



BioWorks®

DIVISION OF BIOFIRST GROUP



ABOVE AND BEYOND IS WHERE WE BEGIN

TECHNICAL BULLETIN: PRINCIPLE™ WP

USE IN LOW VOLUME APPLICATORS

PRINCIPLE WP is a biological insecticide based on the active ingredient *Beauveria bassiana* that controls many of the most destructive crop pests including thrips, whiteflies and aphids. PRINCIPLE WP is built on twenty years of successful implementation into grower systems. Combined with BioWorks' expertise, PRINCIPLE WP provides growers with strong efficacy without the risks of insecticide resistance.



KEY FEATURES:

- + Easy-to-use WP formulation built on 20 years of experience
- + Complex mode of action provides control without the risk of resistance
- + Provides insect control comparable to conventional insecticide programs
- + Excellent compatibility with conventional pesticides and other biological products
- + OMRI-approved
- + Exempt from residue tolerance

WHEN USING IN ULTRA-LOW VOLUME SPRAYERS AND FOGGERS:

- + Follow equipment manufacturer instructions and properly calibrate equipment regularly
- + Ensure that nozzles are clean and not worn out so that correct droplet size is applied; small droplet size is desirable to achieve optimum coverage and reduced residue
- + With most LVM equipment, keep nozzle output from directly contacting plants; nozzles should not be aimed directly at crop
- + Pre-mix/pre-slurry PRINCIPLE WP in a separate container to ensure full suspension of the active ingredient
- + Pour pre-mix through sieve into partially filled spray tank with agitator running to ensure that PRINCIPLE WP stays in suspension
- + Consider using the maximum amount of water that a given machine allows to help ensure material is completely mixed and to improve coverage
- + Water sensitive paper can be used to check for efficient coverage of leaf and stem surfaces; place in several areas around the greenhouse as well as in the plant canopy
- + Unlike hydraulic or low volume mist spraying, there should be no visible leaf wetness when using fogging equipment



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PRINCIPLE WP LOW VOLUME APPLICATOR RATES: COLDFOGGER™, AUTO-FOG™, TRACFOG™, BIO PULSFOG®

PROGRAMS	HYDRAULIC RATE/100 GAL/ACRE	RATE/10,000 SQ FT (DRAMM LOW 20%) ^{1,3}	RATE/10,000 SQ FT (DRAMM LOW 35%) ^{1,3}	MINIMUM AMT. OF SOLUTION AUTO-FOG, TRACFOG, BIO PULSFOG ²	MINIMUM AMT. OF SOLUTION COLDFOGGER
PRINCIPLE WP low rate	16 oz	3.2 oz	5.6 oz	4 liters	10 liters
PRINCIPLE WP high rate	32 oz	6.4 oz	11.2 oz	4 liters	10 liters

¹ Dramm rate adjustments: Low (20%) is used for plugs and other propagation or small plants. High (35%) is used for normal finished or dense crops. These are used to bring the per acre rate down to a rate per 10,000 sq ft.

² More solution may be used. Solution includes carrier + water. The Dramm owner's manual states that you should never use less than 2 liters of water in their foggers no matter how small an area is being fogged to ensure optimum performance of their machines. We do not recommend going below the amounts stated above. Please refer to Dramm User's Manuals for complete equipment operating instructions.

³ Area fogging rate gives the appropriate rate of PRINCIPLE WP which is based on area of coverage

NOTES:

For PRINCIPLE WP, it is recommended that the solution volume never be less than 4 liters (carrier + water) to provide better dilution and reduce the potential for nozzle clogging.

Refer to product labels for complete application details. To find the ideal rate for you, please try our rate calculator at <https://bioworksinc.com/ask-us/rate-calculator/>. Additional technical information is available at bioworksinc.com or from your BioWorks technical sales representative. PRINCIPLE WP is a registered trademark of BioWorks, Inc. Always read and follow label directions.

GOING ABOVE AND BEYOND

At BioWorks, we not only help eradicate harmful diseases and pests that threaten your crops, but we design and support integrated plant health management programs. And because we know how quickly some diseases can work, we respond to any questions you might have in just 48 hours. So you can get back to the business of successful growing.



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BIOWORKS

100 Rawson Road • Suite 205

Victor, NY 14564

expert@bioworksinc.com

bioworksinc.com • 800.877.9443