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PRESS RELEASE



Successful Soybean Crop Trial in Japan Signals Good News for Farmers Entering Southern Hemisphere Growing Season

A recent report on the successful trial of bio-stimulants to improve soybean growth in Japan offers promising news for farmers entering the southern hemisphere growing season. Based on good results with SOIL-BAC and ORGANIC PLUS, farmers planting or nurturing young crops south of the equator or in moderate northern climates can turn to a broad range of Bionetix®



International bioaugmentation products and bio-stimulants to naturally promote healthier plants and a more productive crop yield.

Bionetix® biological products work by enhancing the soil with microorganisms and a variety of nutrients that naturally promote healthier plant growth and production. The microorganisms and nutrients are typically mixed with water and then sprayed onto the soil and/or plants. These

microorganisms and nutrients promote a healthy biomass in the soil and make important nutrients more readily available to plants.

Japanese Soybean Trial

This past summer, a soybean test field in Japan was treated with 1.3 liters of ORGANIC PLUS and 1 kg of SOIL-BAC per every 0.25 acres. The trial started in mid-June, and by August 30th, two and a half months later, the results were already pointing to the benefits of these bio-stimulants.



An excessive drought left soybeans in the untreated fields blighted and withered. Roughly 40% of the plants in these fields died, leading to a loss of approximately 7 acres of soybeans. In contrast, soybeans in the test zone treated with SOIL-BAC and ORGANIC PLUS did well and inexplicably did not wither in the same drought environment.



The germination rate of the soybeans was also extremely good despite abnormally high temperatures. Weed growth seemed to be suppressed, and the number of buds and nodes on soybeans in the treated field was higher than the control field. The farmer of the field that suffered the most serious replant failure had to discard 60% of the production amount and was very surprised

by the efficacy of SOIL-BAC and ORGANIC PLUS in such growing circumstances.

How the Bio-Stimulants Work

ORGANIC PLUS is an all-natural plant bio-stimulant that contains high concentrations of humic and fulvic acids, rhamnolipids (that can be added upon request), marine plants, and micronutrients that help to increase crop yield by performing the following functions:

- Fertilizing soil
- Enhancing seed germination
- Promoting plant health
- Chelating and colloidalizing fertilizers (promotes better nutrient uptake)
- Enhancing root formation
- Enhancing bacterial activity
- Improving water availability

ORGANIC PLUS SP
SOIL AMENDMENT

A HIGHLY EFFECTIVE ALL-NATURAL PLANT BIO-STIMULANT AND SOIL MICROBIAL ENHANCER WITH BIOFUNGICIDAL PROPERTIES

Contains high concentrations of humic and fulvic acids, thiaminibiotin, marine plants, and microorganisms.

BENEFITS OF USE:

- Increases crop yield
- Enhances seed germination
- Increases microbial activity
- Suppresses disease
- Chelates and colloidalizes fertilizers
- Enhances root formation
- Improves soil fertility
- Promotes plant nutrient uptake
- Destroys toxic chemicals

CASE STUDY

ORGANIC PLUS had about 100 times more applied to and below the leaves of standard plants and the plants were much healthier. The yield was on the top of the leaves almost off the standard. The standard yield exceeded expectations.

APPROVED FOR ORGANIC AGRICULTURE BY QUEBEC VMA (CCOV)

Specifications:

Appearance	White
Package	4kg, 25.7kg, 200.6kg
Stability	Max 180 days light
pH	4.5
Substrate Content	40% water, 60% dry matter
Storage and handling	See MSDS

GUARANTEED MINIMUM ANALYSIS

Total Nitrogen (N)	100%
Phosphorus (P2O5)	100%
Potassium (K2O)	100%
Calcium (Ca)	100%
Magnesium (Mg)	100%
Sulfur (S)	100%
Iron (Fe)	100%
Boron (B)	100%

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ORGANIC PLUS should be mixed with water at 85-100 ppm and used within 24 hours for best effectiveness. It should be sprayed onto the field to the point of saturation, especially during the early stages of plant growth.

SOIL-BAC is a bioaugmentation product that helps with the important goal of increasing active biomass in the soil to activate healthy plant growth. SOIL-BAC contains bacteria, nutrients, trace minerals, and vitamins that stimulate growth by increasing nutrient availability and absorption. Each component in this natural plant growth activator performs a specific function:

- Bacteria enhance plant growth, enhance seed germination, promote decomposition of organic matter and pesticide residues, compete with microorganisms that cause infections
- Fungi and amino acids produce natural growth hormones
- Fungi form symbiotic relationships with plant root systems and make nutrients more available
- Vitamins and folic acid provide catalysts for enzymes and enhance plant growth metabolism

SOIL-BAC PLANT GROWTH ACTIVATOR

SOIL-BAC IS DESIGNED TO INCREASE ACTIVE BIOMASS IN THE SOIL TO ENSURE HEALTHY TURF GROWTH

Contains bacteria, microbials, trace minerals and vitamins for plant growth stimulation.

BENEFITS OF USE:

- Promotes plant growth
- Increases nutrient availability
- Facilitates nutrient absorption
- Reduces likelihood of turf diseases

COMPONENTS AND THEIR BENEFITS

Component	Benefit
Bacteria	• Enhanced growth
Phenolic acids	• Disease suppression
Plant hormones	• Increase availability of water and nutrients
Microbials	• Increase nitrogen fixation
Fungi, amino acids	• Enhanced germination
Vitamins, folic acid	• Disease suppression
	• Production of natural growth hormones
Biochemicals	• Production of catalysts for enzymes
	• Enhanced growth metabolism
Essential nutrients	• Enhanced microbial and plant growth

Specifications:

Appearance	White
Package	50g, 250g, 1kg, 5kg, 25kg
Stability	Max 180 days light
pH	7.0
Substrate Content	30% water, 70% dry matter
Storage and handling	See MSDS

GUARANTEED MINIMUM ANALYSIS

Total Nitrogen (N)	100%
Phosphorus (P2O5)	100%
Potassium (K2O)	100%
Calcium (Ca)	100%
Magnesium (Mg)	100%
Sulfur (S)	100%
Iron (Fe)	100%
Boron (B)	100%

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Eight applications of SOIL-BAC are recommended throughout the season, starting in the spring when the ground temperature has reached 5-10 °C (40-50 °F). Frequency of application should

increase during high-stress periods. In addition to being used for agricultural crops, SOIL-BAC is excellent for golf course greens and tees, fairways and sport fields.

Other Micro/Macro Nutrient Supplements

Bionetix® also offers a variety of other macro and micro nutrient packages that play important roles in promoting healthy soil and healthy plant growth. Soils are frequently deficient in nutrients. Though a few dissolved elements may be available, it is impractical to expect all bacterial trace elements and organic growth factors to be present in every soil in the right proportions to feed a biomass and stimulate healthy plant growth. Some of the macro and micro nutrients that Bionetix® offers are as follows:

- **MACRO N/P** provides key macronutrients needed for natural cellular growth and metabolic activity when a deficiency of nitrogen and phosphorus is detected in the soil. The N:P ratio of MACRO N/P is 5:1.
- **MICRO 14** is a special blend of 14 ingredients providing various sources of minerals, vitamins, and microbial growth elements. This blend is beneficial for stimulating microbial activity in nutrient deficient soils. While some commercial fertilizers have a few minerals in addition to nitrogen and phosphorous, none of them contain all of the compounds (such as cofactors and vitamins) that bacteria require for complete growth. In contrast, MICRO 14 contains a full range of micronutrients, as well as co-metabolites, natural growth factors, vitamins, and key amino acids to promote excellent growth.
- **STIMULUS** is another blend of biological nutrients and stimulants that works along the same lines to naturally enhance growth production.



MICRO 14 IS FORMULATED FOR SOIL AND WASTE WATER BIOSTIMULATION IN BIOREMEDIATION PROCESS

MICRO 14
MICRONUTRIENT BLEND FOR SOIL AND WASTE-WATER BIOSTIMULATION

BENEFITS OF USE:

- Environmentally safe
- Non-toxic, non-caustic, non-combustible, non-flammable
- Effective & easy apply

MICRONUTRIENT BLEND

MICRO 14 is a special blend of 14 ingredients providing various sources of minerals, vitamins and microbial growth elements. The blend is beneficial in stimulating activity in nutrient deficient soils, groundwater or wastewater. The formulation will enhance the speed of the microbial degradation of organic materials in order to provide superior bioremediation.

All bacteria have certain nutritional needs for proper growth and development. These include a dozen micronutrients such as iron, sulfur, manganese, zinc, nickel, molybdenum, copper, iodine, selenium and cobalt. Bacterial cells also require a host of co-metabolites, growth factors, vitamins and certain key amino acids which are found in MICRO 14.

Soils and wastewater streams are environments that are frequently deficient in nutrients. In such cases a few dissolved elements may be present, however it is impractical to expect all bacterial trace elements and organic growth factors to be present in every spot in the right proportions to foster a biomass. To enhance a high level of biological activity in such soils or waters, a micronutrient blend is recommended such as MICRO 14. While some commercial fertilizers have a few minerals in addition to N, P, none of them contain all of the compounds bacteria require for complete growth such as cofactors and vitamins.

MICRO 14 provides a fully balanced nutrient blend for the microbial activity and local bacterial performance and rates of degradation of target substances.

SPECIFICATIONS

Appearance	Off white, free-flowing powder
Packaging	20.0kg, 200.0kg, various packaging available
Stability	2 years
pH/PL	7.0 - 8.0
MSDS/MSL	1.1.2 (Liquid)
Storage and handling	Store in a cool dry location. Do not mix and combine with any other MICO.

BIOSTIMULATION WITH MICRO 14 BLEND

CAUSE:

- provides a balanced complex system of electron donors and acceptors to feed microbial populations
- provides activity in nutrient deficient soils, groundwater or wastewater

APPLICATIONS:

- Environmental Cleanup - Bioremediation
- Soil Remediation
- Groundwater Treatment
- Oil Spill Cleanup
- Bioremediation Treatment
- Sludge and Wastewater Treatment
- Aquaria and Ponds
- Odor Control in Landfills
- Marine Use
- Composting

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Biological products can be a powerful means toward naturally enhancing crop growth and minimizing the severity of crop failure when growing conditions are adverse. With summer coming to the southern hemisphere and good results to show from the Japanese soybean trial of SOIL-BAC and ORGANIC PLUS, now may be a good time for farmers south of the equator to make

use of these natural options for stimulating healthier crops. It's not too early for northern hemisphere farmers to start investigating the possibility for next year's crop, either!

To learn more about Bionetix[®] agricultural bio-stimulants and other natural biological solutions, please visit the following link:

<http://www.bionetix-international.com/>



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Bionetix[®] International produces biological waste treatment products that are used in thousands of field applications worldwide. The Biological Series of products—among the earliest products introduced by Bionetix Canada – can be found in countless food preparation and processing locations in the United States, Europe, South America, and Asia. Numerous municipalities around the world have accepted these products. Headquartered in Quebec, Canada; Bionetix International is a subsidiary of Cortec[®] Corporation. ISO 9001:2000 Certified.

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