
Ag BioTech
INCORPORATED
Providing
Natural Biostimulants, Fertilizers &
Plant Growth Regulators Worldwide

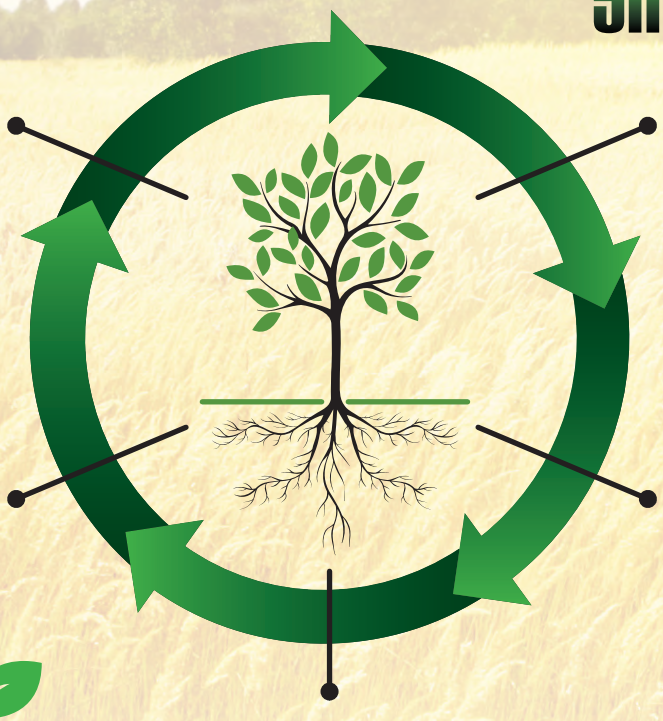
Welcome to Ag BioTech, Inc.

Established in 1992, Ag BioTech, Inc. was one of the first companies to introduce biostimulants to agriculture. We supply natural plant growth regulators, biostimulants, microbial seed and soil inoculants, and fertilizers, while researching cutting edge tools for agriculture. Our company combines the best conventional and organic inputs to provide sustainable solutions to farmers worldwide.

This hybrid approach works to increase plant and soil health in the field, while maximizing the uptake of nutrients for the crops. This results in enhanced yield and quality of the crops grown, while reducing chemical and environmental stress. We currently supply products such as BioShot, Bio Seed, and more. Our product formulation and selection process is built around the notion that active agents must work synergistically to contribute toward the efficacy of each product.

For more information about our product offerings please contact us at **info@agbioinc** or visit **www.agbioinc.com**.

Our Symbiotic Cycle



Assimilation
- Increased levels of nutrients, carbohydrates, and amino acids in plant tissues
- Conversion of these building blocks into new growth

Bio Shot Application
- Increased chlorophyll content
- Increased rate of CO2 fixation and in specific activity of RuBisCO + PEP
- Accelerated rate of carbohydrate and amino acid production

Nutrient Availability
- Abundance of nutrients available in soil solution
- Expanded root network facilitates nutrient and water access

Microbial Population Growth
- Increased rhizosphere exudation feeds established beneficials
- Stimulation of microbial colonies, accelerating population growth

Bio Seed Activation
- N fixation & organic matter mineralization
- P & K solubilization to plant available forms
- Colonization and expansion of root hairs

Bio Seed™

An All-Natural Inoculant

Improve Efficiency • Increase Yields
Improve Quality • Increase Profits

Plants don't eat, they drink!

Bio Seed is a new, organic seed treatment designed to inoculate your crops with beneficial bacteria and fungi. This consortium is not crop-specific, and promotes your soil health from the start. The bacterial and fungal colonies in Bio Seed all have multiple functions to improve nutrient availability by releasing nutrients from soils and granular fertilizers. Bio Seed is composed of a rhizosphere-competent consortium that will grow with your crop's root structure, and support a healthy soil ecosystem in the long term while increasing yields immediately.

How Bio Seed works

This product is designed to:

- Fix atmospheric nitrogen for plant use
- Mineralize nitrogen from organic matter
- Solubilize phosphorus from soil
- Mobilize potassium for easier plant uptake
- Solubilize silica in soil
- Expand the root zone for increased nutrient and water uptake

All strains in Bio Seed are Gram-positive, facultative strains, so even if there are cold, wet conditions after planting, the microbes will survive and thrive!

Guaranteed Analysis:

Paenibacillus azotofixans	$1x10^8$ CFU/g
Bacillus megaterium	$1x10^8$ CFU/g
Bacillus mucilaginosus	$1x10^8$ CFU/g
Bacillus subtilis	$1x10^8$ CFU/g
Trichoderma harzianum	$1x10^8$ CFU/g

Bio Shot™

The next generation of biostimulants.

With it's 10X concentration, Bio Shot delivers the active agents to the spray tank without all the water. Easy to use, compatible with most agrochemicals and cultural practices, Bio Shot eliminates the need for extra application costs while boosting crop yield and quality. With it's low per acre cost, Bio Shot is an economical input for the sustainable intensification of any agricultural system.

How Bio Shot works

Bio Shot improves the photosynthetic capacity of the leaf tissues by increasing chloroplast development and speeding up the respiration process to increase carbohydrate and amino acid production by the plant. These building blocks are used by the plant for a variety of functions throughout the growth cycle. This also increases the amount of root exudation by the plant, which stimulates beneficial soil micro organisms that contribute to nitrogen fixation, phosphate release, and potassium mobility.

Designed with Growers in Mind

Bio Shot features low transportation costs, greater ease in handling, less waste to recycle, and smaller storage space. Coupled with unmatched performance, Bio Shot is truly a 'Best in Class' biostimulant.

What to expect when you use Bio Shot and Bio Seed: higher chlorophyll concentrations combined with increased respiration rates, more plentiful root exudates, and higher levels of activity in the rhizosphere. These benefits lead to the end result of increased yields and quality, and better storability and shelf life for fruits and vegetables.

General Recommendations – Row Crops

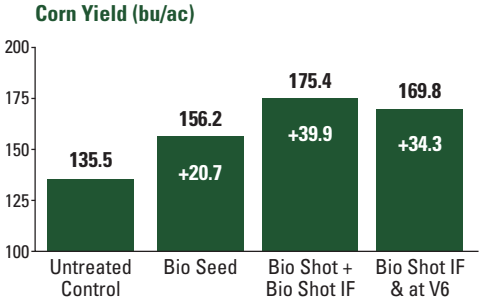
Bio Seed can be used in one of two ways: as an in furrow application or as a seed treatment.

In furrow application: Apply 50 grams/acre* mixed with fertilizer, biostimulant, liquid fish, or other liquid. May be combined with insecticides and many fungicides: low compatibility with chlorothalonyl (Bravo) and diphenoconazole (Score) fungicides, avoid applying these in the same crop season as Bio Seed. Bio Seed must come in contact with the seed and is not to be placed outside the seed row.

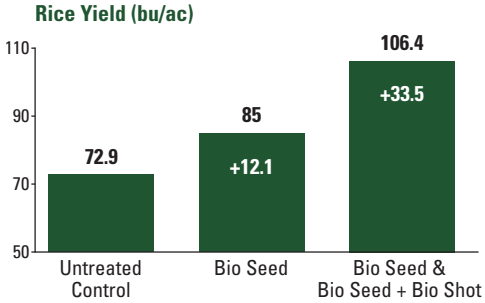
Seed treatment: Add enough water to make a slurry and apply at the rate of 0.3% of seed weight.

Bio Shot can be placed in furrow or broadcast sprayed post emergence at the rate of 1.35 ounces (40 ml)/acre, and can be mixed with herbicides, fungicides, and insecticides. For planter applications Bio Shot should come in contact with the seed and is not to be placed outside the seed row.

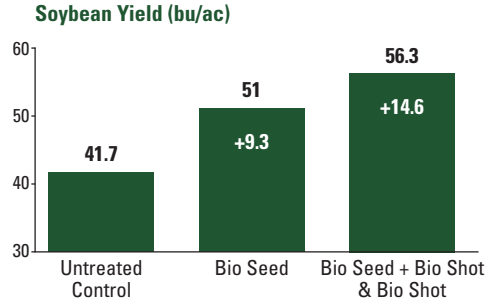
CORN TRIALS *by Agricenter International in Memphis, TN show a 20.7 bushels/acre increase over control strips, when treated with Bio Seed as a seed treatement. Bio Seed + Bio Shot, as in-furrow treatment, yielded a 39.9 bushels/acre increase. Bio Shot, as in-furrow treatment, followed by a V6 foliar spray, yielded a 34.3 bushels/acre increase.*



RICE TRIALS *from Agricenter International, Memphis, TN, in which Bio Seed was applied as a seed treatment, Bio Seed + Bio Shot as in-furrow treatment, and Bio Shot as a foliar treatment twice after planting at 28 and 58 days (pre-flood and flag leaf).*



This ***SOYBEAN TRIAL*** *conducted by Agricenter International in Memphis, TN featured Bio Seed applied as an inoculant on soybeans as a single treatment, and Bio Seed + Bio Shot applied in-furrow, and a follow-up of Bio Shot foliar at 35 days after planting. Both showed statistically significant increases in yield and crop biomass compared to the untreated control.*



General Recommendations - Tree Fruit Crops

Bio Seed Bio Seed can be used in one of three ways: as a root dip, as a drench, or through drip irrigation.

Root dip for new plantings: Add 100 grams per 50 gallons of water and may be combined with insecticides and many fungicides: low compatibility with chlorothalonyl (Bravo) and diphenoconazole (Score) fungicides, avoid applying these in the same crop season as Bio Seed.

As a drench: Add 100 grams to enough water to treat one acre.

Through drip irrigation: 100 grams per acre to the drip fertigation tank.

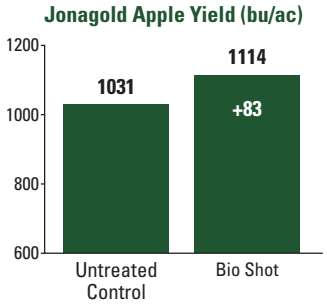
Bio Shot is used as a foliar spray early in the season, at early bloom, and 2-3 times during fruit development at the rate of 2 ounces (60 ml)/acre. Post season applications are recommended for early harvested fruits such as cherries, peaches, and heavily cropped apple varieties.

Testimonials

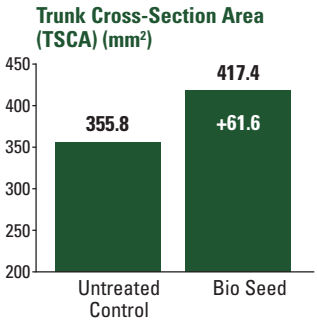
With over 25 years experience, we are among the leading experts in biostimulants. This is what our customers are saying.

> *"In both research trials and widespread commercial use, we have found Bio Shot biostimulant to be a very cost-effective tool for helping our fruitgrower clients to increase fruit soluble solid levels(BRIX), improve return bloom and increase long-term yields".*
> *-Jeff Alicandro, agrassistance, North Rose, NY*

APPLE TRIALS *from agr.assistance in Wayne County, NY, Bio Shot was applied at 2oz/acre to Jonagold apples 5 times throughout the course of the season, starting at May 10th. The treated trees were full bearing at an age of 10+ years, and their apples showed an 8.1% increase in yields per acre, with a 0.53% increase in brix, and a 2.85% increase in return bloom the following season.*



ALMOND TRIALS *in Arbuckle, CA showed the efficacy of a root balls dip in 50 grams/acre prior to planting in January. By July, the treated trees had a 17.3% increase in trunk diameter compared to the untreated control.*



General Recommendations – Vegetables

Bio Seed can be used in one of three ways: as a root dip, in transplant water, or as a post plant drench.

Root dip: Add 100 grams per 50 gallons of water. Can be mixed with insecticides and many fungicides: low compatibility with chlorothalonyl (Bravo) and diphenoconazole (Score) fungicides, avoid applying these in the same crop season as Bio Seed.

Transplant water/post plant drench: Add 100 grams per acre through the transplanter or apply as a drench post planting.

Bio Shot can be used in two ways: in root dip/transplant water/post plant drench, and as a foliar spray.

Root dip/transplant water/post plant drench: Add 2 ounces (60 ml)/acre to the transplant solution.

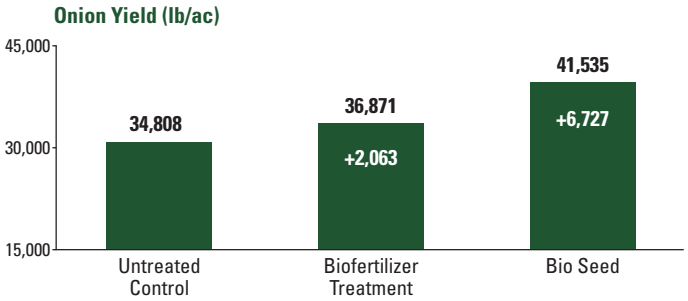
Foliar application for flowering crops: Apply 2 ounces (60 ml)/acre at early bloom, fruit set, and 1-2 applications during fruit maturation.

Foliar application for vegetative crops: Apply 2 ounces (60 ml)/acre post emergence/post transplanting and every 3-4 weeks thereafter.

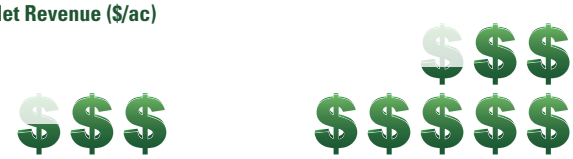
TOMATOES IN SALINAS, CALIFORNIA

Fungicide Seed Treatment	Fungicide Seed Treatment + Growth Promoter	Bio Seed 0.1%	Bio Seed 0.2%

ONION TRIALS *conducted in Leon Guanajuato, Mexico, 2017-2018, comparing Bio Seed to a competitor's biofertilizer product. Bio Seed was applied once, at the base of the plant after transplanting, at 50 grams per acre, while the competitor utilized four applications of 200 grams/acre, throughout the growing season.*

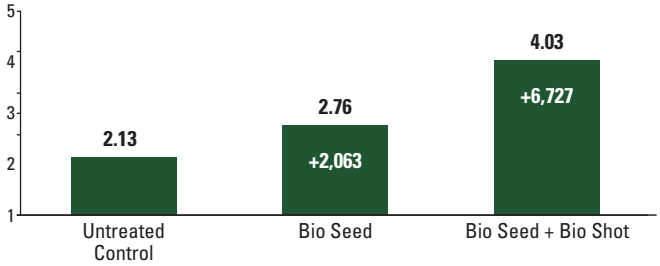


Net Revenue ($/ac)



+ $256 with Biofertilizer **+ $721 with Bio Seed**

TOMATO TRIALS *conducted by Agricenter International, in Memphis, TN, 2018 with Bio Seed 50 g/ac. in drench at planting and as drip at 30 DAP and Bio Seed 50 g/acre + Bio Shot 40 ml/acre in drench, followed by Bio Shot 40 ml/acre sprays at early bloom, fruit set and 1st picking.*



Net Revenue ($/ac)

+ $478 with Bio Seed **+ $1,478 with Bio Seed +Bio Shot**

General Recommendations – Sweet Potato, Peanuts, Hemp & Cotton

Bio Shot can be placed in furrow or broadcast sprayed post emergence at the rate of 1.35 ounces (40ml)/acre, and can be mixed with herbicides, fungicides, and insecticides. For planter applications Bio Shot should come in contact with the seed and is not to be placed outside the seed row.

Bio Seed can be used in one of two ways: as an in furrow application or as a seed treatment.

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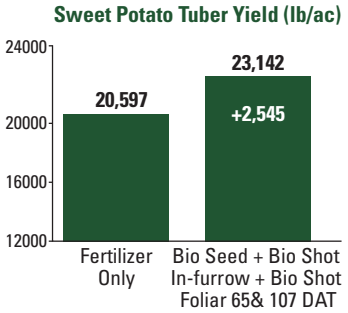
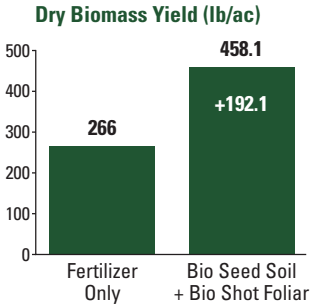
Seed treatment: Add enough water to make a slurry and apply at the rate of 0.3% of seed weight.

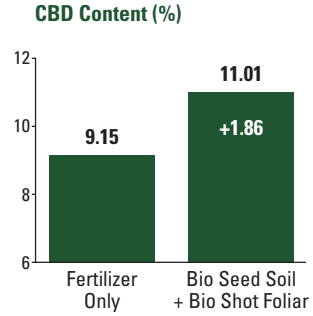
SWEET POTATO TRIALS *by Agricenter International, Memphis, TN, showed a 2,545 lb/acre yield increase with Bio Shot and Bio Seed.*

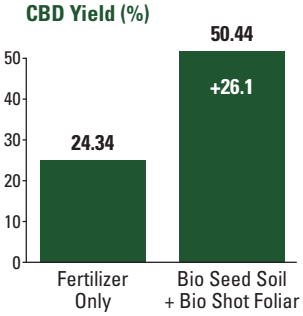


HEMP TRIALS *In both photos, Bio Seed + Bio Shot treatments are shown on the right. Plants have increased crop height and chlorophyll density. Bio Seed + Bio Shot treated hemp shows better root development and Trichoderma mycelium colonization.*

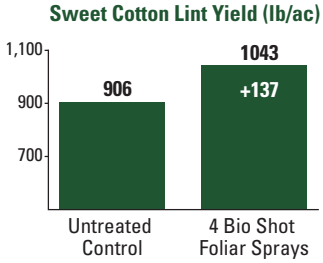
Control | Bio Seed + Bio Shot



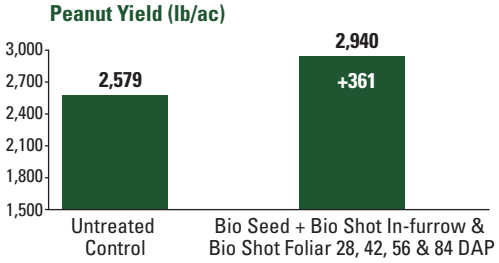




COTTON TRIALS *by Agricenter International, Memphis, TN, showed a 15% lint yield increase after four Bio Shot applications at 35, 53, 76, and 100 days after planting.*



PEANUT TRIALS *by Agricenter International, Memphis, TN, showed a 361 lb/acre yield increase with an innoculation of Bio Seed and four applications of Bio Shot.*



Sustainability

At Ag BioTech, we feel a responsibility to do our best to take care of the world we live in. Our products reflect our vision of an industry not burdened with excessive plastics and cardboard packaging, but instead using highly-concentrated, low use rate products that can treat 10 times as much acreage as conventional bio-products. These products are designed for the sustainable intensification of agricultural systems worldwide, increasing yields and quality of crops grown while reducing single-use plastic waste, synthetic fertilizer requirements, and greenhouse gas emissions.

The effects of our products on a growing crop, from row crops to vegetables to orchards, also reflect our vision to care for the planet and the soil that we rely on so much. The increase of root growth and nutrient uptake are hallmarks of our product line. Increasing root production and microbial stimulation means a more complete uptake of nitrate and phosphate fertilizers once they are applied, reducing runoff into surface waters and leaching into the water table. Over time, our products will help to build up organic matter in the soil through increased root mass, root exudation, carbon sequestration, and enhanced microbial activity. This means more carbon taken out of the atmosphere and put into the soil, reducing the carbon footprint of any growers utilizing our product line.

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