BioWorks®
How You Grow Matters™





Protocol for Low Volume Sprayers

CEASE® Technical Bulletin

Based on a naturally occurring, patented strain of *Bacillus subtilis* (strain QST 713), CEASE® can be used both in hydraulic and low volume sprayers on greenhouse crops and vegetables grown under cover. It is a broad spectrum biofungicide targeting common fungal and bacterial diseases such as *Botrytis*, *Pseudomonas*, *Xanthomonas*, *Erwinia*, powdery mildew, leaf spots, blights and speck, anthracnose and rust. CEASE applications should begin prior to expected disease incidence. Use a spray volume adequate to assure wetting the surfaces of the leaves and stems of the plants. Spray applications should be continued every 1-2 weeks during periods of disease pressure.

Key Features:

- Proven efficacy against BOTH fungal and bacterial pathogens
- Excellent safety - 4-hr REI; 0-day pre-harvest interval
- Leaves virtually NO residues on plant foliage or flowers
- Performs as well as copper-based products, without phytotoxicity or residues
- Does not produce phytotoxicity when used with growth regulators
- Controls disease using multi-site modes of action for resistance management
- Safe for beneficial insects and bees
- Compatible for tank-mixing / rotating with many other registered products
- OMRI Listed and NOP-approved for use in organic production
- Excellent for sustainability or IPM programs

When using low volume mist sprayers, use the following guidelines:

- When using these alternative methods of application, the recommended concentration is 45 oz /2.5 gal of water on 10,000 sq ft
- Low volume sprayers have a high degree of efficiency in coverage of leaf and stem surfaces. DO NOT apply to the point of runoff to avoid waste of material dripping of off the plant.
- When using a low volume sprayer, first determine the proper application volume by spraying the material in a small area. Test the application on a few plants to assure proper coverage.

When using ultra low volume applicators, use the following guidelines:

- Properly calibrate fogger regularly.
- Ensure that nozzles are clean and not worn so that correct droplet size is applied. Smaller droplets are more desirable in a fogging situation.
- Ensure that all the material is well mixed so application will be uniform throughout.
- Use the maximum amount of water that a given machine allows to help ensure material is completely mixed with water.
- Consider using a carrier solution appropriate to the type of fogger equipment. This will improve atomization and cause less large droplets to fall out in front of the fogger providing more uniform coverage.
- Keep nozzle output from directly contacting the plants. Nozzles should not be aimed directly at crop.

(See rates on next page.)

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LOW VOLUME SPRAYERS:

Cold-Fogger

(Use at least 2 gallons of spray per 10,000 sq ft)

Rate = 45 oz per 2.5 gallons of water on 10,000 sq ft

For smaller equipment, use 4.5 oz per liter of water per 1,000 sq ft

NOTE: BioWorks recommends 2 gallons of water to ensure solubility.

ULTRA LOW VOLUME SPRAYERS:

Auto-Fogger, Pulse-Fogger & ESS

(Use at least 2 gallons of spray per 10,000 sq ft)

Rate = 45 oz per 2.5 gallons of water on 10,000 sq ft

For smaller equipment, use 4.5 oz per liter of water per 1,000 sq ft

NOTE: Mix the solution well to ensure solubility of the active ingredient. Fill water tank. May use a compatible carrier solution if desired.

RECOMMENDATIONS:

The Dramm owner's manual states that you should never use less than 0.5 gallons of water in their foggers no matter how small an area is being fogged to ensure optimum performance of their machines.