



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

89168-160

Date of Issuance:

11/25/25

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

LIBERTY MEFENOXAM 4SC

Name and Address of Registrant (include ZIP Code):

Liberty Crop Protection LLC
1880 Fall River Drive Suite 100
Loveland, CO 80538

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Continues page 2

Signature of Approving Official:

Stephanie Suarez, Product Manager 21
Fungicide Branch, Registration Division (7505T)

Date:

11/25/25

2. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 89168-160."
3. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements 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 Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

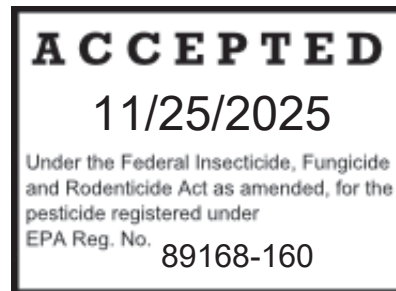
The record for this product currently contains the following CSF(s):

- Basic CSF dated 12/4/2023.

If you have any questions, please contact Carmen Swinger at swinger.carmen@epa.gov

Enclosure

{Note to reviewer: [Text] in brackets denotes optional or explanatory language}
{Note to reviewer: {Text} in braces denotes where in the final label text will appear}
{BOOKLET FRONT PANEL LANGUAGE}



MEFENOXAM	GROUP	4	FUNGICIDE
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LIBERTY MEFENOXAM 4SC

[For the control of certain diseases in listed crops caused by the Oomycete class of fungi]

Active Ingredient:

Mefenoxam: 45.3%
OTHER INGREDIENTS: 54.7%
TOTAL 100.0%

LIBERTY MEFENOXAM 4SC is formulated as a soluble concentrate and contains 4 lb active ingredient per gallon.

*CAS Nos. 70630-17-0 and 69516-34-3

KEEP OUT OF REACH OF CHILDREN.

CAUTION

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.)

See [below] [inside label booklet] for [additional] [First Aid,] [Precautionary Statements] and [Directions for Use].

EPA Reg. No.: 89168-XXX

EPA Est. No.:

Net Contents: _____ Gal

Manufactured For:
LIBERTY CROP PROTECTION, LLC
1880 Fall River Drive, Suite 100
Loveland, CO 80538

030724

{LANGUAGE INSIDE BOOKLET}

FIRST AID	
If in eyes:	<ul style="list-style-type: none">• 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 eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• Call poison control center or doctor immediately for treatment advice.• Have a 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 by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.	

For Chemical Emergency:
Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate or butyl rubber ≥ 14 mils
- Shoes plus socks

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.

Engineering Controls

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

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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. **DO NOT** apply when weather conditions favor drift from treated areas. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory

Mefenoxam is known to leach through the soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

This product may contaminate water through drift of spray in wind. This product has a high 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. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

Physical or Chemical Hazards

DO NOT use or store near heat or open flame

DO NOT mix or allow coming in contact with Oxidizing agents. Hazardous Chemical reaction may occur.

DIRECTIONS FOR USE

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

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

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. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. For crop uses that fall under this REI, see Part 2, **Soil- Directed and Other Foliar Applications under Directions for Use** of this label.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area immediately if there will be no contact with anything that has been treated. For crop uses that fall under this Exception, see Part 1, **Soil-Injected or Soil-Incorporated Applications under Directions for Use** of this label.

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, including plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves made of barrier laminate or butyl rubber \geq 14 mils
- Shoes plus socks

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND RESTRICTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

PRODUCT INFORMATION

LIBERTY MEFENOXAM 4SC is a systemic fungicide for use on selected crops to control certain diseases caused by members of the Oomycete class of fungi.

PRODUCT USE RESTRICTIONS

DO NOT use **LIBERTY MEFENOXAM 4SC** in greenhouses or other structures including lath houses, float houses, and hydroponic facilities unless specified on this label.

DO NOT use **LIBERTY MEFENOXAM 4SC** for disease control in bedding plants, transplant trays, or nurseries except where specifically allowed in certain crop sections.

DO NOT USE LIBERTY MEFENOXAM 4SC AS A FOLIAR APPLICATION UNLESS SPECIFIED ON THIS LABEL.

DO NOT dip plants or roots, spray bare roots, or use a transplant water treatment with solutions containing **LIBERTY MEFENOXAM 4SC** except where specifically allowed in certain crop sections.

Maximum usage when applying both metalaxyl- and mefenoxam-containing products to the same crop within the same season: **DO NOT** apply more than the maximum yearly total application rate for the active ingredient as stated on the label of the product containing the lowest yearly total on that crop.

Under conditions conducive to severe disease pressure, additional fungicide applications may be applied using an alternate fungicide registered for the crop/disease appearing on this label.

Where rate ranges are specified on this label, use the higher specified rate when heavy disease pressure is expected and the lower specified rate when disease pressure is expected to be light, unless otherwise noted.

Where mefenoxam/metalaxyl products used allow the same maximum poundage of active ingredient per acre per calendar year:

If more than one product containing mefenoxam/metalaxyl active ingredient is used on an acre during the same calendar year and the mefenoxam/metalaxyl products used allow the same maximum poundage of active ingredient per acre per calendar year, then the total poundage of all such mefenoxam/metalaxyl products used must not exceed any of the specified individual mefenoxam/metalaxyl product maximum poundage of active ingredient allowed per acre per calendar year.

Where mefenoxam/metalaxyl products used allow different maximum poundage of active ingredient per acre per calendar year:

If more than one product containing an mefenoxam/metalaxyl active ingredient is used on an acre during the same calendar year and the mefenoxam/metalaxyl products used allow different maximum poundage of active ingredient per acre per calendar year, then the total poundage of all such mefenoxam/metalaxyl products used must not exceed the lowest specified individual mefenoxam/metalaxyl product maximum poundage of active ingredient allowed per acre per calendar year.

Soil-applied maximum application rates include all uses in Part 1 and all uses in Part 2 except foliar applications.

Replanting

If replanting is necessary, additional applications of **LIBERTY MEFENOXAM 4SC** may be made, provided that the total amount of active ingredient in **LIBERTY MEFENOXAM 4SC** applied does not exceed the maximum allowed for the specific crop.

PRODUCT USE INSTRUCTIONS

Application: Apply **LIBERTY MEFENOXAM 4SC** by ground or air in sufficient water or liquid fertilizer to provide uniform coverage of the soil surface. Apply in a minimum of 20 gal per acre for ground applications and 3 gal per acre by air. Refer to the Directions for Use for specific crop application directions. Refer to Application Instructions for band and in-furrow calculations.

Moving LIBERTY MEFENOXAM 4SC into the Root or Seed Zone:

To ensure maximum activity on soilborne pathogens, **LIBERTY MEFENOXAM 4SC** must be moved into the seed or root zone of the plant. Follow the specific crop directions. Placement in the seed or root zone includes in-furrow sprays, soil injections, crown dips.

Incorporation includes preplant incorporated applications, soil drenches, or shank applications. For soil surface sprays, rainfall will move the fungicide into the seed or root zone, but if rain is not expected within 24 hours after application, mechanically incorporate (before planting) or sprinkler irrigate (after planting) with $\frac{1}{2}$ to 1 inch of water.

Efficacy: Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if maximum amount of **LIBERTY MEFENOXAM 4SC** has been used. If resistant isolates to Group 4 fungicides are present, efficacy can be reduced. Under high disease pressure, use the highest specified rate and shortest specified interval when needed.

Crop Tolerance: Plant tolerance has been found acceptable for all crops on the label, however, not all possible tankmix Combinations have been tested under all conditions. When possible, test the combinations on a small portion of the crop to ensure a phytotoxic response will not occur as a result of application.

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 specified 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' specifications for setting up nozzles. To reduce fine droplets, nozzles must be oriented 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, the boom must remain 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** 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 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.

IPM: Integrate **LIBERTY MEFENOXAM 4SC** into an overall disease and pest management strategy (IPM) whenever the use of a fungicide is required. Follow cultural practices known to reduce disease development. Consult your local agricultural authorities for additional IPM strategies established for your area.

Rotation Crop	Planting Time From Last LIBERTY MEFENOXAM 4SC Application
Alfalfa (birdsfoot trefoil) Apple Artichoke, Globe Asparagus Avocados Brassica (Cole) Leafy Vegetables (e.g., broccoli, cabbage, cauliflower) Bushberry Subgroup 13-07B (e.g., blueberries, cranberries) Cacao Caneberry Subgroup 13-07A (e.g. blackberry and raspberry) Carrots Citrus Clover Corn Cotton Cucurbit Vegetables (e.g., cucumber, melons, squash) Fruiting Vegetables (e.g., tomatoes, peppers, eggplant) Ginseng Grapes Grass, Forage, Fodder and Hay Herbs (fresh and dried) Hops Leafy Vegetables, except Brassica (e.g., lettuce, spinach, celery) Legume Vegetables (e.g., beans and peas, succulent and dried) Onions (dry bulb, garlic, and green) Peanuts Pineapples Root and Tuber Vegetables (e.g. potatoes, carrots, sugar beets) Soybeans Stone fruits Strawberries Sunflower Tobacco Tomato Tree nuts Tropical fruits (e.g. papaya, mango, kiwifruit) Wasabi	0 days
Cereal Grains (except Corn)	14 days
Crops Not Intended for Food or Feed	0 days
All Other Crops Intended for Food or Feed	365 days

Resistance Management

MEFENOXAM	GROUP	4	FUNGICIDE
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For resistance management, **LIBERTY MEFENOXAM 4SC** contains a Group 4 fungicide. Any fungal population may contain individuals naturally resistant to **LIBERTY MEFENOXAM 4S** and other Group 4 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Follow appropriate resistance-management strategies.

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

- Rotate the use of **LIBERTY MEFENOXAM 4SC** or other Group 4 fungicides within a growing season, or among growing seasons, with different groups that control the same pathogens.
- Use tank mixtures with a fungicide 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 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 effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM guidance for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact LIBERTY CROP PROTECTION at 844-425-8488. You can also contact your pesticide distributor or university extension specialist to report resistance.

SPRAY EQUIPMENT

Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Nozzles must be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- Screens placed on suction side of pump must be 16-mesh or coarser.
- **DO NOT** place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.
- Check nozzle manufacturer's specifications.

Pump

- Use a pump with capacity to:
 1. Maintain 35-40 psi at nozzles
 2. Provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- **DO NOT** air sparge.

For more information on spray equipment and calibration, consult sprayer manufacturers and state guidance. For specific local directions and spray schedules, consult the current state agricultural guidance.

MIXING INSTRUCTIONS

- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- Agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate application to an already treated area.

LIBERTY MEFENOXAM 4SC Alone (no tank mix):

- Add ¼ - ½ of the required amount of water to the spray or mixing tank.
- With the agitator running, add **LIBERTY MEFENOXAM 4SC** to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after **LIBERTY MEFENOXAM 4SC** has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

LIBERTY MEFENOXAM 4SC + Tank Mixtures: **LIBERTY MEFENOXAM 4SC** is usually compatible with all tank-mix partners listed on this label. To determine the physical compatibility of **LIBERTY MEFENOXAM 4SC** with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 20 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

DO NOT combine **LIBERTY MEFENOXAM 4SC** in the spray tank with pesticides, surfactants or fertilizers, unless compatibility charts or your own prior use has shown that the combination is physically compatible, effective and non-injurious under your conditions of use.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Mixing in the Spray Tank:

- Add ¼ - ½ of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank-mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and **LIBERTY MEFENOXAM 4SC** to the spray tank.
- Allow **LIBERTY MEFENOXAM 4SC** to completely disperse.
- Spray the mixture with the agitator running.
- Observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label.
- **DO NOT** exceed maximum label dosage rates, and the most restrictive label precautions and limitations must be followed.
- **DO NOT** tank mix this product with any product which prohibits such mixing.

APPLICATION PROCEDURES**Ground Application (Broadcast):**

Apply in a minimum of 20 gal of water per acre, unless specified otherwise.

Ground Application (Banded):

- Application rates in the Directions for Use are expressed as an amount per acre which refers to the total crop area to be treated. If using a banded application, use proportionally less product using the formula below:

$$\frac{\text{Band width in inches}}{\text{Row spacings in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Ground Applications (In-Furrow):

- Apply **LIBERTY MEFENOXAM 4SC** as an in-furrow spray in 3-7 gal per acre of water at planting.
- Mount the spray nozzle so the spray is directed into the furrow just before the seed are covered.
- The following table provides common row spacings and the amount of **LIBERTY MEFENOXAM 4SC** to apply per acre.

Use Rate fl oz/1,000 row feet (oz ai/1,000 row feet)	LIBERTY MEFENOXAM 4SC fl oz/A								
	20-inch rows	22-inch rows	24-inch rows	30-inch rows	32-inch rows	34-inch rows	36-inch rows	38-inch rows	40-inch rows
0.08 (0.038)	2.0	1.8	1.6	1.4	1.2	1.1	1.1	1.0	0.9
0.15 (0.078)	4.0	3.6	3.2	2.8	2.4	2.3	2.2	2.0	1.9
0.28 (0.14)	7.0	6.7	6.1	4.8	4.6	4.3	4.0	3.8	3.7
0.42 (0.21)	11.0	10.0	9.1	7.3	6.8	6.5	6.1	5.8	5.4

20" = 26,136 row ft/A, 22" = 23,760 row ft/A, 24" = 21,780 row ft/A, 30" = 17,424 row ft/A, 32" = 16,315 row ft/A,
34" = 15,374 row ft/A, 36" = 14,520 row ft/A, 38" = 13,754 row ft/A, 40" = 13,068 row ft/A

Aerial Application:

- Apply in a minimum of 3 gal of water per acre, unless specified otherwise.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.

Application through Irrigation Systems (Chemigation):

- Apply this product only through center pivot, solid set, hand move, moving wheel, micro-sprinkler, or drip irrigation systems. **DO NOT** apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
- **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments if needed.
- **LIBERTY MEFENOXAM 4SC** must be applied on the schedule specified in the specific crop use directions, not according to the irrigation schedule.

Note: DO NOT inject **LIBERTY MEFENOXAM 4SC** at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 15 parts water to 1 part **LIBERTY MEFENOXAM 4SC** in the mix tank. **LIBERTY MEFENOXAM 4SC** can affect many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used, but replace once a year. **DO NOT** use Viton, Buna-N, Neoprene, or PVC seals.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water- source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick- closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.

6. Systems must use a metering pump, including 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.
7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Specific Instructions for Public Water Systems

1. 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.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, including 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.
7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

DIRECTIONS FOR USE - PART 1

SOIL-INJECTED OR SOIL-INCORPORATED APPLICATIONS

The restricted-entry interval (REI) for soil-injected or soil-incorporated applications is 0 hours.

Alfalfa (*birdsfoot trefoil*)

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Root Rot (<i>Phytophthora</i> spp.)	0.25-0.50 pt/A (0.12-0.25)	Soil spray (broadcast): Apply as a broadcast soil surface spray at planting. If alfalfa seed was previously treated with mefenoxam or metalaxyl as a seed dressing, use the 0.25 pt/A rate.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 0.50 pt/A (equivalent to 0.25 lb ai/A) DO NOT make more than 1 application at the highest rate of 0.50 pt (0.25 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 0.50 pt/A/year (equivalent to 0.25 lb ai/A/year) <ul style="list-style-type: none"> DO NOT exceed 0.25 lb ai/A/year of mefenoxam- and metalaxyl-containing products. DO NOT feed green forage or cut hay for 60 days following application. Pre-Harvest Interval (PHI): 60 days 		

For additional applications, see Alfalfa in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Artichoke, Globe

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Root Rot (<i>Phytophthora</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Soil spray (broadcast): Apply at planting.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A) DO NOT make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year) <ul style="list-style-type: none"> DO NOT exceed 1.0 lb ai/A/year of mefenoxam- and metalaxyl-containing products. Pre-Harvest Interval (PHI): 200 days 		

Avocados

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora cinnamomi</i>)	Diluted Mixture: 0.25 fl oz in 18 gal water 2.0-4.0 pt/A (1.0-2.0) or 0.50-1.0 fl oz/ 1,000 gal water (3.9-7.8 ppm)	Sleeve drench: At transplanting, drench the roots inside the sleeve with 1 qt of the diluted mixture per tree. Sleeve drench does not replace other soil applications for long-term control of root rot. Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the start of the growing season or at transplanting and as soon as soil tests indicate the presence of <i>Phytophthora</i> . Two additional applications may be made at 3 month intervals. Applications are not needed during the winter months of November through February. For new plantings, use <i>Phytophthora</i> -resistant rootstocks. Mature trees in moderate to advanced stages of decline cannot be cured with LIBERTY MEFENOXAM 4SC .
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 4.0 pt/A (equivalent to 2.0 lb ai/A) DO NOT make more than 3 applications at the highest rate of 4.0 pt (2.0 lb ai)/A/year. Minimum Application Interval: 90 days Maximum Annual Application Rate: 12.0 pt/A/year (equivalent to 6.0 lb ai/A/year) <ul style="list-style-type: none"> DO NOT exceed 6.0 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products. Pre-Harvest Interval (PHI): 28 days 		

For additional applications, see Avocados in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Bushberry, Crop Subgroup 13-07B: Blueberries (High and Low Bush), Currants, Elderberry, Gooseberry, Highbush Cranberry, Aronia Berry, Highbush Blueberry, Lowbush Blueberry, Buffalo Currant, Chilean Guava, Black Currant, Red Currant, Elderberry, European Barberry, Gooseberry, Highbush Cranberry, Edible Honeysuckle, Huckleberry, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, and Sea Buckthorn Hybrids, cultivars, and varieties of these

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora</i> spp.)	3.6 pt/A (1.8) or 0.25 pt/1,000 row ft	Soil Spray (broadcast, band or drip) New Plantings: Make one application at the time of planting. For band applications use an 18-inch band. (See direction for <i>Established Plantings</i> in Part 2 for subsequent applications). Use LIBERTY MEFENOXAM 4SC in conjunction with good cultural practices to minimize disease.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.6 pt/A (equivalent to 1.8 lb ai/A)
- **DO NOT** make more than 2 applications/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 7.2 pt/A/year (equivalent to 3.6 lb ai/A/year)
 - **DO NOT** exceed 3.6 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-Harvest Interval (PHI): 0 days

Caneberry (Blackberry and Raspberry) Subgroup 13-07A: Blackberry, Raspberry (Red and Black), Wild Raspberry Cultivars, Andean Blackberry, Arctic Blackberry, Bingleberry, Black Satin Berry, Boysenberry, Brombeere, California Blackberry, Cherokee Blackberry, Chesterberry, Cheyenne Blackberry, Common Blackberry, Coryberry, Darrowberry, Dewberry, Dirksen Thornless Berry, Evergreen Blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth Blackberry, Marionberry, Mora, Mures Deronce, Nectarberry, Northern Dewberry, Olallieberry, Oregon Evergreen Berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee Blackberry, Southern Dewberry, Tayberry, Youngberry, and Zarzamora, Hybrids, cultivars, and varieties of these.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora</i> spp.)	3.6 pt/A (1.8) or 0.25 pt/1,000 row ft	Soil Spray (broadcast, band or drip) New Plantings: Make one application at the time of planting. For band applications use an 18-inch band. (See directions for <i>Established Plantings</i> in Part 2 for subsequent applications.) Use LIBERTY MEFENOXAM 4SC in conjunction with good cultural practices to minimize disease.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.6 pt/A (equivalent to 1.8 lb ai/A)
- **DO NOT** make more than 2 applications/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 7.2 pt/A/year (equivalent to 3.6 lb ai/A/year)
 - **DO NOT** exceed 3.6 lb ai/A/year of soil-applied and 0.2 lb ai/A/year of foliar-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** use an adjuvant.
- Pre-Harvest Interval (PHI): 45 days

Carrots

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off Cavity Spot Root Dieback (<i>Pythium</i> spp.)	0.5-1.0 pt/A (0.25-0.5)	<p>Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting or prior to emergence.</p> <p>For banded applications, use a 7-inch band.</p> <p>NOTE: If post planting applications are planned, see notes below for guidance on maximum rates for soil and foliar applications.</p> <p>For best control of cavity spot, use a preventive disease control program that incorporates an at-planting or seed treatment use of LIBERTY MEFENOXAM 4SC or a different EPA registered mefenoxam product followed by one or more additional applications.</p>
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam) DO NOT make more than 2 applications at the highest rate of 1.0 pt (0.5 lb ai)/A/year. Minimum Application Interval: 14 days Maximum Annual Application Rate: 2.8 pt/A/year (equivalent to 1.4 lb ai/A/year mefenoxam) DO NOT exceed a total of 1.4 lb ai/A (2.8 pt/A) per crop of total mefenoxam- and metalaxyl-containing products. DO NOT exceed the equivalent of 0.65 lb ai/A (1.3 pt/A) per crop soil-applied and 0.75 lb ai/A/year of foliar-applied mefenoxam- and metalaxyl-containing products. DO NOT use a soil application if a seed treatment containing mefenoxam or metalaxyl is used. Pre-Harvest Interval (PHI): 7 days 		

For additional applications, see Carrots in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Clover

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Root Rot (<i>Phytophthora</i> spp.)	0.25-0.50 pt/A (0.125-0.25)	<p>Soil spray (broadcast): Apply as a broadcast soil surface spray at planting. If the clover seed was previously treated with mefenoxam or metalaxyl as a seed dressing, use the 0.25 pt/A rate.</p>
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 0.5 pt/A (equivalent to 0.25 lb ai/A mefenoxam) DO NOT make more than 1 application at the highest rate of 0.50 pt (0.25 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 0.5 pt/A/year (equivalent to 0.25 lb ai/A/year mefenoxam) DO NOT exceed 0.25 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products. DO NOT feed green forage or cut hay for 90 days following application. Pre-harvest Interval (PHI): 90 days 		

Brassica (Cole) Leafy Vegetables, Crop Group 5 and Turnip Greens : Broccoli , Brussels Sprouts, Cabbage, Cauliflower, Collards, Mustard Greens and Hybrids, cultivars, and varieties of these.

Additional cole crops: Broccoli Raab (rapini), Cavalo Broccolo, Chinese Broccoli (gai lan), Chinese Cabbage (bok choy and napa), Chinese Mustard Cabbage (gai choy), Kale, Kohlrabi, Mizuna, Mustard Spinach, and Rape Greens. **For Downy Mildew control, see Cole Crops in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.**

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Basal Stem Rot (<i>Phytophthora</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and incorporate in the top 2 inches of soil. Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting. Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the labeled rates. For banded applications, use a 7-inch band.
Damping Off (<i>Pythium</i> spp.)	0.25-0.50 pt/A (0.125-0.250)	Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and incorporate in the top 2 inches of soil. For banded applications, use a 7-inch band.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- Minimum Application Interval: NA
- Maximum Annual Application Rate:
 - Soil: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
 - Foliar: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 1.0 lb ai/A per crop of soil-applied and 0.50 lb ai/A per crop of foliar-applied mefenoxam and metalaxyl-containing products.
 - **DO NOT** make more than 4 applications at the lowest rate of 0.25 pt (0.125 lb ai)/A/year.
- Pre-harvest Interval (PHI): NA

Cotton

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot Seed Rot (<i>Pythium ultimum</i>) Seedling Blight (<i>Pythium aphanidermatum</i>)	0.075-0.15 fl oz/1,000 row ft (0.03-0.0625)	In-furrow spray: Apply in water or liquid fertilizer at planting. Direct the spray into the furrow over the seed just before the seeds are covered.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.15 fl oz/1000 row ft (equivalent to 0.0625 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 0.15 fl oz (0.0625 lb ai)/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: 0.15 fl oz/1000 row ft/year (equivalent to 0.0625 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.125 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products (assumes 30" row spacing).
- Pre-harvest Interval (PHI): NA

Cucurbit Vegetables, Crop Group 9 Cantaloupe: Cucumber, Honeydew, Pumpkin, Summer Squash (Crookneck squash, Scallop squash, Straightneck squash, Vegetable marrow, Zucchini), Winter Squash (Acorn squash, Butternut squash, Calabaza, Hubbard squash, Spaghetti squash), Watermelon and Hybrids, cultivars, and varieties of these.

Additional cucurbit crops: Chayote, Chinese Waxgourd, Citron Melon, Gherkin, Gourd, edible (hyotan, cucuzza, hechima, chinese okra), *Momordica* spp. (balsam apple, balsam pear, bitter melon, Chinese cucumber), and Muskmelons (casaba, crenshaw, golden pershaw, honey balls, mango, Persian, pineapple, Santa Claus, snake melons, true cantaloupe).

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Suppression: Phytophthora blight (<i>Phytophthora capsici</i>)	1.0-2.0 pt/A (0.50-1.0)	<p>Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and incorporate in the top 2 inches of soil.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting.</p> <p>Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the labeled rates. For banded applications, use a 7-inch band.</p>
Suppression: Phytophthora blight (<i>P. capsici</i>)	Transplant water 4-8 fl oz/100-200 gal water/A	<p>Transplant Water[*] (see PRODUCT USE RESTRICTIONS): Apply in transplant water or immediately following planting via soil drench. Apply 4-8 fl oz/A (0.25 - 0.5 pt/A) in at least 100 gallons of transplant water per acre.</p> <p>Precautions: There is a risk of plant injury with transplant water application:</p> <p>Crop injury is more likely when applied in less than 100 gallons/acre. Injury is temporary and typically disappears within three weeks. Pre-mixing LIBERTY MEFENOXAM 4SC in a tank separate from the transplant water source tank will help to prevent incompatibility with fertilizers or other pesticides in the transplant water solution.</p> <p>In fields with a history of <i>P. capsici</i> blight, make a follow up drip application of LIBERTY MEFENOXAM 4SC (4 - 8 fl oz/A) 14-21 days after transplanting.</p> <p>[*Transplant water application not for use in California.]</p>
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A) DO NOT make more than 6 applications at the highest rate of 2.0 pt (1.0 lb ai)/A/year. Minimum Application Interval: 14 days Maximum Annual Application Rate: 12.0 pt/A/year (equivalent to 6.0 lb ai/A/year) <ul style="list-style-type: none"> DO NOT exceed 6.0 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products. Pre-Harvest Interval (PHI): 5days 		

For additional applications, see Cucurbits in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Fruiting Vegetables Crop Group 8, except Tomato Eggplant, Groundcherry, Pepino, Pepper (bell, chili, cooking pepper, pimento, sweet) Tomatillo

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Suppression: Crown Rot (<i>Phytophthora capsici</i>)	1.0 pt/A (0.50)	<p>To control Crown Rot, apply before the plants are infected to obtain satisfactory control. Plants already infected with <i>Phytophthora capsici</i> cannot be cured with LIBERTY MEFENOXAM 4SC.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer preplant or at planting. For direct-seeded peppers, apply preplant or prior to emergence.</p> <p>For banded applications, use a 12- to 16-inch band.</p> <p>Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water. Make up to two additional applications on a 30-day schedule following initial application at planting.</p>
Suppression: Crown Rot (<i>P. capsici</i>)	Transplant water 4-8 fl oz/100-200 gal water/A 0.25-0.5 pt/A (0.125-0.25)	<p>Transplant Water[*] (see PRODUCT USE RESTRICTIONS): Apply in transplant water or immediately following planting via soil drench. Apply 4-8 fl oz/A (0.25 - 0.5 pt/A) in at least 100 gallons of transplant water per acre.</p> <p>Precautions: There is a risk of plant injury with transplant water application:</p> <p>Crop injury is more likely when applied in less than 100 gallons/acre. Injury is temporary and typically disappears within three weeks. Pre-mixing LIBERTY MEFENOXAM 4SC in a tank separate from the transplant water source tank will help to prevent incompatibility with fertilizers or other pesticides in the transplant water solution.</p> <p>In fields with a history of <i>P. capsici</i> blight, make a follow up drip application of LIBERTY MEFENOXAM 4SC (4 - 8 fl oz/A) 14-21 days after transplanting.</p> <p>[*Transplant water application not for use in California.]</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
- **DO NOT** exceed the equivalent of 1.5 lb ai/A per crop of soil-applied mefenoxam-containing products and 0.5 lb ai/A per crop of foliar-applied mefenoxam-containing products.
- Pre-harvest Interval (PHI): 7 days

For additional applications, see Fruiting Vegetables in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Ginseng

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Phytophthora Root Rot (<i>Phytophthora cactorum</i>)	0.75 pt/A (0.375)	Soil drench: For stand establishment, apply uniformly to the soil surface in the spring before the plants start growing. Apply in 100- 400 gal of water per acre. Follow with additional applications of a mefenoxam granular EPA registered product (refer to product label for directions).
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 0.75 pt/A (equivalent to 0.375 lb ai/A mefenoxam) Minimum Application Interval: NA Maximum Annual Application Rate: 0.75 pt/A/year (equivalent to 0.375 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed 0.375 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products, and 1.125 lb ai/A/year foliar-applied mefenoxam- and metalaxyl-containing products. DO NOT make more than 1 application of LIBERTY MEFENOXAM 4SC per year. Pre-harvest Interval (PHI): NA 		

Grapes

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot Root Rot (<i>Phytophthora</i> spp.)	3.6 pt/A (1.8) or 0.25 pt/1000 row ft Drip irrigation: 0.5 – 1.0 fl oz/1000 gals of water or 4 fl oz (0.25 pt)/100 linear feet of row.	Soil spray (broadcast, band or drip): Apply in the spring before the plants start growing in sufficient water to provide uniform coverage. Two additional applications may be made to coincide with periods most favorable for root rot development. Soil spray (broadcast or band): For banded applications, use a 3-ft band at the base of the plants. Calculate the correct amount based on 3.6 pt/A using the instructions in the Application Procedures section. Drip irrigation: Apply 0.5 - 1.0 fl oz/1000 gals of water or 4 fl oz (0.25 pt)/100 linear feet of row. Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the beginning of the growing season (bud break) or at transplanting. Two additional applications may be made at 3-month intervals. Applications are not needed during the winter dormancy period.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 3.6 pt/A (equivalent to 1.8 lb ai/A mefenoxam) DO NOT make more than 3 applications/A/year. Minimum Application Interval: 90 days Maximum Annual Application Rate: 10.8 pt/A/year (equivalent to 5.4 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed the equivalent of 5.4 lb ai/A per crop of soil-applied mefenoxam-containing products and 0.4 lb ai/A per crop of foliar-applied mefenoxam-containing products. Pre-harvest Interval (PHI): 60 days 		

Grass, Forage, Fodder, and Hay, Crop Group 17*

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Seedling Diseases (<i>Pythium</i> spp.)	0.25-1.0 pt/A (0.125-0.50)	Soil spray (broadcast): Apply as a broadcast soil surface spray at planting. If the grass seed was previously treated with mefenoxam or metalaxyl as a seed dressing, use the 0.25-0.50 pt/A rate.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam) DO NOT make more than 1 application at the highest rate of 1.0 pt (0.50 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed 0.50 lb ai/A/year of mefenoxam- and metalaxyl-containing products. DO NOT apply to range grasses. DO NOT graze, feed green forage, or cut hay for 60 days following application. Pre-harvest Interval (PHI): 60 days 		

*Enclosed pasture grasses or grasses grown for hay or silage including Bermuda grass, bluegrass, brome grass, or fescue.

Herbs, Fresh and Dried, Herbs Subgroup 19A: Basil, Chervil (dried), Chive, Coriander (leaf), Cilantro (leaf), Dillweed, Lemongrass, Rosemary, Sage, Savory (Summer and Winter), Sweet Bay, Tarragon, Thyme

Additional herbs: Angelica, Balm, Borage, Burnet, Catnip, Chamomile, Chinese Chive, Clary, Costmary, Curry (leaf), Horehound, Hyssop, Lavender, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rue, Tansy, Wintergreen, Woodruff, and Wormwood

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil. Soil spray (broadcast or band): Apply in sufficient water to provide uniform coverage. For banded applications, use a 7-inch band.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam) DO NOT make more than 2 applications at the highest rate of 2.0 pt (1.0 lb ai)/A/year. Minimum Application Interval: 28 days Maximum Annual Application Rate: 4.0 pt/A/year (equivalent to 2.0 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed the equivalent of 2.0 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products). Pre-harvest Interval (PHI): 21 days 		

For additional applications, see Herbs in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Leafy Vegetables (Except Brassica), Crop Group 4: Celery, Endive (Escarole), Lettuce (Head and Leaf), Parsley, Rhubarb, Spinach, Swiss Chard

Additional leafy vegetables: Amaranth, Chinese spinach; Amaranth, leafy; Amaranth, tampala; Arugula (Rocket); Cardoon; Celtuce; Chervil; Chinese Celery; Chrysanthemum (edible-leaved); Chrysanthemum (garland); Corn Salad; Cress (garden); Cress (Upland); Dandelion; Dock (Sorrel); Florence Fennel (finocchio); Orach; Purslane (garden); Purslane (winter); Radicchio (red chicory); Spinach (New Zealand); and Spinach (vine).

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	<p>Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting.</p> <p>For banded applications, use a 7-inch band.</p> <p>Make no more than one soil application.</p>
Damping Off (<i>Pythium</i> spp.)	<p>Transplant water</p> <p>4-8 fl oz/100-200 gal water/A equivalent to (0.25-0.5 pt/A)/100-200 gallons water/A (0.125-0.25)</p>	<p>Transplant Water[*] (see PRODUCT USE RESTRICTIONS): Apply in transplant water or immediately following planting via soil drench. Apply 4-8 fl oz/A (0.25 - 0.5 pt/A) in at least 100 gallons of transplant water per acre.</p> <p>Precautions: There is a risk of plant injury with transplant water application:</p> <p>Crop injury is more likely when applied in less than 100 gallons/acre. Injury is temporary and typically disappears within three weeks. Pre-mixing LIBERTY MEFENOXAM 4SC in a tank separate from the transplant water source tank will help to prevent incompatibility with fertilizers or other pesticides in the transplant water solution.</p> <p>[*Transplant water application not for use in California.]</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- **DO NOT** make more than 1 applications at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
- Minimum Application Interval: 21 days - spinach only.
- Maximum Annual Application Rate:
 - **Soil:** 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 1 applications at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
 - **Foliar:** 0.8 pt/A/year (equivalent to 0.4 lb ai/A/year mefenoxam)
 - For lettuce, **DO NOT** exceed the equivalent of 1.0 lb ai/A per crop of soil-applied and 0.4 lb ai/A per crop of foliar-applied mefenoxam-containing products.
- For leafy vegetables make no more than one soil application per crop year.
- For spinach a total of 2 shank applications may be made per crop year.
- Pre-harvest Interval (PHI):
 - For leafy vegetables (except spinach): **DO NOT** apply within 7 days of harvest (7-day PHI). Make no more than one soil application per crop.

For additional applications to Lettuce (Head and Leaf), see Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Spinach Only

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
White Rust (<i>Albugo occidentalis</i>)	0.25 pt/A (0.125)	Shank application: Shank in LIBERTY MEFENOXAM 4SC 21 days after planting or after the first cutting. Another application may be shanked in after the next cutting.
Downy Mildew (<i>Peronospora effusa</i>)		A total of 2 shanked applications may be made on a 21-day interval.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.25 pt/A (equivalent to 0.125 lb ai/A mefenoxam)
- Minimum Application Interval: 21 days - spinach only.
- Maximum Annual Application Rate:
 - Soil: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 8 applications/A/year.
 - Foliar: 0.8 pt/A/year (equivalent to 0.4 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 3 applications/A/year
 - For spinach: **DO NOT** exceed the equivalent of 1.0 lb ai/A per crop of soil-applied mefenoxam- containing products at planting and 0.25 lb ai/A per crop of soil-applied post planting, shanked-in applications of mefenoxam-containing products OR **DO NOT** exceed the equivalent of 1.0 lb ai/A per crop of soil-applied mefenoxam-containing products at planting and 0.4 lb ai/A per crop of foliar- applied mefenoxam-containing products.
- Pre-harvest Interval (PHI):
 - For spinach: Spinach can be harvested with a 3-day PHI only if soil application does not exceed 1.0 lb ai/A/year and foliar application of EPA registered product containing mefenoxam and copper hydroxide at an application rate that does not exceed 0.25 lb ai mefenoxam/A/year. Otherwise, the PHI is 21 days for spinach.

Legume Vegetables, Succulent or Dried, except Soybeans: Bean (*Lupinus* spp.), Bean (*Phaseolus* spp.), Bean (*Vigna* spp.), Broad Bean (fava bean), Chickpea (garbanzo bean), Lentil, Pea (*Pisum* spp.), Pigeon Pea, Soybean (immature seed only) and Hybrids, cultivars, and varieties of these.

Additional legume vegetables: Bean (*Lupinus* spp.) - grain lupin, sweet lupin, white lupin, white sweet lupin; Bean (*Phaseolus* spp.) - field, kidney, lima, navy, pinto, runner, snap, tepary, wax; Bean (*Vigna* spp.) - adzuki, asparagus, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth, mung, rice, southern pea, urd, yardlong; Guar; Jackbean; Lablab bean (hyacinth bean); Pea (*Pisum* spp.) - dwarf, edible-pod, English, field, garden, green, snow, sugar snap; and Sword bean.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off Root Rot (<i>Pythium</i> spp.)	0.50-1.0 pt/A (0.25-0.50)	Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil. Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting. For banded applications, use a 7-inch band.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 1.0 pt (0.50 lb ai)/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: Soil: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.5 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): NA

Bulb Vegetables Crop Group 3-07: Onion Dry, Bulb: Onions (dry bulb), Shallots (dry bulb); **Green Onion:** Green Eschalots, Green Onions, Green Shallots, Japanese Bunching Onions, Leeks, Spring Onions, Scallions and hybrids, cultivars, and varieties of these.

Additional bulb crops:

Dry Bulb Crops: Great-headed Garlic, Serpent Garlic, Lily Bulb, Chinese Onion Bulb, Pearl Onion, Potato Onion Bulb;

Green Bulb Crops: Chive (fresh leaves), Chinese Chive (fresh leaves), Hosta Elegans, Fritillaria (leaves), Kurrat, Lady's Leek, Beltsville Bunching Onions, Onion (fresh), Macrostem Onion, Tree Tops Onion, Welsh Onion (tops), and Shallot (fresh leaves).

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	0.50-1.0 pt/A (0.25-0.50)	<p>Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting.</p> <p>For banded applications, use a 7-inch band.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam) DO NOT make more than 1 application at the highest rate of 1.0 pt (0.50 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> For onions (dry bulb): DO NOT exceed the equivalent of 1.0 lb ai/A per crop of soil-applied and 0.5 lb ai/A per crop of foliar-applied mefenoxam-containing products. For onions (green): DO NOT exceed the equivalent of 1.0 lb ai/A per crop of soil-applied and 0.3 lb ai/A per crop of foliar-applied mefenoxam-containing products. Pre-harvest Interval (PHI): NA 		

Peanuts

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Pythium Root Rot (<i>Pythium</i> spp.)	0.25 pt/A (0.125)	<p>In-furrow spray: For seedling disease control, position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly or crop injury may occur.</p> <p>Soil spray (banded): For banded applications, apply over the row. Use a 7-inch band.</p>
<p>USE RESTRICTIONS</p> <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 0.25 pt/A (equivalent to 0.125 lb ai/A mefenoxam) DO NOT make more than 1 application/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 0.25 pt/A/year (equivalent to 0.125 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed 0.125 lb ai/A/year of soil-applied and 0.50 lb ai/A/year of foliar-applied mefenoxam- and metalaxyl-containing products. Pre-harvest Interval (PHI): NA 		

For additional applications, see Peanuts in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Pineapple

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Heart Rot Disease (<i>Phytophthora</i> spp.)	0.50-1.0 pt in 100 gal water (0.25-0.50)	Crown dip: Apply as a crown dip before planting. Amount of dip solution per acre will depend on crown size, plant density, and dipping techniques. Use 75-100 gallons of the mixture per acre for dipping.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/100 gallons water (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: 1.0 pt/100 gallons water/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.5 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- If there is a crop failure within one year of planting treated crowns, **DO NOT** harvest plant material for animal feed.
- Pre-harvest Interval (PHI): NA

Potatoes

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Pythium Leak (<i>Pythium</i> spp.)	0.42 fl oz/ 1,000 row ft (0.019)	In-furrow spray: Apply directly over the seed pieces in furrow as a 6- to 8-inch band prior to row closure or use markout application method (incorporated). You may need to follow this in-furrow application with an LIBERTY MEFENOXAM 4SC prepack or tank mix (Part 2) foliar application at tuber initiation: <ul style="list-style-type: none"> • When conditions are conducive for disease development. • When the variety is susceptible or moderately susceptible to Pink Rot/Pythium leak. • In areas with a long growing season. LIBERTY MEFENOXAM 4SC may be impregnated on dry fertilizer or applied in combination with liquid fertilizers.
Pink Rot (<i>Phytophthora erythroseptica</i>)	Equivalent to 6.1 fl oz/A on 36-inch row spacing (0.19)	
Pythium Seedling Disease (<i>Pythium</i> spp.)		

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.42 fl oz/1000 row ft (equivalent to 0.19 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: 0.42 fl oz/1000 row ft (equivalent to 0.19 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 0.34 lb ai/A per crop of soil-applied and 0.40 lb ai/A per crop of foliar- applied mefenoxam-containing products.
- **DO NOT** apply **LIBERTY MEFENOXAM 4SC** beyond the at-planting stage.
- **DO NOT** use the “dribble” application method.
- Pre-harvest Interval (PHI): NA

Crop Group 1, except Carrot, Ginseng, Potato, and Sugar Beet: Artichoke (Chinese and Jerusalem), Garden Beet, Horseradish, Turnip- rooted Parsley, Parsnip, Radish, Oriental Radish (daikon), Rutabaga, Sweet Potato, Turnip, Yam Bean (jicama, manioc pea), True Yam

Additional root and tuber vegetables: Arracacha, Arrowroot, Burdock (edible), Canna (edible), Cassava (bitter and sweet), Celeriac (celery root), Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Ginger, Leren, Salsify (oyster plant, black, Spanish), Skirret, Tanier (cocoyam), Turmeric

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Pythium Root Rot (<i>Pythium</i> spp.) Phytophthora Root Rot (<i>Phytophthora</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil. Use sufficient water to provide uniform coverage of soil. Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting. For banded applications, use a 7-inch band.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam) DO NOT make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed 1.0 lb ai/A/year of mefenoxam- and metalaxyl-containing products. Pre-harvest Interval (PHI): NA 		

Soybeans

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Phytophthora Root and Stem Rot (<i>Phytophthora megasperma</i>)	0.08-0.28 fl oz/ 1,000 row ft (0.0025 to 0.0087)	In-furrow spray: Apply in-furrow with water or liquid fertilizer. Position the spray so the fungicide is mixed with the soil covering the seed. Avoid spraying the seed directly or crop injury may occur. Use the higher specified rate for full-season control. Use 0.08-0.15 fl oz for early- to mid-season control.
Pythium Damping Off (<i>Pythium</i> spp.)	0.37-1.25 pt/A (0.18-0.625)	Soil spray (broadcast or band): Apply in water or liquid fertilizer. Use the higher specified rate for full-season control. Use 0.37-0.75 pt for early- to mid-season control. For banded applications, use a 7-inch band. For best results, use soybean varieties that have some degree of resistance to the races of <i>Phytophthora</i> present in the field. Use the higher specified rate in areas with a history of heavy <i>Phytophthora</i> damage. Under heavy late-season <i>Phytophthora</i> pressure, LIBERTY MEFENOXAM 4SC may not provide complete control.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 1.25 pt/A (equivalent to 0.625 lb ai/A mefenoxam) DO NOT make more than 1 application/A/year. Minimum Application Interval: NA Maximum Annual Application Rate: 1.25 pt/A/year (equivalent to 0.625 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed 0.625 lb ai/A/year of mefenoxam- and metalaxyl-containing products. Pre-harvest Interval (PHI): NA 		

Strawberries

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Red Stele (<i>Phytophthora fragariae</i>) Vascular Collapse (<i>P. cactorum</i>) Leather Rot (<i>P. cactorum</i>)	1.0 pt/A (0.50)	<p>Drip irrigation application only (see Part 2 for other application methods).</p> <p>Annual plantings: Apply up to 3 times per crop. Make the first application after transplanting. Make the second application 30 days before the beginning of harvest or at fruit set. Apply the third application during harvest, depending on disease pressure and environmental conditions.</p> <p>Established plantings: Apply up to 3 times per crop. Make the first application in the spring after the ground thaws and before first bloom. Make a second application after harvest in the fall. For control of leather rot, make an additional application during the growing season at fruit set.</p> <p>When applying through drip irrigation, calculate the rate as a band application with a band width equal to the root zone width. Inject LIBERTY MEFENOXAM 4SC into the irrigation water.</p> <p>LIBERTY MEFENOXAM 4SC may be applied the day of harvest.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 1.5 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 0 days.

Sugar Beets

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Pythium Root Rot (<i>Pythium</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	<p>Preplant incorporated (broadcast or band): Apply in water or liquid fertilizer and mechanically incorporate in the top 2 inches of soil.</p> <p>Soil spray (broadcast or band): Apply in water or liquid fertilizer at planting.</p> <p>For banded applications, use a 7-inch band.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 1.0 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): NA

Tobacco

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	0.50-1.0 pt/A (0.25-0.50) or 0.25-0.50 fl oz/ 150 sq yd	Soil spray (broadcast): Apply as a preplant soil application before or at time of planting. Use higher specified application rate on broadleaf tobacco. Use 50 gal/A of water (2 gal water/150 sq yd).
Blue Mold (<i>Peronospora tabacina</i>)	0.50-1.0 pt/A (0.25-0.50) For no-till tobacco: 0.50-1.0 pt/A (0.25-0.50)	Soil spray (broadcast): Apply as a broadcast soil application prior to transplanting and incorporate in the top 2-4 inches of soil before forming beds. Use the low specified rate for low disease pressure or early-season control. Use the higher specified rate for high disease pressure, extended control, and burley and other tobacco types other than flue-cured.
Black Shank (<i>Phytophthora parasitica</i> var. <i>nicotianae</i>)	Broadcast 1.0-3.0 pt/A (0.50-1.5) For no-till tobacco: 0.50-1.0 pt/A (0.25-0.50)	Soil spray (broadcast): Apply to the soil within one week of planting. Incorporate in the top 2-4 inches of soil. Use the higher specified rate if the disease epidemic is expected to be severe. In FL and GA, use 3 pt/A where black shank is severe. Apply preventively for effective black shank control. If black shank is expected early in the season, apply as near as possible to transplanting followed by sequential applications.
	Transplant Water 4-8 fl oz /200 gal water	Transplant Water (PRODUCT USE RESTRICTIONS): Apply in transplant furrow while planting tobacco seedlings for control of black shank. Apply 4-8 oz/A (0.25 - 0.5 pt/A) in at least 200 gallons of transplant water per acre. Use the highest specified rate if the disease epidemic is expected to be severe. Make at least one subsequent application of LIBERTY MEFENOXAM 4SC at first cultivation and/or layby if necessary. Precautions: There is a risk of plant injury with transplant water application, especially when applied in less than 200 gallons of carrier volume per acre. Crop injury is more likely when applied in less than 100 gallons/acre. Injury is temporary and typically disappears within three weeks. Pre-mixing LIBERTY MEFENOXAM 4SC in a tank separate from the transplant water source tank will help to prevent incompatibility with fertilizers or other pesticides in the transplant water solution. Consult local extension bulletins for additional use directions. For best results against black shank, use tobacco varieties that have high resistance to black shank and use crop rotation. In fields with a history of severe black shank, use the highest specified rate and plant a variety resistant to the race of <i>Phytophthora</i> present (Burley L8 hybrids are resistant to only <i>Phytophthora</i> Race 0). Failure to adequately control nematodes in fields treated with LIBERTY MEFENOXAM 4SC may result in poor control of black shank.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.0 pt/A (equivalent to 1.5 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 3.0 pt (1.5 lb ai)/A/year.
- **DO NOT** make more than 6 applications at the lowest rate of 0.5 pt (0.25 lb ai)/A/year.
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
 - **DO NOT** Do exceed the equivalent of 1.5 lb ai/A per crop of mefenoxam- and metalaxyl-containing products.
 - **DO NOT** apply to stressed seedlings or during hot and dry conditions due to injury potential.
- **DO NOT** use in high black shank areas on highly susceptible flue-cured varieties.
- **DO NOT** use **LIBERTY MEFENOXAM 4SC** for black shank control in PA.

- Pre-harvest Interval (PHI): NA

For additional applications, see Tobacco in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

Tomato

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Soil spray (broadcast or band): Apply at planting in water or liquid fertilizer. For banded applications, use a 7-inch band.
Root and Fruit Rot (<i>Phytophthora</i> spp.) (<i>Pythium</i> spp.)	1.0 pt/A (0.50)	Injection (drip irrigation): Initiate control of Root and Fruit Rot with a soil application as described above. Make subsequent applications through drip irrigation. Make the first drip application 4-6 weeks after planting. Apply the second drip application as needed up to 4 weeks before harvest, but before the last irrigation. For injected applications, base rate calculations on a 7-inch band.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
- **DO NOT** make more than 3 applications at the lowest rate of 1.0 pt (0.50 lb ai)/A/year.
- Minimum Application Interval: 28 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 1.5 lb ai/A per crop of soil-applied mefenoxam-containing products and 0.5 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl containing products.
- Pre-harvest Interval (PHI): 7 days

For additional applications, see Tomato in Part 2 of Directions for Use: Soil Directed and Other Foliar Applications.

DIRECTIONS FOR USE - PART 2

SOIL-DIRECTED AND OTHER FOLIAR APPLICATIONS

The restricted-entry interval (REI) for soil-directed or foliar applications is 48 hours.

Alfalfa (birdsfoot trefoil)

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Root Rot (<i>Phytophthora</i> spp.)	0.25 pt/A (0.125)	Soil spray (broadcast): Apply as a broadcast soil surface spray at planting when inter-seeding into existing stands for renovation.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.25 pt/A (equivalent to 0.125 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: 0.50 pt/A/year (equivalent to 0.25 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.25 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- **DO NOT** feed green forage or cut hay for 60 days following application.
- Pre-harvest Interval (PHI): 60 days

For additional applications, see Alfalfa in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Apple Bearing and Nonbearing Trees

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions							
Crown Rot Collar Rot Root Rot (<i>Phytophthora</i> spp.)	4 pt/A (2.0) Or 1.5 fl oz/ 1,000 sq ft	<p>Soil spray (broadcast, band or irrigation): Apply to soil beneath the tree canopy or apply through irrigation water (micro-sprinkler or drip) in the spring before growth begins (established plantings).</p> <p>Apply to the soil in the early spring before growth starts and in the fall after harvest, but before the ground freezes. The treated area is based on the area under the tree canopy or the area of the sprayed row. Use sufficient water volume to obtain thorough coverage of the soil.</p>							
	Diluted Mixture: 0.50 pt in 100 gal water (0.25)	<p>Soil drench: Apply the diluted mixture around the trunk of each tree in the early spring before growth starts and in the fall after harvest, but before the ground freezes. On new plantings, delay the first application until 2 weeks after planting.</p> <table><tr><th>Trunk diameter at 12 inches above the soil line</th><th>Quantity of Diluted Mixture</th></tr><tr><td><1 inch</td><td>1 qt</td></tr><tr><td>1-3 inches</td><td>3 qt</td></tr><tr><td>>5 inches</td><td>4 qt</td></tr></table> <p>NOTE: Apply before symptoms appear. LIBERTY MEFENOXAM 4SC will not revitalize trees showing moderate to severe disease symptoms.</p> <p>Use LIBERTY MEFENOXAM 4SC in conjunction with good cultural practices and rootstocks that are most tolerant to disease</p>	Trunk diameter at 12 inches above the soil line	Quantity of Diluted Mixture	<1 inch	1 qt	1-3 inches	3 qt	>5 inches
Trunk diameter at 12 inches above the soil line	Quantity of Diluted Mixture								
<1 inch	1 qt								
1-3 inches	3 qt								
>5 inches	4 qt								

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 4.0 pt/A (equivalent to 2.0 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the rate of 4.0 pt (2.0 lb ai)/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 8.0 pt/A/year (equivalent to 4.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 4.0 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- **DO NOT** graze or feed cover crops in treated orchards.
- Pre-harvest Interval (PHI): NA

Asparagus

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot Spear Rot (<i>Phytophthora</i> spp.)	1.0 pt/A (0.50)	Soil spray (broadcast or band) Cutting beds: Apply 30 to 60 days before the first cutting. Apply again just before the beginning of harvest. New plantings: Apply after planting seedlings or after covering one-year old crowns.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 1.0 lb ai/A/year of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 1 day

Avocados

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora cinnamomi</i>)	1.0-4.0 pt/A (0.50-2.0)	Sprinkler irrigation: Apply as a soil surface spray to the soil surface under the tree canopy or via the irrigation system (drip, microemitter, sprinkle). Begin applications at the start of the growing season or at transplanting. Two additional applications may be made at 3-month intervals. Applications are not needed during the winter months of November through February. Use 1.0 pt/A if the trees have a canopy diameter of 2 ft. Increase the rate as the canopy diameter increases. For canopy diameters of 15 ft or more, use the 4.0 pt/A rate.

		<p>Soil spray: Apply to the soil directly under the drip emitter. Use irrigation to incorporate the material into the soil. If there is more than one emitter, distribute the amount of LIBERTY MEFENOXAM 4SC among the emitters. Use the same rate and application regime described above under sprinkler irrigation.</p> <p>Begin applications as soon as soil tests indicate the presence of <i>Phytophthora</i>.</p> <p>For new plantings, use <i>Phytophthora</i>-resistant rootstocks.</p> <p>Mature trees in moderate to advanced stages of decline cannot be cured with LIBERTY MEFENOXAM 4SC.</p>
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USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 4.0 pt/A (equivalent to 2.0 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications at the highest rate of 4.0 pt (2.0 lb ai)/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Rate: 12.0 pt/A/year (equivalent to 6.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 6.0 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 28 days

For additional applications, see Avocados in Part 1 of Directions for Use: Soil-Injected or Soil-Incorporated Applications.

Berry and Small Fruit, Caneberry, Crop Subgroup 13-07A: Blackberry, Loganberry, Raspberry (Red and Black), Wild Raspberry, Cultivars, Hybrids, cultivars, and varieties of these.

Additional types of caneberries: Andean Blackberry, Arctic Blackberry, Bingleberry, Black Satin Berry, Boysenberry, Brombeere, California Blackberry, Cherokee Blackberry, Chesterberry, Cheyenne Blackberry, Common Blackberry, Coryberry, Darrowberry, Dewberry, Dirksen Thornless Berry, Evergreen Blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth Blackberry, Marionberry, Mora, Mures Deronce, Nectarberry, Northern Dewberry, Olallieberry, Oregon Evergreen Berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee Blackberry, Southern Dewberry, Tayberry, Youngberry, and Zarzamora.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora</i> spp.)	3.6 pt/A (1.8)	<p>Soil Application (band or via drip/micro-sprinkler irrigation) New Plantings: After initial at-planting application (Part 1), reapply once during a period favorable for root rot.</p> <p>Established Plantings: Before the plants start to grow in the spring, make a soil-directed application towards the base of the plant in a 3-ft band over the row or via the drip irrigation. One additional application may be made to coincide with the period most favorable for root rot development.</p> <p>LIBERTY MEFENOXAM 4SC will not revitalize plants showing moderate to severe root rot symptoms.</p> <p>Use LIBERTY MEFENOXAM 4SC in conjunction with good cultural practices to minimize disease.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.6 pt/A (equivalent to 1.8 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 7.2 pt/A/year (equivalent to 3.6 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 3.6 lb ai/A/year of soil-applied and 0.2 lb ai/A/year of foliar-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** use an adjuvant.
- Pre-harvest Interval (PHI): 45 days

Berry and Small Fruit, Crop Subgroup 13-07B Bushberry: Blueberries (High and Low Bush), Currants, Elderberry, Gooseberry, Highbush Cranberry, Lingonberry, Hybrids, cultivars, and varieties of these.

Additional berries subgroup: Aronia Berry, Highbush Blueberry, Lowbush Blueberry, Buffalo Currant, Chilean Guava, Black Currant, Red Currant, Elderberry, European Barberry, Gooseberry, Highbush Cranberry, Honeysuckle (Edible), Huckleberry, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, Sea Buckthorn.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Phytophthora</i> spp.)	3.6 pt/A (1.8)	<p>Soil Application (band or via drip/micro-sprinkler irrigation) New Plantings: After initial at-planting application (Part 1), reapply once during a period favorable for root rot.</p> <p>Established Plantings: Before the plants start to grow in the spring, make a soil-directed application towards the base of the plant in a 3-ft band over the row or via the drip irrigation. One additional application may be made to coincide with the period most favorable for root rot development.</p> <p>LIBERTY MEFENOXAM 4SC will not revitalize plants showing moderate to severe root rot symptoms.</p> <p>Use LIBERTY MEFENOXAM 4SC in conjunction with good cultural practices to minimize disease.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.6 pt/A (equivalent to 1.8 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications/A/year.
- Minimum application interval: 90 days
- Maximum Annual Application Rate: 7.2 pt/A/year (equivalent to 3.6 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 3.6 lb ai/A per crop of soil applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 0

Berry and Small Fruit, Subgroup 13-07E – Small fruit vine climbing, except grape[*]: Amur river grape, Gooseberry, Kiwifruit (Fuzzy and Hardy), Maypop, Schisandra berry, Including cultivars, varieties, and/or hybrids of these

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root and Crown Rot (<i>Pythium</i> and <i>Phytophthora</i> spp.)	5.6-11.2 fl oz/ 40 gal of water (0.175-0.35)	Soil Drench: Apply 1.0 qt of LIBERTY MEFENOXAM 4SC solution as a soil drench in a one square foot area around the base of each vine. At the labeled rate of 5.6-11.2 fl oz, this will apply 0.175-0.350 lb ai/A if the planting density is 160 vines per acre. Make the first application in the fall after harvest or in February or early March. Make a second application in spring or approximately 60 days after the February or March application.
	11.2 fl oz (0.35)	Banded Soil Application: Make up to five applications as a spray toward the soil in a 2- to 3-ft band on each side of the row. Begin applications in April and follow with two additional applications on a 30-day interval. Make the fourth application in September and the final application approximately 30 days later, which must be at least 7 days before harvest.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 11.2 fl oz/A (equivalent to 0.35 lb ai/A mefenoxam)
- **DO NOT** make more than 5 applications at the highest rate of 11.2 fl oz (0.35 lb ai)/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 3.5 pt/A/year (equivalent to 1.75 lb ai/A/year mefenoxam)
- **DO NOT** exceed 1.75 lb ai/A/year of soil-applied mefenoxam and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 7 day

[*Not for use in California EXCEPT on kiwifruit.]

Cacao[*]

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Black pod rot (<i>Phytophthora</i> spp.)	0.32 fl oz/A (0.01)	Foliar/pod spray: Apply in mixture with a copper fungicide, with first application prior to disease development. Continue on a 21- day interval, with a maximum of 4 applications. Make no more than two consecutive applications of LIBERTY MEFENOXAM 4SC or other Group 4 fungicide before alternating with a fungicide that is not in Group 4. Apply in sufficient volume to ensure complete coverage of the canopy and developing pods. [*Not for use in California.]

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.32 fl oz/A (equivalent to 0.01 lb ai/A mefenoxam)
- **DO NOT** make more than 4 applications/A/year.
- Minimum Application Interval: 21 days
- Maximum Annual Application: 1.28 fl oz/A/year (equivalent to 0.04 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.04 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
 - **DO NOT** apply more than 4 applications per year.
- Pre-Harvest Interval (PHI): 30 days

Carrots

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Cavity Spot Root Dieback (<i>Pythium</i> spp.)	0.25-1.0 pt/A (0.125-0.5)	<p>For post planting applications: Begin 28- 50 days after planting. Apply on a 14- to 21-day interval by chemigation, by ground equipment with a spray directed to the base of the plant, or shanked in with liquid fertilizer. All ground applications must be followed by irrigation by one inch of water to promote movement of material into the root zone.</p> <p>Directed spray (broadcast or band): Make up to 4 applications beginning 40-60 days after planting on a 14- to 21-day interval. Apply as a spray directed to base of plant. Use sufficient water to provide uniform coverage of soil.</p> <p>For banded applications, use a 7-inch band.</p> <p>Irrigation: Inject LIBERTY MEFENOXAM 4SC into the irrigation water.</p> <p>For best control of cavity spot, use a preventive disease control program that incorporates an at-planting or seed treatment use of LIBERTY MEFENOXAM 4SC or other EPA registered mefenoxam product followed by one or more additional applications.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the highest rate of 1.0 pt (0.5 lb ai)/A/year.
- **DO NOT** make more than 11 applications at the lowest rate of 0.25 pt (0.125 lb ai)/A/year.
- Minimum Application Interval: 14 days
- Maximum Annual Application: 2.8 pt/A/year (equivalent to 1.4 lb ai/A/year mefenoxam)
 - **DO NOT** exceed a total of 1.4 lb ai/A (2.8 pt/A) of mefenoxam- and metalaxyl-containing products.
 - **DO NOT** exceed the 0.65 lb ai/A (1.3 pt/A) of soil-applied and 0.75 lb ai/A (1.5 pt/A) per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** use a soil application if a seed treatment containing mefenoxam or metalaxyl is used.
- Pre-Harvest Interval (PHI): 7 days

For additional applications, see Carrots in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Citrus Fruit, Crop Group 10: Calamondin Citrus, Citron Citrus, Hybrids (chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sour and sweet), Pummelo, Satsuma, Mandarin

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Citrus Foot Rot Root Rot Trunk Canker Brown Rot Gummosis (<i>Phytophthora</i> spp.) NOTE: for best Phytophthora control, use a	Broadcast 2 pt/A (1 lb ai) Irrigation 0.5 pt/grove acre California only Broadcast 2-4 pt/A (1.0-2.0) Irrigation 0.5-1 pt/grove Acre (0.25-0.5)	<p>Citrus Resets or New Plantings: Timing: Make the first application at the time of planting. Make two or three applications per year (spring + summer, summer + fall, or spring + summer + fall).</p> <p>Application Method: Spray boom: Apply to soil beneath the tree canopy. If rain is not expected within 24 hours after application, sprinkler irrigate with ½ to 1 inch of water to move product into root zone.</p> <p>Irrigation: LIBERTY MEFENOXAM 4SC can be applied through irrigation water (micro-sprinkler or drip).</p>

combination of cultural practices, fungicides with differing modes of action, and resistant varieties.	1.0-1.5 fl oz/ 100 gal water	Water ring drench: Apply 5 gal of the mix around the base of each tree within the watering ring of resets or new plantings.
	Newly planted to 6 months 0.5 fl oz/20 trees Trees > 6 months 1.0-1.5 fl oz/20 trees	Individual Tree Treatment for Resets/New Plantings: Mix desired amount of LIBERTY MEFENOXAM 4SC in a water solution. Apply as a directed spray to individual trees (8-12 fl oz solution/tree) around the base of the tree and outwards to cover the fibrous root system. Follow with sprinkler irrigation to move product into the root zone. May be tank mixed with other approved pesticides.
	Broadcast 1 pt/A- 2.0 pt/A (0.5-1-0) Irrigation 0.5-1.0 pt/grove acre California only Broadcast 1.0 pt-6.0 pt/A (0.5-3.0)	Established Plantings: Timing: Begin LIBERTY MEFENOXAM 4SC applications during the spring root flush period. One or two additional applications may be made to coincide with flushes of root growth. Time applications as in the <i>Citrus Resets or New Plantings</i> sections above. Application Method: Spray Boom: Apply to soil beneath the tree canopy. If rain is not expected within 24 hours after application, sprinkler irrigate with 1/2 to 1 inch of water to move product into root zone. Irrigation: LIBERTY MEFENOXAM 4SC can be applied through irrigation water (micro-sprinkler or drip). Consult local extension bulletins for additional use directions.
	2 pt in 3 gal water (1.0)	Trunk Spray for Gummosis: Spray the trunks to thoroughly wet the cankers. Apply up to 3 times per year. In FL, add 2.0 pt to 10 gal of water.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 6 pt/A (equivalent to 3.0 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the highest rate of 6 pt (3.0 lb ai)/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 12 pt/A/year (equivalent to 6.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 6.0 lb ai/A per crop of mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply to bare roots.
- For resistance management, **DO NOT** apply to citrus in field or greenhouse nurseries.
- **DO NOT** make trunk gummosis sprays and soil applications to the same tree in the same cropping season.
- **DO NOT** apply rates higher than 2 pt/A to citrus resets or new plantings (less than 5 years old) in FL, PR or TX to prevent potential phytotoxicity.
- **DO NOT** use on the highly Phytophthora susceptible sweet orange rootstock in FL.
- **DO NOT** apply tank mixes of **LIBERTY MEFENOXAM 4SC** and residual herbicides to trees less than 3 years old. Apply the herbicide first; then wait 3-4 weeks to apply **LIBERTY MEFENOXAM 4SC**.
- Pre-harvest Interval (PHI): 0 days

Brassica (Cole) Leafy Vegetables, Crop Group 5 and Turnip Greens: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Mustard Greens, Turnip Greens (greens only), Hybrids, cultivars, and varieties of these.

Additional cole crops: Broccoli Raab (rapini), Cavalo Broccolo, Chinese Broccoli (gai lon), Chinese Cabbage, (bok choy and napa), Chinese Mustard Cabbage (gai choy), Kale, Kohlrabi, Mizuna, Mustard Spinach, and Rape Greens.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Downy Mildew (<i>Peronospora parasitica</i>)	0.125-0.25 pt/A (0.0625-0.125)	<p>Foliar spray (ground or air): LIBERTY MEFENOXAM 4SC must be used in a tank mix with other fungicides registered for control of downy mildew. Apply with the full label rate of the tank mix partner fungicide.</p> <p>Apply when conditions are favorable for disease, but before infection on a 14-day schedule.</p> <p>NOTE: Foliar applications to turnip plants may not be made to dual purpose turnip cultivars or varieties which produce a harvestable root.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.25 pt/A (equivalent to 0.125 lb ai/A mefenoxam)
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate:
 - Soil: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 8 applications at the highest rate of 0.25 pt (0.125lb ai)/A/year.
 - Foliar: 1.0/pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 4 applications at the highest rate of 0.25 pt (0.125lb ai)/A/year.
 - **DO NOT** exceed the equivalent of 1.0 lb ai/A per crop of soil-applied and 0.50 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply foliar sprays of **LIBERTY MEFENOXAM 4SC** without a labeled tank-mix partner.
- **DO NOT** apply the **LIBERTY MEFENOXAM 4SC** mixture in fields where downy mildew is already established.
- **DO NOT** apply to dual purpose turnip cultivars or varieties which produce a harvestable root.
- Pre-harvest Interval (PHI): 7 days

For additional applications, see Cole Crops in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications

Cranberries

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Phytophthora Root Rot (<i>Phytophthora</i> spp.)	1.0-1.75 pt/A (0.50-0.875)	Soil spray (broadcast): Apply 3 times by ground or chemigation equipment. Make the first application in the fall after harvest. Make the second application in the spring, and the final application up to, but no later than, 45 days before harvest.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 1.75 pt/A (equivalent to 0.875 lb ai/A mefenoxam) DO NOT make more than 3 applications at the highest rate of 1.75 pt (0.875 lb ai)/A/year. Minimum Application Interval: 90 days Maximum Annual Application Rate: 5.25 pt/A/year (equivalent to 2.625 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT exceed the equivalent of 2.65 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products. DO NOT apply by air. Pre-harvest Interval (PHI): 45 days 		

Cucurbit Vegetables, Crop Group 9: Cantaloupe, Cucumber, Honeydew, Pumpkin, Summer Squash, Crookneck squash, Scallop squash, Straightneck squash, Vegetable marrow, Zucchini, Winter Squash, Acorn squash, Butternut squash, Calabaza, Hubbard squash, Spaghetti squash, Watermelon, Hybrids, cultivars, and varieties of these.

Additional cucurbit crops: Chayote, Chinese Waxgourd, Citron Melon, Gherkin, Gourd, edible (hyotan, cucuzza, hechima, chinese okra), Momordica spp. (balsam apple, balsam pear, bitter melon, Chinese cucumber), and Muskmelons (casaba, crenshaw, golden pershaw, honey balls, mango, Persian, pineapple, Santa Claus, snake melons, true cantaloupe).

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Pythium</i> spp.)	0.25-0.4 pt/A (0.125-0.20)	Soil spray (directed): If soil applications of LIBERTY MEFENOXAM 4SC were made at planting, two additional applications at 20- to 30-day intervals may be made during the season.
Suppression: Phytophthora blight (<i>Phytophthora capsici</i>)		Direct the spray to the base of the plants and cover 6-8 inches of the soil on either side of the plants. Incorporate mechanically or sprinkler-irrigate to move the LIBERTY MEFENOXAM 4SC into the root zone. Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the labeled rates.
USE RESTRICTIONS <ul style="list-style-type: none"> Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. Maximum Single Application Rate: 0.4 pt/A (equivalent to 0.2 lb ai/A mefenoxam) Minimum Application Interval: 20 days Maximum Annual Application Rate: <ul style="list-style-type: none"> Soil: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT make more than 5 applications at the highest rate of 0.4 pt (0.20 lb ai)/A/year. Foliar: 0.8 pt/A/year (equivalent to 0.4 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> DO NOT make more than 2 applications at the highest rate of 0.4 pt (0.20 lb ai)/A/year. DO NOT exceed the equivalent of 1.0 lb ai/A per crop of soil-applied and 0.5 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products. Pre-harvest Interval (PHI): 5 days 		

For additional applications, see Cucurbits in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Fruiting Vegetables Crop Group 8, except Tomato: Eggplant, Groundcherry, Pepino, Pepper (bell, chili, cooking pepper, pimento, sweet), Tomatillo

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot (<i>Phytophthora capsici</i>)	1.0 pt/A (0.50)	<p>Banded spray: Make 2 post-directed applications at 30-day intervals following transplanting. Direct the spray to the base of the plants and cover 6-8 inches of the soil on either side of the plants. Incorporate mechanically or sprinkler-irrigate to move the LIBERTY MEFENOXAM 4SC into the root zone.</p> <p>Shank application: Apply in liquid fertilizer, shanked in as a banded treatment to either side of the plant.</p> <p>Injection (drip irrigation): Inject LIBERTY MEFENOXAM 4SC into the irrigation water at the labeled rates.</p> <p>May cause some yellowing of pepper leaves.</p> <p>Apply before the plants are infected to obtain satisfactory control. Plants already infected with <i>Phytophthora</i> cannot be cured with LIBERTY MEFENOXAM 4SC.</p> <p>The foliar blight phase of <i>Phytophthora</i> cannot be controlled with foliar applications of LIBERTY MEFENOXAM 4SC.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the rate of 1.0 pt (0.50 lb ai)/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 1.5 lb ai/A per crop of soil-applied mefenoxam-containing products and 0.5 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 7 days

For additional applications, see **Fruiting Vegetables in Part 1 of Directions for Use: Soil-Injected or Soil-Incorporated Applications.**

Herbs, Fresh and Dried, Herb Subgroup 19A: Basil, Chervil (dried), Chive Coriander (leaf), Cilantro (leaf), Dillweed, Lemongrass, Rosemary, Sage, Savory (Summer and Winter), Sweet Bay, Tarragon, Thyme

Additional herbs: Angelica, Balm, Borage, Burnet, Catnip, Chamomile, Chinese Chive, Clary, Costmary, Curry (leaf), Horehound, Hyssop, Lavender, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rue, Tansy, Wintergreen, Woodruff, and Wormwood.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.)	1.0-2.0 pt/A (0.50-1.0)	Banded spray: Apply as a basally directed spray at 28 days after planting or after the first cutting. Direct the spray toward the base of the plants and cover 6-8 inches on each side of the plants (12- to 16-inch band width/row).

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
- **DO NOT** make more than 4 applications at the lowest rate of 1.0 pt (0.50 lb ai)/A/year.
- Minimum Application Interval: 28 days
- Maximum Annual Application Rate: 4.0 pt/A/year (equivalent to 2.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 2.0 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 21 days

For additional applications, see Herbs in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Hops

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Downy Mildew (<i>Pseudoperonospora humuli</i>)	0.50 pt/A (0.25)	<p>Soil Application (drench or via drip/micro-sprinkler irrigation): Apply as a drench in water or liquid fertilizer to the soil over the crowns after pruning but before training when shoots are 6 inches or less. May also be applied via drip/micro- sprinkler irrigation.</p> <p>Foliar spray: At the first sign of a secondary infection (primary infection persists after the soil drench and/or there is evidence of foliar infection), apply in combination with copper fungicides. Apply by ground with a minimum of 50 gal of water per acre.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.5 pt/A (equivalent to 0.25 lb ai/A mefenoxam)
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate:
 - Soil: 0.5 pt/A/year (equivalent to 0.25 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 1 application/A/year.
 - Foliar: 1.0 pt/A/year foliar-applied (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 2 applications/A/year.
 - **DO NOT** exceed the equivalent of 0.25 lb ai/A per crop of soil-applied and 0.5 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply foliar sprays of **LIBERTY MEFENOXAM 4SC** without a copper fungicide registered for hops.
- Pre-harvest Interval (PHI): 45 days

Legume Vegetables, Succulent Shelled Pea and Bean: Broad Bean, Lima Bean, Cowpea, Blackeyed Pea, English Pea, Garden Pea, Pigeon Pea, Southern Pea

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Downy Mildew (<i>Phytophthora parasitica</i>)	0.125-0.2 pt/A (0.0625 - 0.1)	<p>Foliar spray (ground or air): LIBERTY MEFENOXAM 4SC must be used in a tank mix with other fungicides registered for control of downy mildew. Apply with the full label rate of the tank mix partner fungicide.</p> <p>Apply on a 14-day schedule when conditions are favorable for disease, but before infection.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.2 pt/A (equivalent to 0.1 lb ai/A mefenoxam)
- Minimum Application Interval: 14 days
- Maximum Annual Rate:
 - Soil: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 5 applications at the highest rate of 0.2 pt (0.1lb ai)/A/year.
 - Foliar: 0.8 pt/A/year (equivalent to 0.4 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 4 applications at the highest rate of 0.2 pt (0.1lb ai)/A/year.
 - **DO NOT** exceed the equivalent of 0.5 lb ai/A per crop of soil-applied and 0.4 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- For use only on succulent beans east of the Mississippi River.
- Pre-harvest Interval (PHI): 3 days

Lettuce Head and Leaf

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Downy Mildew (<i>Bremia lactucae</i>)	0.125-0.25 pt/A (0.0625-0.125)	<p>Foliar spray (ground or air): LIBERTY MEFENOXAM 4SC must be used in a tank mix with other fungicides registered for control of downy mildew. Apply with the full label rate of the tank mix partner fungicide.</p> <p>Apply when conditions are favorable for disease, but before infection on a 14-day schedule.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 0.25 pt/A (equivalent to 0.125 lb ai/A mefenoxam)
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate:
 - Soil: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 8 applications at the highest rate of 0.25 pt (0.125 lb ai)/A/year.
 - Foliar: 0.8 pt/A/year (equivalent to 0.4 lb ai/A/year mefenoxam)
 - **DO NOT** make more than 3 applications at the highest rate of 0.25 pt (0.125 lb ai)/A/year.
 - **DO NOT** exceed the equivalent of 1.0 lb ai/A per crop of soil-applied (pre-plant or at-planting) and 0.4 lb ai/A per crop of foliar applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply foliar sprays of **LIBERTY MEFENOXAM 4SC** without a labeled tank mix partner.
- **DO NOT** apply the **LIBERTY MEFENOXAM 4SC** mixture in fields where downy mildew is already established.
- **DO NOT** apply more than 4 foliar applications per crop.
- Pre-harvest Interval (PHI): 7 days. However, refer to the label of the tank mix partner and follow the more restrictive PHI.

For additional applications to Lettuce (Head and Leaf), see Leafy Vegetables (Except Brassica) in Part 1 of Directions for Use: Soil-Injected or Soil-Incorporated Applications.

Peanuts

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Pod Rot (<i>Pythium</i> spp.)	0.5-1.0 pt/A (0.25-0.50)	Apply at early pod set as a soil spray or at pegging as a foliar spray (overhead irrigation).

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application/A/year.
- Minimum Application Interval: NA
- Maximum Annual Application Rate: Foliar: 1.0 pt/A/year (equivalent to 0.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 0.125 lb ai/A/year soil-applied and 0.5 lb ai/A/year foliar-applied of mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): NA

For additional applications, see Peanuts in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Potatoes

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Storage Rots Pythium leak (<i>Pythium</i> spp.) Pink rot (<i>Phytophthora erythroseptica</i>)	3.2 fl oz/A (0.1)	Make the first application after tuber initiation, when the largest tubers are the size in diameter of a nickel. This period coincides with the initiation of flowering. Make a second application 14 days later. If the field has a history of storage rot problems, make a third application 14 days after the second application. If foliar diseases are expected, then a tank mix with a labeled rate of mancozeb or chlorothalonil products is required. Use in conjunction with other management practices including crop rotation and resistant varieties.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.2 fl oz/A (equivalent to 0.1 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate: 9.6 fl oz/A/year (equivalent to 0.3 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 0.34 lb ai/A per season of soil-applied and 0.4 lb ai/A per season of foliar-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 14 days

Stone Fruits, Crop Group 12: Apricot, Cherry (sweet and tart), Nectarine, Peach, Plum (Chickasaw, Damson, Japanese), Plumcot, Prune (fresh), Hybrids, cultivars, and varieties of these.

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot Collar Rot Root Rot (<i>Phytophthora</i> spp.)	4.0 pt/A (2.0) Or 1.5 fl oz/ 1,000 sq ft	Soil spray (broadcast, band or irrigation): Apply to soil beneath the tree canopy or apply through irrigation water (micro-sprinkler or drip) to cover the root zone two weeks after planting (new plantings) or in the spring before growth begins (established plantings). Additional applications may be made at 2- to 3-month intervals, depending on disease pressure. Make up to 3 applications per year. Apply before symptoms appear. LIBERTY MEFENOXAM 4SC will not revitalize trees showing moderate to severe disease symptoms. For intense plantings (2-3 times the normal planting rate), apply on a per area basis (1,000 sq ft).

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 4.0 pt/A (equivalent to 2.0 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 60 days
- Maximum Annual Application Rate: 12.0 pt/A/year (equivalent to 6 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 6.0 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply more than 3 applications per year.
- **DO NOT** concentrate spray around tree trunks.
- **DO NOT** apply to trees under stress.
- In CA, **DO NOT** apply to newly planted trees within 45 days of planting. On some varieties, chlorosis may occur on leaf margins.
- **DO NOT** graze livestock in treated areas.
- **DO NOT** graze or feed cover crops grown in treated orchards.
- Pre-harvest Interval (PHI): 0

Strawberries

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Red Stele (<i>Phytophthora fragariae</i>) Vascular Collapse (<i>P. cactorum</i>) Leather Rot (<i>P. cactorum</i>)	1.0 pt/A (0.50)	<p>Annual Plantings: Apply up to 3 times per crop by ground (banded), drip, or overhead chemigation. Make first application after transplanting. Make the second application 30 days before the beginning of harvest or at fruit set. Apply the third application during harvest, depending on disease pressure and environmental conditions.</p> <p>Established Plantings: Apply up to 3 times per crop by ground (banded), drip, or overhead chemigation. Make first application in the spring after the ground thaws and before first bloom. Make a second application after harvest in the fall. For control of leather rot, make an additional application during the growing season at fruit set.</p> <p>If applying through drip irrigation, calculate the rate as a band application with a band width equal to the root zone width. Inject LIBERTY MEFENOXAM 4SC into the irrigation water.</p> <p>LIBERTY MEFENOXAM 4SC may be applied the day of harvest.</p>
USE RESTRICTIONS <ul style="list-style-type: none"> • Refer to PRODUCT USE RESTRICTIONS for additional product use restrictions. • Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam) • DO NOT make more than 3 applications/A/year. • Minimum Application Interval: 30 days • Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam) <ul style="list-style-type: none"> ○ DO NOT exceed the equivalent of 1.5 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products. • DO NOT make more than 3 applications per crop. • Pre-harvest Interval (PHI): 0 days 		

Strawberry plant production in field nurseries

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Red Stele (<i>Phytophthora fragariae</i>) Vascular Collapse (<i>P. cactorum</i>) Leather Rot (<i>P. cactorum</i>)	1.0 pt/A (0.50)	<p>Field Nurseries: Apply to young plants in field nurseries by ground, drip, or overhead chemigation.</p> <p>If applying through drip irrigation, calculate the rate as a band application with a band width equal to the root zone width. Inject LIBERTY MEFENOXAM 4SC into the irrigation water.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A/mefenoxam)
- **DO NOT** make more than 2 applications/A/year.
- Minimum Application Interval: 30 days
- Maximum Annual Application Rate: 2.0 pt/A/year (equivalent to 1.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 1.0 lb ai/A per plant production cycle of mefenoxam- and metalaxyl-containing products.
- **DO NOT** use in strawberry field nurseries east of the Rocky Mountains.
- Pre-harvest Interval (PHI): NA

Tobacco

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Blue Mold (<i>Peronospora tabacina</i>)	0.50 pt/A (0.25) For no-till tobacco: 0.50-1.0 pt/A (0.25-0.50)	Soil spray (band): If LIBERTY MEFENOXAM 4SC was applied prior to transplanting, make an additional application at lay-by or the last cultivation. Position the nozzles so the spray is deposited under the plants and is covered by the soil in cultivation.
Black Shank (<i>Phytophthora parasitica</i> var. <i>nicotianae</i>)	1.0-2.0 pt/A (0.50-1.0) For no-till tobacco: 0.50-1.0 pt/A (0.25-0.50)	<p>Soil Spray (broadcast or band): Position the nozzles so the spray is deposited under the plants and covered with soil by the cultivator. Use the higher specified rate if the disease epidemic is expected to be severe. Make one application at lay-by or make one application at the first cultivation and a second application at lay-by.</p> <p>Apply preventively for effective black shank control. If black shank is expected early in the season, apply as near as possible to transplanting followed by sequential applications.</p> <p>Consult local extension bulletins for additional use directions.</p> <p>For best results against black shank, use tobacco varieties that have high resistance to black shank and use crop rotation.</p> <p>In fields with a history of severe black shank, use the highest rate and plant a variety resistant to the race of <i>Phytophthora</i> present (Burley L8 hybrids are resistant to only <i>Phytophthora</i> Race 0).</p> <p>Failure to adequately control nematodes in fields treated with LIBERTY MEFENOXAM 4SC may result in poor control of black shank.</p>

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 2.0 pt/A (equivalent to 1.0 lb ai/A mefenoxam)
- **DO NOT** make more than 1 application at the highest rate of 2.0 pt (1.0 lb ai)/A/year.
- **DO NOT** make more than 6 applications at the lowest rate of 0.50 pt (0.25 lb ai)/A/year.
- Minimum Application Interval: 14 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
- **DO NOT** exceed the equivalent of 1.5 lb ai/A per crop of mefenoxam- and metalaxyl-containing products.
- **DO NOT** use in high black shank areas on highly susceptible flue-cured varieties.
- **DO NOT** use **LIBERTY MEFENOXAM 4SC** for black shank control in PA.
- Pre-harvest Interval (PHI): NA

For additional applications, see Tobacco in Part 1 of Directions for Use: Soil-Injected or Soil-Incorporated Applications.

Tomato

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Fruit rot (<i>Phytophthora</i> spp.)	1.0 pt/A (0.50)	Soil spray (broadcast or band) or soil injection: Apply as a directed soil surface spray under the vines or injected into the beds with water or liquid fertilizer.
Root rot (<i>Pythium</i> spp.)		Make application 4-6 weeks after planting. If needed, make a second application up to 1 week before harvest.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.0 pt/A (equivalent to 0.5 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 28 days
- Maximum Annual Application Rate: 3.0 pt/A/year (equivalent to 1.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 1.5 lb ai/A per crop of soil-applied and 0.5 lb ai/A per crop of foliar-applied mefenoxam- and metalaxyl-containing products.
- Pre-harvest Interval (PHI): 7 days

For additional applications, see Tomato in Part 1 of Directions for Use: Soil-Injected or Soil- Incorporated Applications.

Tree Nuts, Crop Group 14-12: African nut-tree, Almond, Beechnut, Brazil nut, Brazilian Pine, Bunya, Bur Oak, Butternut, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Ginkgo, Guiana Chestnut, Hazelnut (Filbert), Heartnut, Hickory nut, Japanese horsechestnut, Macadamia Nut, Mongongo nut, Monkey pot, Monkey puzzle nut, Okari nut, Pachira nut, Peach palm nut, Pecan, Pequi Nut, Pili Nut, Pine nut, Pistachio, Sapucaia nut, Tropical almond, Walnut, black, Walnut, English, Yellowhorn

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot Collar Rot Root Rot (<i>Phytophthora</i> spp.)	4.0 pt/A (2.0) Or 1.5 fl oz/ 1,000 sq ft	Soil spray (broadcast, band or irrigation): Apply to soil beneath the tree canopy or apply through irrigation water (micro-sprinkler or drip) to cover the root zone two weeks after planting (new plantings) or in the spring before growth begins (established plantings). Additional applications may be made at 2-to 3-month intervals, depending on disease pressure. Make up to 3 applications per year. Apply before symptoms appear. LIBERTY MEFENOXAM 4SC will not revitalize trees showing moderate to severe disease symptoms. For intense plantings (2-3 times the normal planting rate), apply on a per area basis (1,000 sq ft).

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 4.0 pt/A (equivalent to 2.0 lb ai/A mefenoxam)
- **DO NOT** make more than 3 applications/A/year.
- Minimum Application Interval: 60 days
- Maximum Annual Application Rate: 12.0 pt/A/year (equivalent to 6.0 lb ai/A/year mefenoxam)
 - **DO NOT** exceed the equivalent of 6.0 lb ai/A per crop of soil-applied mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply more than 3 applications per year.
- **DO NOT** concentrate spray around tree trunks.
- **DO NOT** apply to trees under stress.

- In CA, **DO NOT** apply to newly planted trees within 45 days of planting. On some varieties, chlorosis may occur on leaf margins.
- **DO NOT** graze livestock in treated areas.
- **DO NOT** graze or feed cover crops grown in treated orchards.
- Pre-harvest Interval (PHI): 30 days

Tropical and Subtropical Fruit – Medium to Large Fruit, Smooth and Rough or Hairy Peel: Canistel, Mango, Papaya, Black Sapote, Star Apple, Mamey Sapote, Sapodilla

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Damping Off (<i>Pythium</i> spp.) Root Rot (<i>Phytophthora</i> spp.)	1.5-3.0 pt/A (0.75-1.5)	Soil Drench: Add LIBERTY MEFENOXAM 4SC to water or a liquid fertilizer solution. Apply this solution to the base of the plants to deliver approximately 5 gallons per plant. Two applications may be made per growing season. Make the first application at transplanting or in the spring at root growth flush. Make a second application at least 1 day before harvest.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.0 pt/A (equivalent to 1.5 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the highest rate of 3.0 pt (1.5 lb ai)/A/year.
- **DO NOT** make more than 4 applications at the lowest rate of 1.5 pt (0.75 lb ai)/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 6.0 pt/A/year (equivalent to 3.0 lb ai/A/year mefenoxam)
- **DO NOT** exceed 3.0 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply more than 2 applications per year.
- Pre-harvest Interval (PHI): 1 day

Tropical and Subtropical Fruit – Medium to Large Fruit, Rough or Hairy Peel: Sugar Apple, Atemoya, Custard Apple, Cherimoya, Illama, Soursop, Biriba

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Crown Rot Damping Off Pythium Root (<i>Pythium</i> spp.) Phytophthora Root and Crown Rot (<i>Phytophthora</i> spp.) Starfruit only: Crown Rot Root Rot (<i>Phytophthora</i> spp.) Crown Rot Pythium Root Rot (<i>Pythium</i> spp.)	1.5-3.0 pt/A (0.75-1.5)	Soil Drench: Add LIBERTY MEFENOXAM 4SC to water or a liquid fertilizer solution. Make applications to the soil surface under the canopy of the trees delivering approximately 5 gal/plant. Make one application in the spring when root growth begins. Make a second application in the fall.

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 3.0 pt/A (equivalent to 1.5 lb ai/A mefenoxam)
- **DO NOT** make more than 2 applications at the highest rate of 3.0 pt (1.5 lb ai)/A/year.
- **DO NOT** make more than 4 applications at the lowest rate of 1.5 pt (0.75 lb ai)/A/year.
- Minimum Application Interval: 90 days
- Maximum Annual Application Rate: 6.0 pt/A/year (equivalent to 3.0 lb ai/A/year mefenoxam)
- **DO NOT** exceed 3.0 lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- **DO NOT** apply more than 2 applications per year.
- Pre-harvest Interval (PHI): 30 days

Wasabi (greenhouse)*]

Target Diseases (Pathogen)	Product Use Rate (lb ai)	Application Directions
Root Rot (<i>Pythium</i> spp.)	0.5-1.5 pt/A (0.25-0.75) Equivalent to 0.0012 - 0.014 lb ai/ft ³	Greenhouse foliar mist application only: Apply only via automatic foliar misting system in 400-1500 gal/A. Make the first application prior to disease onset and subsequent applications on a 7-day interval. DO NOT apply more than 2 sequential applications of LIBERTY MEFENOXAM 4SC or other Group 4 fungicides before alternating with a fungicide that is not in Group 4. [*Not for use in California]

USE RESTRICTIONS

- Refer to **PRODUCT USE RESTRICTIONS** for additional product use restrictions.
- Maximum Single Application Rate: 1.5 pt/A (equivalent to 0.75 lb ai/A mefenoxam)
- **DO NOT** make more than 6 applications at the highest rate of 1.5 pt (0.75 lb ai)/A/year.
- Minimum Application Interval: 7 days
- Maximum Annual Application: 9.0 pt/A (equivalent to 4.5 lb ai/A/year mefenoxam)
 - **DO NOT** exceed 4.5lb ai/A/year of mefenoxam- and metalaxyl-containing products.
- Applications may only be made via automatic foliar misting system. No workers or handlers may be present in the greenhouse during application.
- **DO NOT** apply more than 6 applications per year.
- Pre-Harvest Interval (PHI): 7 days
- Restricted-Entry Interval (REI): 48 hours

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the 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 Residential uses]

[Nonrefillable container. DO NOT reuse or refill this container. If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.]

[For Commercial Uses]

[For plastic containers ≤ 5 gallons: Nonrefillable Container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

[For plastic containers > 5 gallons: Nonrefillable container. 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 ¼ full with water. Recap 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.]

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of LIBERTY CROP PROTECTION LLC or Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW all such risks shall be assumed by Buyer and User and Buyer and User agree to hold LIBERTY CROP PROTECTION LLC and Seller harmless for any claims relating to such factors.

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