 100 gallons water	Established plantings when conditions favor disease. Applications at 90 day intervals may be required. Ensure thorough coverage of plants.

ROOT AND TUBER VEGETABLES*

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Use **HM-0210-A** for effective control of foliar and root rot in ginseng, damping-off and root rot diseases in carrots, and late blight disease and storage diseases such as pink rot and pythium leak in potatoes, sweet potatoes, and yams.

Disease	Application Method	Rate	Application Program
Ginseng: Foliar and root rot (Phytophthora cactorum)	Foliar spray	2½ quarts in 100 gallons of water	In cool wet conditions that favor Phytophthora. Apply at 7 day intervals. Do not exceed a total of 8 applications per season.
Carrots: Phytophthora and Pythium spp	Foliar spray	1½ quarts per acre in 25 gallons of water to 2 quarts per acre in 250 gallons of water	Apply at 14-day intervals after plant emergence, as needed. Assure good coverage.
Potatoes, Sweet Potatoes, Yams: Pink rot and Pythium leak (Phytophthora erythrospica and Pythium spp)	In-furrow spray	2-5 quarts per acre in 10 gallons water	Apply in a band spray directly over top of potato seed just before row is closed.
Potatoes, Sweet Potatoes, Yams: Late blight, Pink rot and Pythium leak (Phytophthora infestans, Phytophthora erythrospica and Pythium spp)	Foliar spray	1½ quarts per acre in 90-375 gallons water per acre	Apply at 5 to 14 day intervals subject to disease incidence.

*Except for potatoes, sweet potatoes, and yams, not for use in California.

3 pints, 2 pints-2.5 pints, 2.5 pints-6 pints, (1.5 pints(100-250 gals of water)

POTATOES

HM-0210-A may be used for effective control of late blight disease, storage diseases such as pink rot and pythium leak in potatoes grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Pink rot and Pythium Leak (Phytophthora erythrospica and Pythium spp)	In furrow spray	2.5- 6 pints /acre in 10 gallons water	Apply in a band spray directly over top or just before row is closed.
Late blight, Pink Rot and Pythium Leak (Phytophthora infestans, Phytophthora erythrospica and Pythium spp)	Foliar spray	1.5 pints/acre in 90 gallons water to 6 pints/acre in 375 gallons water.	Apply at 5 to 14 day intervals subject to disease incidence.

POTATOES, TANK MIXTURES, IN-FURROW SPRAY

For the effective control of late blight disease, storage diseases such as pink rot and pythium leak, **HM-0210-A** should be tank mixed with a Mefenoxam-containing fungicide, registered for this use pattern and applied to potatoes grown in commercial plantations.

Product	Disease	Rate	Application Program
HM-2010-A + Mefenoxam-containing fungicide, registered for this use pattern	Late blight, Pink rot and Pythium leak (Phytophthora infestans, Phytophthora erythrospica and Pythium spp)	1.5 - 6 pints /acre in 10 gallons water + Mefenoxam containing fungicide, as per label directions.	Apply in a band spray directly over top or just before row is closed as per registered label directions.

POTATOES, TANK MIXTURES, FOLIAR SPRAY

For the effective control of late blight disease, storage disease such as pink rot and pythium leak, **HM-0210-A** should be tank mixed with mefenoxam, or triphenyltin hydroxide-containing fungicide, registered for this use pattern and applied to potatoes grown in commercial plantations.

Product	Disease	Rate	Application Program
HM-0210-A + Mefenoxam or triphenyltin hydroxide-containing fungicide, registered for this use pattern	Pink rot and Pythium leak (Phytophthora erythrospica and Pythium spp.)	1.5- 6 pints/acre in 10 gallons water + mefenoxam or triphenyltin hydroxide-containing fungicide, as per label directions.	Additional foliar applications may become necessary when 1) High disease pressure is evident. 2) Susceptible cultivars or long growing season locations are

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selected as per
registered label
directions.

STONE FRUIT* (Peaches, Plums, & Prunes)

HM-0210-A may be used for effective control of root, collar rot, and almond pruning wound canker disease in stone fruit grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Root and collar rot (Phytophthora spp)	Foliar spray	3 pints/acre in 200 gallons water.	Three treatments are Required 1. Spring 2. Mid summer 3. Fall, post-harvest
Almond pruning-wound cankers (Phytophthora syringae)	Paint or spray	1.25-3 pints in 100 gallons water.	Apply to pruning wound and surrounding area, ensure area is thoroughly wet. In high disease situations use higher rate. For small volume applications, mix 4-6.5 ounces of product per gallon of water.

*Not for use in California

STRAWBERRIES

HM-0210-A may be used for effective control of leather rot, red stele and Phytophthora disease in strawberries grown in commercial plantations.

Disease	Application Method	Rate	Application Program
Red stele (Phytophthora fragariae)	Pre-planting dip	1.5 pints in 100 gallons water.	Dip planting material in this solution for 30 minutes, then plant within one day. Program may be used for annual and perennial varieties.
	Foliar spray	1.5 pints/acre in 100 gallons water to 2.75 pints/acre in 200 gallons water.	Annual crops, first treatment 14 to 21 days post planting, repeat at 1-2 month intervals when disease is evident. Perennial crops, first treatment during spring growth flush, repeat at 1-2 month intervals when disease is evident. For susceptible varieties use higher rates and shorter spray intervals.
Leather rot (Phytophthora Cactorum)	Foliar spray	1.5 pints/acre in 100 gallons water to 3 /acre in 200 gallons water.	Apply at 10% bloom and early fruit set, then at one to two week intervals as required for disease control. In high disease situations use higher rates and shorter spray intervals.

*Not for use in California

SUGAR BEETS

HM-0210-A may be used for effective control of Downy Mildew, Phytophthora spp., and Pythium spp. in Alfalfa in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy Mildew	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week

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			intervals. Repeat as needed.
Irrigation	1.5-2.5 pints per acre		Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.
Phytophthora spp.	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
Irrigation	1.5-2.5 pints per acre		Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.
Pythium spp.	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
Irrigation	1.5-2.5 pints per acre		Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.

TOBACCO

HM-0210-A may be used for effective control of Downy Mildew, Phytophthora spp., and Pythium spp. in Alfalfa in commercial plantations.

Disease	Application Method	Rate	Application Program
Downy Mildew	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.5-2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.
Phytophthora spp.	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.5-2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.
Pythium spp.	Foliar	1.5-2.5 pints per acre	Apply diluent solution so as to thoroughly wet foliage. Apply at 2 to 3 week intervals. Repeat as needed.
	Irrigation	1.5-2.5 pints per acre	Apply with normal irrigation schedule. Apply at 2 to 3 week intervals. Repeat as needed.

TOMATOES*

HM-0210-A may be used for effective control of late blight and root rot in tomatoes and tomatillos grown in commercial plantations.

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Disease	Application Method	Rate	Application Program
Late blight and root rot (Phytophthora infestans and Phytophthora spp)	Foliar spray	1.5 pints/acre in 50 gallons water to 3 pints/acre in 200 gallons water.	First application at transplant or when direct seeded crops are at 2-4 true leaf, then at one to two week intervals as required to control disease. In high disease situations use higher rates and shorter spray intervals.

*Not for use in California.

FOR CONTROL AND PREVENTION OF PHYTOPHTHORA RAMORUM, (SOD) SUDDEN OAK DEATH

Injection Application

Injection application can be made with various commercially available applicators that maintain positive pressure differential such as; ChemJet®, Sidewinder®, Ag-murph Gun®, Marley® Injector, or hydraulic applicator type equipment that forces solution in to the sapwood of the tree. Do not inject in areas of obvious decay, canker or mechanical injury that appear on the tree trunk. Drill holes 3/16 inch (5mm) in diameter into live sapwood (depth dependent upon age of tree) with downward angle into trunk uniformly around the tree circumference, using a slow drill.

Rate Determination

Calculate the amount of product required by measuring the trees for product injection by one of the following 3 methods: and use the highest calculated number of injections.

- Method 1. 1 injection per square yard of canopy
- Method 2. 1 injection per yard of diameter of canopy measured at the drop-line
- Method 3. 1 injection per 6 inches of trunk circumference measured at 4 feet above soil level

Injection Solution

Mix 1 part **HM-0210-A** and 2 parts water and inject a total of 7.5 ml. or .25 ounce of **HM-0210-A** solution per injection. Remove injector(s) after treatment solution is dispensed. Do not add any other products to injection solution. If using reusable applicator clean or disinfect applicator tip with chlorine bleach solution or similar disinfectant prior to next treatment to prevent spread of pathogen

Ultra Small Volume Calculation HM-0210-A

7.5 ml solution Calculation or .25 ounce Calculation	
2.5 ml	0.1 oz. or ¼ teaspoon
4.0 ml	0.2 oz. or 1 and 1/3 teaspoon

Volume Calculation

To make 1 quart of end use injection solution	
324 ml HM-0210-A or	11 oz. of HM-0210-A
624 ml Water	21 oz. of Water

Basal Bark Application

Mix solution of 21 parts **HM-0210-A** with 21 parts water solution with 1 part **PENETRATOR**. Apply this uniformly to the circumference of the trunk of the tree. Spray from the top down to ground level from either first branch or from as high as possible without exposing applicator to drift. Spray to just prior to runoff.

Treatment is generally effective if applied uniformly to 6 to 9 feet or trunk circumference, or from first branch to ground level, depending upon age and infection level of tree. Can be used as preventative or curative application for trees listed.

Various types of application equipment can be used to apply **HM-0210-A** solution such as from hydraulic sprayers, handheld pump up sprayers, backpack sprayers, hose end applicators with backflow prevention devices and other similar application devices.

Solution Calculation

For 1 gallon of **HM-0210-A** Basal Bark end use solution:

Mix	
1.2 L of HM-0210-A or	42 oz. HM-0210-A
1.2 L of water	42 oz. water
55 ml Penetrator Surfactant	3.2 ounces Penetrator Surfactant

Mix and apply uniformly to circumference of tree trunk bark surface.

Penetrator has been formulated, tested and proved to be

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effective in this application with **HM-0210-A**. No other products should be added to application solution.

ORNAMENTAL APPLICATIONS*

HM-0210-A may be used for effective control of Bacterial blight, Downy mildew, Phytophthora and Pythium diseases of Ornamental grown in commercial landscapes, commercial nurseries, golf courses, parks, and greenhouses. **HM-0210-A** may be applied to plants such as Aglaonema, Anthurium, Aphelandra, Arborvitae, Azaleas, Bougainvillea, Boxwood, Cattelya skinneri, Ceanothus, Cotoneaster, Cissus, Diffenbachia, Dogwood, English ivy, Ficus, Hibiscus, Juniper, Japanese Holly, Leather leaf Fern, Monterey Pine, Peperomia, Photinia, Pittosporum, Philodendron, Pieris, Pothos, Rhododendron, Roses, Schefflera, Sedum, Sempervivum, Syngonium, Spathiphyllum, Taxus media, White Pine, White Cedar, and Zygocactus. Applications should occur before disease development and in conjunction with good cultural management practices. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to plants that are heat or moisture stressed. Do not apply to plants that are in a state of dormancy. Do not exceed recommended spray intervals or label rates as plant injury can occur.

Disease	Application Method	Rate	Application Program
Bacterial blight (Xanthomonas Campestris) posthovers: Dieffenbachiae, fici Hederiae and syngonli	Foliar spray	1.2 to 2.5 pints per 100 gallons of water OR .25 to .4 fl oz per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 7 to 14 days. Repeat as required.
Downy mildew		1.5 - 3 pints per 100 gallons of water OR .25 to .50 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
Phytophthora and Pythium		1.25- 2.5 pints per 100 gallon of water OR 1/3 to 2/3 fl. Oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
	Soil drench	3.75 to 7.6fl. oz. per 100 gallons of water	Apply each 25 gallons of solution to an area of 100 square feet. Follow application with irrigation. Repeat as required. Limit of one application per month.
	Soil Incorporation	.75-1.2 pints per cubic yard of soil	Just prior to potting, mix 1 to 2 pts. of HM-0210-A into each cubic yard of growing media. If disease pressure is high, foliar spray or soil drench may be needed.
	Bare rooted dipping of	1.2 pints per 100 gallons of water	Immediately before

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transplants OR .25 fl. Oz. per gallon	transplanting, dip transplants for two minutes, keep roots submerged, ensure root mass is thoroughly wet.
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*Not for use in California.

ORNAMENTAL APPLICATIONS* (Homeowner)

HM-0210-A may be used for effective control of Bacterial blight, Downy mildew, Phytophthora and Pythium diseases of ORNAMENTALS. HM-0210-A may be applied to plants such as Aglaonema, Aphelandra, Arborvitae, Azaleas, Bougainvillea, Boxwood, Cattelya skinneri, Ceanothus, Cotoneaster, Cissus, Diffenbachia, Dogwood, Ficus, Hibiscus, Juniper, Japanese Holly, Leather leaf Fern, Monterey Pine, Peperomia, Photinia, Pittosporum, Philodendron, Pieris, Pothos, Rhododendron, Roses, Schefflera, Sedum, Sempervivum, Taxus media, White Pine, White Cedar, and Zygocactus.

Applications should occur before disease development and in conjunction with good cultural management practices. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to plants that are heat or moisture stressed. Do not apply to plants that are in a state of dormancy.

Disease	Application Method	Rate	Application Program
Bacterial blight (Xanthomonas Campestris) posthovars: Dieffenbachiae, fici Hederiae and syngonli	Foliar spray	.25 to .50 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 7 to 14 days. Repeat as required.
Downy mildew		.25 to .50 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
Phytophthora and Pythium		.25 to 50 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
	Soil drench	4.0 to 7.5 fl. oz. per 100 gallons of water	Apply each 25 gallons of solution to an area of 100 square feet. Follow application with irrigation. Repeat as required. Limit of one application per month.
	Soil incorporation	.75 to 1.2 pints per cubic yard of soil	Just prior to potting, mix 1 to 2 pts. of HM-0210-A into each cubic yard of growing media. If disease pressure is high, foliar spray or soil drench may be needed.
	Bare rooted dipping of transplants	.25 fl. oz. per gallon of water	Immediately before transplanting, dip transplants for

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Disease	Application Method	Rate	Application Program
			two minutes, keep roots submerged.
			ensure root mass is thoroughly wet.

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BEDDING PLANTS*

HM-0210-A may be used for effective control of Downy mildew, Phytophthora and Pythium diseases of BEDDING PLANTS grown in commercial landscapes, commercial nurseries and golf courses, parks, and greenhouses. HM-0210-A may be applied to plants such as Ageratum, Algerian Ivy, Anthurium, Artemesia, Aster, Begonia, Baby's Breath, Caladium, Carnation, Chrysanthemum, Columbine, Coleus, Daisy, Delphinium, Easter Lily, English ivy, Foxglove, Gallardia, Geranium, Gloxinia, Impatiens, Marigold, Petunia, Pansy, Phlox, Pinks, Poinsettia, Primrose, Prostrate Rosemary, Salvia, Snapdragon, Vinca, Verbena, and Zinnia.

Applications should occur before disease development and in conjunction with good cultural management practices. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to plants that are heat or moisture stressed.

Disease	Application Method	Rate	Application Program
Downy mildew	Foliar spray	1.5 to 2.75 quarts per 100 gallons of water OR 1/4 to .75 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
Phytophthora and Pythium	Foliar spray	1.25 to 2.5 pints per 100 gallon of water OR .25 to .50 fl. Oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required. Note: Do not apply more than 500 gallons of spray solution per acre.
	Soil drench	4.0 to 7.5 fl. oz. per 100 gallons of water	Apply each 25 gallons of solution to an area of 100 square feet. Follow application with irrigation. Repeat as required. Limit of one application per month.

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BEDDING PLANTS* (Homeowner)

HM-0210-A may be used for effective control of Downy mildew, Phytophthora and Pythium diseases of BEDDING PLANTS. HM-0210-A may be applied to plants such as Ageratum, Algerian Ivy, Anthurium, Artemesia, Aster, Begonia, Baby's Breath, Caladium, Carnation, Chrysanthemum, Columbine, Coleus, Daisy, Delphinium, Easter Lily, English ivy, Foxglove, Gallardia, Geranium, Gloxinia, Impatiens, Marigold,

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Petunia, Pansy, Phlox, Pinks, Poinsettia, Primrose, Prostrate Rosemary, Salvia, Snapdragon, Vinca, Verbena, and Zinnia.

Applications should occur before disease development and in conjunction with good cultural management practices. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to plants that are heat or moisture stressed.

Disease	Application Method	Rate	Application Program
Downy mildew	Foliar spray	1/4 to 3/4 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
Phytophthora and Pythium	Foliar spray	1/4 to 3/4 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required. Note: Do not apply more than 500 gallons of spray solution per acre.
	Soil drench	1/4 to 1/2 tsp. per gallon of water	Apply each gallon of solution to an area of 4 square feet. Follow application with irrigation. Repeat as required. Limit of one application per month.

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CONIFERS IN COMMERCIAL NURSERIES, PLANTATIONS AND FORESTS* (INCLUDING CHRISTMAS TREES)

HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of root rot (Phytophthora) in CONIFERS including, but not limited to, Pines, Spruce and Douglas Fir. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to CONIFERS that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Phytophthora	Foliar spray	1.25 to 2.5 pints per 100 gallon of water OR 1/4 to 1/2 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required. Apply 1 gallon of solution per square yard. Follow application with irrigation. Application intervals: 14 to 21 days. Repeat as required.
	Soil drench	1.25 to 2.5 pints per 100 gallons OR 1/4 to 1/2 fl. oz. per gallon	Apply each gallon of solution to an area of 4 square feet. Follow application with irrigation. Repeat as required. Limit of one application per month.
	Bare root dipping at transplanting	1 quart per 100 gallons OR 1/4 fl. oz. per gallon	Immediately before transplanting, dip transplants for two minutes; keep roots submerged and ensure root mass is thoroughly wet.

*Not for use in California.

Do not graze livestock in treated areas of conifer nurseries or plantations. Do not feed forage from treated areas of plantations and or nurseries.

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CONIFERS* (Homeowner)

HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of root rot (Phytophthora) in CONIFERS including, but not limited to, Pines, Spruce and Douglas Fir. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to CONIFERS that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Phytophthora	Foliar spray	1/4 to 1/2 fl. oz. per gallon	Apply spray to thoroughly wet all foliage. Application intervals: 14 to 21 days. Repeat as required.
	Soil drench	1/4 to 1/2 fl. oz. per gallon	Apply 1 gallon of solution per square yard. Follow application with irrigation. Application intervals: 14 to 21 days. Repeat as required.
	Bare root dipping at transplanting	1/4 fl. oz. per gallon	Immediately before transplanting, dip transplants for two minutes; keep roots submerged and ensure root mass is thoroughly wet.

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ORNAMENTAL PEAR IN COMMERCIAL NURSERIES, PLANTATIONS*

HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of fire blight in ornamental pear, hawthorne, and pyracantha. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to ROSES that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Fire blight	Foliar spray	1.5 pints per 100 gallons	First application pre bloom. Application intervals: 7 days until end of bloom period. Apply spray to thoroughly wet all foliage.

*Not for use in California.

ORNAMENTAL PEAR* (Homeowner)

HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of fire blight in ornamental pear, hawthorne, and pyracantha. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to plants that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Fire blight	Foliar spray	1/4 fl. oz. per gallon	First application pre bloom. Application intervals: 7 days until end of bloom period. Apply spray to thoroughly wet all foliage.

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ROSES IN COMMERCIAL NURSERIES, PLANTATIONS*

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HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of downy mildew (*Peronospora sparsa*) in ROSES including, but not limited to, container, field, landscape and mini varieties. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to ROSES that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Downy mildew (<i>Peronospora sparsa</i>)	Foliar spray	1.5 pints per 100 gallons of water OR 1/4 fl. oz. per gallon of water	Apply spray to thoroughly wet all foliage. Application intervals: 7 to 14 days. Repeat as required.

*Not for use in California

ROSES* (Homeowner)

HM-0210-A applications in conjunction with good cultural management practices may be used for effective control of downy mildew (*Peronospora sparsa*) in ROSES including, but not limited to, container, field, landscape and mini varieties. Use higher rate of application when disease pressure is severe. Do not exceed recommended application rates or apply more frequently than stated on label or plant injury may occur. Do not apply to ROSES that are moisture or heat stressed.

Disease	Application Method	Rate	Application Program
Downy mildew (<i>Peronospora sparsa</i>)	Foliar spray	1/4 fl. oz. per gallon	Apply spray to thoroughly wet all foliage. Application intervals: 7 to 14 days. Repeat as required.

*Not for use in California

TURF*

HM-0210-A may be used for effective control of Pythium and damping-off diseases of turf grasses on Golf courses, parks, commercial landscapes, commercial turf production, and sod farms. When conditions favor disease, begin preventative applications and repeat at recommended intervals. Use higher rate of application when disease pressure is severe.

Disease	Application Method	Rate	Application Program
Pythium	Foliar spray	3 to 7.5 fl. oz. per 1,000 square feet	Apply recommended quantity of product in 1 to 5 gallon of water per 1,000 square feet. Ensure foliage is thoroughly wet. Application intervals: 14 to 21 days. Repeat as required. Do not irrigate or mow treated areas until spray has completely dried.

*Not for use in California.

TURF* (Homeowner)

HM-0210-A may be used for effective control of Pythium and damping-off diseases of turf grasses. When conditions favor disease, begin preventative applications and repeat at recommended intervals. Use higher rate of application when disease pressure is severe.

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Disease	Application Method	Rate	Application Program
Pythium	Foliar spray	3 to 7.5 fl. oz. per 1,000 square feet	Apply recommended quantity of product in 1 to 5 gallon of water per 1,000 square feet. Ensure foliage is thoroughly wet. Application intervals: 14 to 21 days. Repeat as required. Do not irrigate or mow treated areas until spray has completely dried.

*Not for use in California.

TURF TANK MIXTURES*

For the effective control of summer stress complex caused by a complex of Rhizoctonia and Pythium diseases, HM-0210-A should be tank mixed with Fore® WP fungicide and applied to turfgrasses on golf courses, parks, commercial landscapes, commercial turf production, and sod farms.

Product	Disease	Rate per 1,000 square feet	Application Program
HM-0210-A + FORE® WP**	Summer Stress Complex (Rhizoctonia and Pythium spp.)	3 to 7.5 fl. oz. HM-0210-A + 4 to 8 fl. oz. FORE® WP	Apply recommended quantity of product in 1 to 5 gallons of water per 1,000 square feet as a foliar spray. Start as a preventative spray at two-week intervals and repeat as required. Do not irrigate or mow treated areas until spray has completely dried.

CONDITIONS OF SALE-LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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