



Natural Growing Through Biology

A Biological Farm Management System (BFMS®) Guide For Grapes

Application	Products	Rate	Area/Acre	Frequency
Root Dip	¹ RhizoGenesis™ or MycoGenesis™ Pepzyme G™ or NutraNeed™	1 lb 12.5 oz	Mix in 20 gallons of water (We recommend soaking roots in solution for up to 12 hours before planting. Do not use mixed product after 24 hours.)	At planting
Spring Soil Preparation With Biologicals	MycoGenesis™ or OP-8™ NutraNeed™	At label rate 113 grams 12.5 oz	Per surface acre	Once in the Spring
Soil Treatment After Planting	² Spectrum™ Product or OP-8™ NutraNeed™	At label rate 113 grams 12.5 oz	Fertigated or band application (2-4 feet on each side of the row)	Monthly
Foliar Treatments	³ Micro 5000™ ³ PZ1000™ ³ NFBoost™	75-150 grams 75-150 grams 25 grams	Per surface acre at pre-bloom (dormant or bud swell)	Rotate foliar nutrition every 14-21 days throughout growing season.
Fall Soil Preparation With Biologicals	⁴ BioDigester™ NutraNeed™	50 grams 12.5 oz	Fertigated or band application (2-4 feet on each side of the row)	Post-harvest

1. Add ½ pound of microbial product and 6 oz of enzyme to 10 gallons of water, stir to mix, and dip plants. Continue to add water and mix in remaining product as you continue dipping. For optimum results, let plant roots soak in solution for 12 hours. Do not use mixed product after 24 hours.
2. Spectrum™ product (DS, NFB, PSB, or Spectrum™) or OP-8™ based on information from soil and plant sap report and plant need. Apply at label rate per acre and 12.5 oz. of NutraNeed™ per acre. Each application should be used with an enzyme product and a carbon-based product (i.e. fish hydrolysates, humates, kelp, or other carbon-based fertilizer).
3. Plant sap analysis is highly recommended with foliar nutrition. For organic use Micro 5000 Organic™ and NFBoost™ only.
4. Only if residue or debris is present to help in digestion.

BEST PRACTICES AND BASIC USAGE RECOMMENDATIONS:

- To avoid plugging: If agitation systems are not mechanical, premix products before adding to tank. 50-mesh screen is recommended.
- Apply foliar sprays in early morning or evening when temperature is below 80°F.
- Do not combine microbial products with antibiotics or materials that contain chlorides, bromine, fluorine, or elemental copper. Use in separate applications at least 2 days apart.
- These products are meant to be used together as a package application and are designed to work in conjunction with each other.
- Some growers have reported cutting back on their nitrogen inputs by 40% while using these products after achieving mineral balance.
- During times and stages of high plant stress (pest pressure, disease, etc.) the recommended rates can be doubled, but do NOT exceed a 2X increase as it may result in leaf burn.
- Non-chlorinated or R/O water is best with a pH between 6.0-6.4 if possible. Water over 105°F. can cause shock and harm to beneficial microbes and enzymes.
- Continuous agitation is recommended to keep materials suspended, vortex well and often when mixing and during use.
- Microbial products should be used within 24 hours after adding water.
- Always perform a jar test to ensure that there is no precipitant formation before the first application of any product or combination of products.
- Thoroughly clean and neutralize all tanks, lines, containers and sprayers prior to mixing products, especially after use of any toxic chemicals.

This protocol is intended as support for your fertility program and not as a replacement. It is designed for simplicity and compatibility with almost any fertilizer program. Our specific recommendations to you may vary depending on your unique situation.