

BenePhite® Expand

ADVANCED PHOSPHITE BIONUTRITION

Premium phosphite and multinutrient product built with complexed organic matter (COM) and nutrient chelators that provide the plant with activity that is synergistic with the phosphites and nutrients in this formulation, and also mitigates the drawbacks commonly seen with phosphites. The enhanced nutrient mobility supports key physiological processes in the plant while improving tolerance to and recovery from stresses.

0-19-0

GUARANTEED ANALYSIS

Total Phosphoric Acid (P ₂ O ₅)	19.0%
Cobalt (Co)	0.05%
Iron (Fe)	0.75%
Manganese (Mn)	1.75%
Molybdenum (Mo)	0.10%
Zinc (Zn)	4.0%

Derived from: Phosphorous acid, zinc phosphite, manganese phosphite, iron phosphite, cobalt nitrate, and sodium molybdate.

Net Weight

10.6 lbs per Gallon @ 68° F

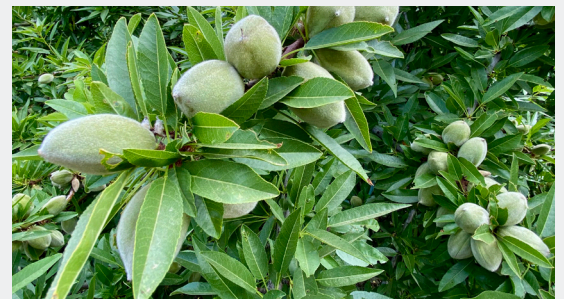


Increases Canopy Function for Increased Yields

- Highly mobile nutrients deliver a more robust canopy for a larger crop
- Zinc, iron, and manganese support healthy leaf development
- Increased leaf size and shoot length improve the photosynthetic capacity of the canopy
- Increased photosynthate production directed to growing points such as roots, leaves, and fruit
- Molybdenum and cobalt improve fruit set and reduce senescence

Advantages of BenePhite® Expand

- Supports the process of ATP production to compensate for the energy drain common from multiple phosphite applications
- Reduces risk of leaf burn commonly found with other phosphite products
- Supports stomatal function during heat and drought stress to maintain efficient photosynthetic processes
- Enables mobility of applied nutrients in both the xylem and phloem
- Supports root growth for increased nutrient and water use efficiency (NUE and WUE)



Optimizes Canopy Function



Improves Root Health



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NUTRITIONAL
INFORMATION

Iron

Iron is essential in the plant's formation of chlorophyll which gives the plant its healthy green color and is essential for photosynthesis. Iron is the key to electron transfer in both photosynthesis and respiration. Iron is also an important cofactor in other enzyme driven processes like protein synthesis.

Manganese

Manganese plays a key role in chlorophyll production. Because it is used to split the water molecule during photosynthesis it is essential for plant health. Manganese also activates more enzymes than any other nutrient. It is especially important in the production of proteins that are part of the plant's natural defenses against disease.

Molybdenum

Molybdenum is important for phosphate metabolism. Molybdenum is also required by plants for the utilization of nitrogen. Nitrate-nitrogen is converted to amino acids by the nitrate reductase enzyme; this enzyme requires molybdenum.

Zinc

Zinc is an essential constituent of several important enzyme systems and affects many metabolic processes in the plant. Zinc controls the synthesis of the important plant growth regulator indoleacetic acid, which is crucial for active growing tips and leaf enlargement. When zinc is deficient, terminal growth areas are the first areas to be impacted. Zinc is crucial for stress mitigation and a key part of most antioxidant systems in the plant. It combines with copper to create the plant's most effective response to abiotic stresses. Zinc is also critical in bud differentiation, making it important for long-term productivity in vineyard and orchard crops.

Cobalt

Cobalt is not an essential plant nutrient but is beneficial in small doses. It aids in stimulating plant growth, reducing leaf senescence, and may block ethylene formation.

RATES, TIMING, &
DIRECTIONS FOR USE

Foliar Applications

For all crops apply 1-8 pints/acre. Repeat every 2-3 weeks as needed.

For best results DO NOT spray in the heat of the day when temperatures are above 85 degrees or when the plant is under moisture stress. Apply with sufficient water for complete coverage. DO NOT spray to the point of runoff. Use as fine of a spray mist as possible. Allow 3-4 hours after application before sprinkler irrigation to avoid washing the product off. DO NOT APPLY with citrus oils at over 0.5% of a tank mix, or petroleum oils over 1% of tank mix. DO NOT APPLY with copper-based fungicides.

Soil Applications

For all crops apply 2-6 quarts/acre. Repeat every 2-3 weeks as needed.

For best results, use watered-in applications. May be applied via an irrigation system or prior to irrigation. Apply enough water to move the product into the area of active rooting, but not excessive amounts that may leach. Use the higher label rates with surface and flood irrigation. Do not apply directly onto the seed.

BenePhite Expand is compatible with many fertilizers and pesticides, however, a jar test is recommended when considering blends. The product's low pH should be considered when making blends. Recommended mixing sequence: water, adjuvants, pesticides, Valent BioSciences nutrient products, other fertilizers, balance of water while agitating. Ensure agitation is available when mixing with calcium fertilizers. Consult your manufacturing representative for questions.

See product label for complete Directions For Use.