

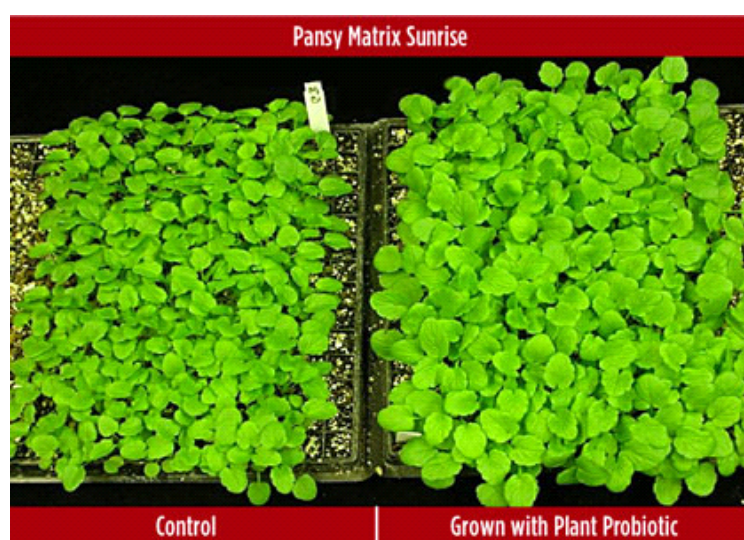
GROWERTALKS

Features

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Putting the “New” in Nutrition

Jennifer Zurko



Nature's Source “Boost Molecules” and Plant Probiotic

For the past six months, Nature's Source has been testing their plant food to learn more about their organic foundation. The research revealed some interesting findings—Nature's Source, in addition to the major and minor nutritional minerals, includes organic compounds, unlike other fertilizers. This research identified many key compounds, which they call “boost molecules,” that further promote and develop plant stimulation, growth

and overall plant health.

“Since Ball acquired the company roughly three ago, we have continued to not only improve our product quality overall, but we also wanted to better understand the reasons for the benefits,” explained Chance Finch, GM of Ball DPF, the maker of Nature's Source. “We deliver the necessary major and minor elements as in most fertilizers—the main difference is our organic compounds we derive from our Oilseed Extract technology.”

Chance said that they've always known about the benefits Nature's Source provides, like greener, more colorful plants; denser, fuller plants with stronger stems; and more flowering/fruiting. But now they can clearly pinpoint the compounds (i.e., amino acids, etc.) contributing to the positive plant responses.

The reason for the additional testing was because Nature's Source has recently entered into the agriculture market, which requires more evidence and facts to technically educate and explain how Nature's Source works for Specialty Ag.

The major standard compounds in Nature's Source are Nitrogen, Phosphorus and Potassium, but these

boost molecules found in the formulation do even more to grow a stronger plant with increased vigor and improved post-harvest:

- **Aspartic Acid**—Significantly improves nutrient acquisition; increases root branching and root hair development
- **Alanine**—An amino acid that operates in anaerobic conditions; helps plants deal with flood and nitrogen-limiting conditions
- **Glutamic Acid**—Fundamental metabolite in the formation of vegetable tissue and chlorophyll synthesis
- **Glycine**—Plant growth regulator to slow maturation process, temporarily suppressing ethylene production **Methionine**—Established precursor of ethylene provides a positive effect on plant growth; documented yield increases
- **Proline**—Protects membranes and proteins against adverse effects from high salts and temperature extremes, increasing plants' ability to deal with temperature stress
- **Phenylalaine**—Starting compound for flavonoid biosynthesis impacting flavor; key component to antioxidant production
- **Silicon**—Promotes disease and insect resistance, cell structure fortification

The benefits to these boost molecules, says Chance, are many. Better stress tolerance and root structure, more intense color and toned growth with improved shippability and shelf life allow you to see the effects of these compounds through all levels of the supply chain.

"We pack a nutritional punch in a single product delivery system, which not only feeds the plant, but the soil," said Chance.

And speaking of feeding the soil, Nature's Source also has a new product for 2014 called Nature's Source Plant Probiotic. A unique complex of beneficial microorganisms, the Plant Probiotic promotes establishment and enhances the growth of crops in all types of soils and growing media. Beneficial microbe populations are essential to creating the ideal soil environment for healthy plant growth.

"Since our plant food is a natural source of nutrition with an available carbon source, we can also feed the soil [with] existing, naturally occurring soil organisms, as well as those intentionally added," said Chance. "The combination of our Plant Food and Plant Probiotic is an ideal marriage for the soil and the plant."

Nature's Source Plant Probiotic is a water-soluble powder comprised of 10 biological compounds to include various Bacillus strains, Trichoderma and Streptomyces, and is formulated to reestablish beneficial microbial populations that provide the soil with the necessary components to promote healthy growth and reduce plant stress.

Benefits of Nature's Source Plant Probiotic include:

- Overall healthier plants—strengthens plants' natural immunity
- Aids in nutrient breakdown, availability and absorption; reduces nutrient leaching
- Improves soil structure
- Promotes faster, stronger rooting
- Reduces planting/transplant shock (better plant establishment)

- Easy to use and environmentally beneficial
- Increases resistance to environmental stress

Osmocote Bloom

Everris has been working on the development of controlled release fertilizers specifically designed for greenhouse crops. Osmocote Bloom is the first product to be introduced in this category and it's adapted for use in small containers at relatively low rates. Osmocote Bloom is 100% coated and it contains N-P-K, magnesium plus micronutrients. The average prill diameter is about 1/5 the size of a standard Osmocote prill. This smaller size provides better uniformity and even distribution of nutrition in smaller containers, optimizing plant utilization. Bloom can be mixed into the growing media and, depending on rate, can be combined with a water-soluble program or used as the sole nutrient source.

A recent trial at a commercial grower yielded excellent results with a fall pansy crop. Bloom was incorporated into the growing media at a low rate of 3 lbs./cu. yard and compared to a constant liquid feed water-soluble fertilizer program. The grower reported back some very positive results: bigger plants, 15% to 20% more blooms, at least a 25% reduction in production time and a significant savings in the total fertilizer cost.

Key features of Bloom include: good economy, consistent nutrient delivery, low impact on root zone EC and pH, excellent crop growth, reduced leaching of nutrients and possible post-production benefits.

SUPERthrive—Now with kelp

After extensive scientific testing, Vitamin Institute has enhanced its popular SUPERthrive formula with the addition of kelp to offer even more increased productivity. Although the color and odor are slightly different from what long-time customers have experienced, the directions remain the same: ~ 1/4 tsp. per gallon of water; ~ 3 oz. per 100 gallons.

A primary growers' tool since 1939, SUPERthrive replenishes the soil to facilitate absorption by the roots to nourish and encourage the natural building blocks that plants make themselves under optimum conditions. It maximizes potential by quickly building a strong root base and reducing transplant shock. SUPERthrive also supports the need of growers to be economical with time and money, and promotes swift and robust greenhouse production.

SUPERthrive's non-toxic vitamin solution is successful for all methods of watering—irrigation, drip and foliar spraying. It's well-suited to greenhouse production and management, as well as hydro-seeding and hydroponics.

Jack's Boosted Base FeED 18-2-18 and 15-2-20 Spring Pansy FeED

Research at the JR PETERS Laboratory, as well feedback from growers, showed that when fertilizing at lower nitrogen rates, additional micronutrient amendments were often necessary. That's when they developed Jack's Boosted Base FeED 18-2-18.

“Boosted Base was designed for growers who want to feed at a lower rate on a constant basis, but it includes the extra microbes so they don’t have to add them later,” said Dr. Cari Peters, VP of JR Peters. “It’s a nice, complete micronutrient package.”

An ideal product for those who fertilize at lower parts per million Nitrogen (100 to 150 ppm) as a constant liquid program, other features include:

- Elevated micronutrients to combat low feed rate deficiencies of today’s newest varieties
- Reduces the need for extra micronutrient additions
- Technical grade raw materials and chelates in a true 100% soluble and available for the plant
- Enhanced with the Jack’s FeED blend of iron chelates designed to keep iron available over a broad range of media pH

Also new for JR Peters is their 15-2-20 Spring Pansy FeED, which was specifically designed for spring pansy production, but it can also be used for vinca, salvia and other iron-inefficient spring plants.

The proprietary blend of macro, secondary and trace elements is designed to optimize nutrient delivery to your colder-grown seed and plug grown crops. The Nitrogen source is mostly Nitrate-nitrogen based (84%).

- Low phosphorus will keep plants compact, control stretch and reduce wasted P runoff
- Combines 3.5% Calcium and 1.75% Magnesium, as well as elevated Boron, Iron and Manganese specific for spring pansy production
- Contains JR Peters exclusive FeED chelating system, which is a blend of high-quality Iron chelates that keeps iron available to the plant even if the pH rises during the crop cycle

There is also the Fall Pansy FeED 17-3-19 for pansy production in late summer and early fall. **GT**