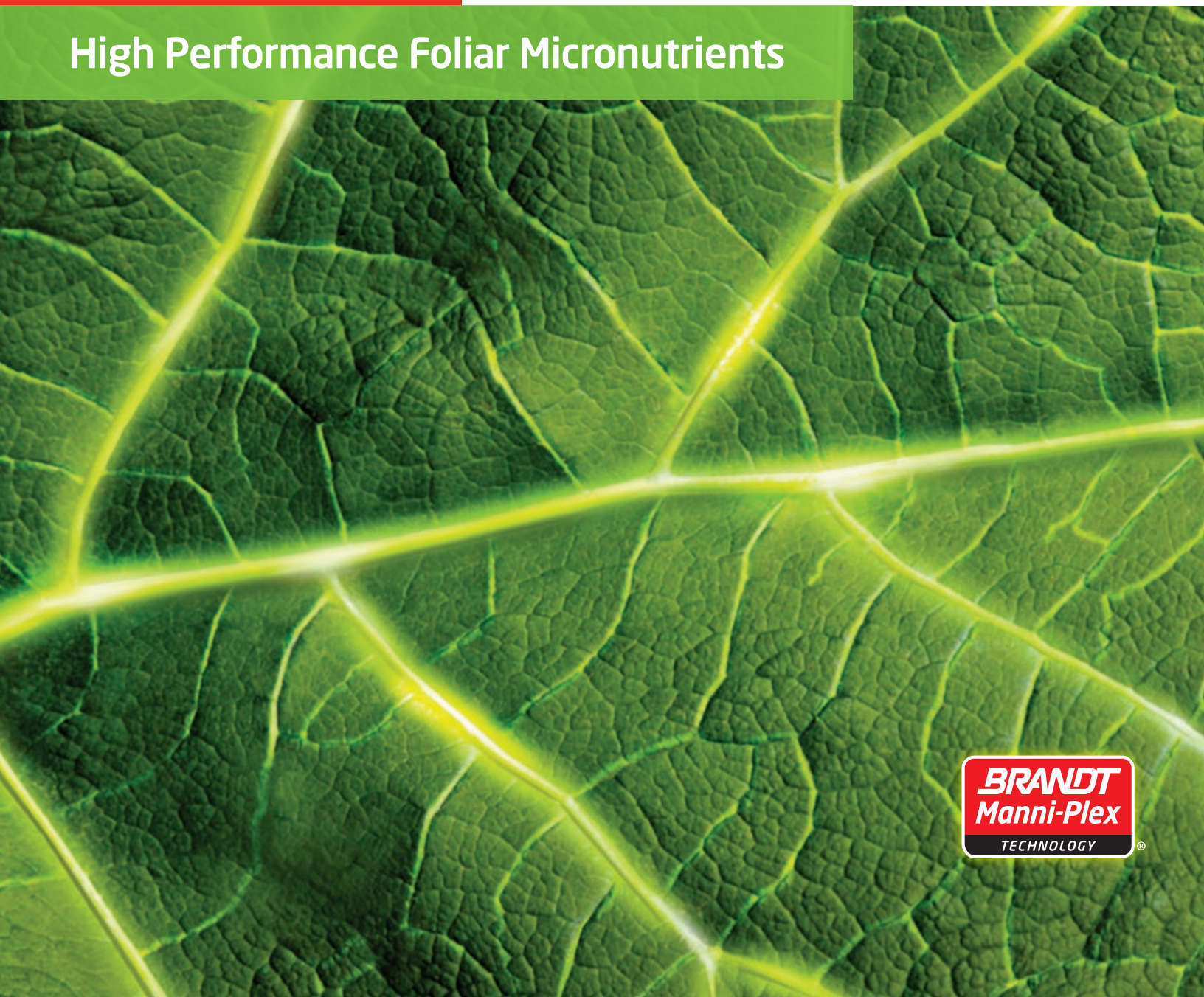
BRANDT®

Manni-Plex®

High Performance Foliar Micronutrients



Manni-Plex

High Performance Foliar Micronutrients

Benefits of Foliar Feeding

Foliar feeding is one of the most efficient ways to supply nutrition to crops during critical growth stages. Applying nutrition to plant leaves allows the plant to immediately absorb nutrients, which promotes better plant uptake, better overall plant health and increased yield potential.

Key Advantages of Manni-Plex Nutrients

The proprietary technology used in MANNI-PLEX is designed to enhance the absorption of nutrients through the leaf and enhance nutrient mobility and translocation through the plant phloem to plant growing points.

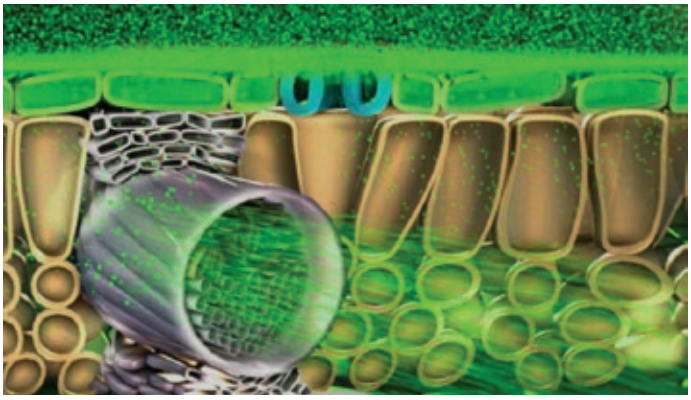
- Supplies readily available nutrients to the plant that are immediately available for uptake
- More efficient than other nutrient forms
- Low molecular weight and shape allows more nutrients to penetrate plant leaves and translocate to growing points
- Nutrients move freely and easily through the plant's phloem
- Proprietary formulation coats leaves and adheres to the leaf surface, making it available to the plant longer
- Ready-to-use liquid formulation can be tank mixed with most fungicides, insecticides and PGR's

Manni-Plex Delivers the Right Nutrients, in the Right Form Which Allows for Maximum Plant Benefit

Unlike other nutrient forms, the nutrient elements in MANNI-PLEX formulations are complexed with sugar alcohol. The proprietary complex has a very small molecular size and shape, which allows MANNI-PLEX to enter the plant through small stomata and transcuticular pores on the leaf surface and helps get more nutrients into the plant.

Once MANNI-PLEX nutrients are inside the plant, they move quickly and freely through the phloem to plant growth areas. This allows the plant to fully utilize the applied nutrients, which results in improved plant health and crop production quality.

The correlation of sugar alcohol complexes and nutrient mobility within plants has been validated in University studies. Research showed that plants that were rich in sugar alcohol complexes, such as mannitol, had better distribution of nutrients such as boron from leaves through the phloem and a higher accumulation in fruit tissues. UC Davis.



The molecular shape and structure of MANNI-PLEX foliar nutrients allows the plant to quickly intake nutrients through the leaf and transport them through the phloem to plant growing points.

How Are Manni-Plex Foliar Nutrients Different from Other Liquid Nutrients?

Not all liquid products are suitable for foliar application and being a liquid product does not necessarily ensure entry into the plant. MANNI-PLEX products were designed specifically for foliar uptake. They target the leaf as the nutrient entry point and target the phloem as the nutrient transport pathway.

The small molecular size and shape of MANNI-PLEX ensures that plant uptake and translocation is maximized. In contrast, many other liquid fertilizers have a large molecular size and weight which makes foliar nutrient delivery very difficult. These type of liquid fertilizers are better suited for soil nutrient uptake through the plant xylem.

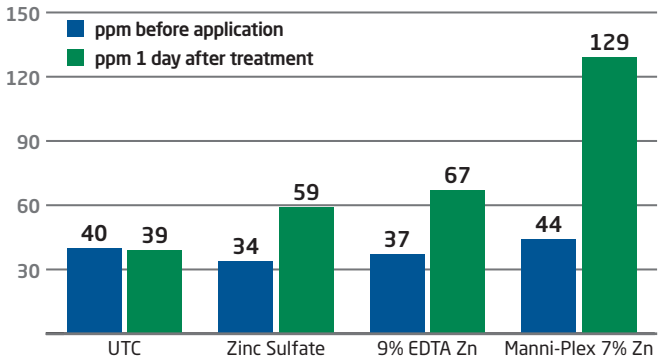
Manni-Plex's Low Molecular Weight Gets More Nutrients into Plant Growing Points

Nutritional Source	Molecular weight
Manni-Plex	**182**
Fulvic Acid	1000
Lignosulfonates	5000

Tissue Test: Manni-Plex Nutrient Mobility vs. Other Nutrient Forms

Sweet Cherries

CA, 2017 (Zn ppm). Manni-Plex Zn (2 qt/ac), all treatments included elemental Zinc (0.36 lb/ac).



Treated Plant (Center) Shows Manni-Plex Zn Efficacy

- Increased flowering
- Increased shoot & tissue growth
- Improved plant stand & vigor
- Healthy root mass

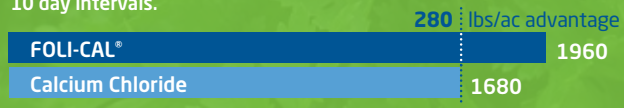
Manni-Plex Delivers Consistent, Reliable Results

- Stronger, healthier plants
- Enhanced flowering & fruiting
- Larger, more uniform fruit
- Enhanced fruit quality & color
- Enhanced yield

Field Tested: Manni-Plex Improves Quality, Size and Yield

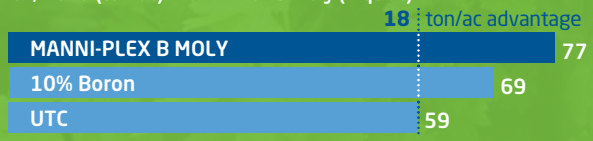
Celery

FL, 2010 (lbs/ac). 5 applications (1 qt/ac) of Foli-Cal were made in 10 day intervals.



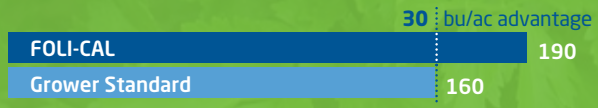
Processing Tomatoes

CA, 2015 (ton/ac). Manni-Plex B Moly (1 qt/ac).



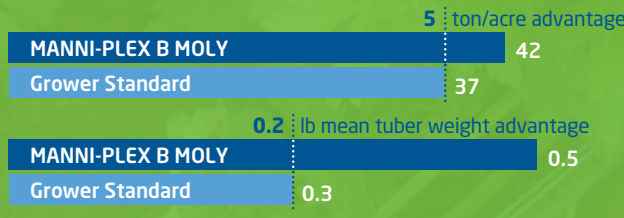
Snap Beans

FL, 2010 (bu/ac). Foli-Cal, Manni-Plex for Beans applied at bloom (1 qt/ac). Manni-Plex K applied one week before harvest (2 qt/ac).



Russet Potatoes

WA, 2015. Manni-Plex B Moly (2 qt/ac) applied at tuber stage. BRANDT Smart Trio (2 qt/ac) was added at 2 week intervals at bulk stage.



Russet Potatoes, 2015

Manni-Plex Formulations

Foli-Cal®	5.0% N, 10.0% Ca
Manni-Plex B Moly	5.0% N, 3.3% B, 0.5% Mo
Manni-Plex Cal-B	7.0% Ca, 1.0% B
Manni-Plex Cal-Mag	7.0% N, 5.3% Ca, 2.6% Mg
Manni-Plex Fe	5.0% N, 5.0% Fe
Manni-Plex for Beans	2.0% N, 0.2% B, 0.3% Fe, 3.2% Mn, 0.01% Mo, 2.1% Zn
Manni-Plex for Citrus	5.0% N, 0.25% B, 1.0% Fe, 2.5% Mn, 2.0% Zn
Manni-Plex for Corn	3.0% N, 0.5% Mg, 0.2% B, 0.5% Cu, 0.9% Mn, 4.7% Zn
Manni-Plex for Papaya	5.0% N, 1.0% Cu, 0.5% Fe, 2.0% Mn, 3.0% Zn
Manni-Plex for Pecans	5.0% N, 1.0% Cu, 0.5% Fe, 2.0% Mn, 3.0% Zn
Manni-Plex for Small Grains	2.0% N, 0.5% B, 2.0% Cu, 1.5% Mn, 1.5% Zn
Manni-Plex for Tree Nuts	5.0% N, 2.0% Mg, 0.2% B, 2.0% Cu, 3.0% Zn
Manni-Plex for Vegetables	5.0% N, 1.8% Mg, 0.4% B, 1.25% Fe, 0.9% Mn, 0.9% Zn
Manni-Plex K	20.0% K_2O
Manni-Plex Mg	5.0% N, 4.0% Mg
Manni-Plex Mn	7.0% N, 5.0% Mn
Manni-Plex Mo	8.0% Mo
Manni-Plex Ni	7.0% N, 5.0% Ni
Manni-Plex Zn	3.0% N, 7.0% Zn
Manni-Plex Cal Zn	6.0% N, 6.0% Ca, 3.0% Zn
N-Boron®	5.0% N, 3.3% Ca

For more information email info@brandt.co or call:
+1 217 547 5840 (BRANDT global)
+34 954 196 230 (BRANDT Europe)

Brandt Consolidated, Inc.
www.brandt.co

BRANDT®

2019-06