

Premium Growth Kit



Terra Bioticstm
Healthy Soil Optimum Growth

Build a strong **ROOT FOUNDATION**

Terra Biotics helps:

- Enable the plant to absorb nutrients
- Provide the right nutrients & biologicals at the right time
- Promote strong roots for disease/pest-resistance
- Achieve high growth with maximum blooms and optimum flavor

www.terrabiotics.com



All-in-One

Organic fertilizer, nutrients & biologicals

Our field tested, time proven products are easy to use and an effective, cost efficient alternative to chemical fertilizers & pesticides or trying to buy multiple different organic products and mixing everything up yourself. These products work with nature to bring the soil back to full and balanced fertility for maximum nutrient density.

Our organic nutrients & biologicals packages build a healthy soil food web in order to get a strong root system that can absorb the right micro & macro nutrients at the right time. We include bacteria, nitrogen fixers, mycorrhizae, saprophytic fungi, protozoa, and multitudes of microbes into our easy to use micronized water soluble powder.

Soil Preparation/Planting Cycle

Wake up the soil early to full fertility. Applying **Soil Infusion** at the planting phase will re-establish and support healthy biological activity in the soil, designed to “jump start” early growth. The balance of nutrients and pre-biotics in these products are formulated to recreate the Soil Food Web balance. The result is a dynamic increase in pro-biotic activity, converting locked up minerals and fertilizers into available nutrients. The interaction of the Soil Food Web will warm the soil and improve flocculation, creating a supportive environment for germination and seedling development. This healthy soil will encourage early growth and vitality providing an ideal aerobic zone where roots can penetrate and establish with ease.

We also recommend **Seed Treatment** to prepare the seeds for planting. This product provides readily available nutrients for a healthy sprouting seed naturally protecting it from disease invasion. The powdery blend will easily coat the seeds, creating a dynamic environment for healthy germination and seedling development.

Using **Soil Infusion (3-2-5 +Biologicals)** can:

- Provide additional nutrients, strengthen the root frame and stimulate growth
- Protect plants from bacterial and fungal disease because of allopathic compounds
- Warm soil temperatures, increase biological activity, support earlier plant growth
- Increase nutrient uptake and strengthen viability
- Stimulate root growth and improve vascular health

How does it work?

Soil Infusion will establish and support healthy biological activity. It is designed to “jump start” early growth, to wake up the soil to full fertility. The balance of nutrients and pre-biotics in this product are formulated to recreate the Soil Food Web balance. The result is a dynamic increase in pro-biotic activity, transforming the marginal biology to broad, excellent and active aerobic families. This dynamic activity will convert locked up minerals and fertilizer nutrients. These organic components will now be available at planting. The interaction of the Soil Food Web will warm up the soil and improve permeability and flocculation, creating a supportive environment for seed germination and seedling development. This healthy soil will encourage early seedling growth and plant vitality providing an ideal aerobic zone where roots can penetrate with ease and establish a healthy stand.

What causes these actions:

Soil Infusion utilizes a dynamic and balanced combination of chosen strains consisting of:

- 20 strains of Bacteria
- 9 strains of Saprophytic fungi and several strains of Endo Mycorrhizae fungi

Our unique Prebiotic delivery system, consisting of complex carbon compounds, Fulvic acid, proteins and carbohydrates, nourish the biology as it becomes established-allowing maximum sustainability. Probiotics consume to survive, grow and thrive; by providing the biology with this highly available food; it insures the most dynamic outcome. Once the biology is established, the Saprophytic and Mycorrhizae fungi are supplied with the nutrition they need to thrive and restore soil health.

When Do I Use This Product?

For the best results, apply Soil Infusion:

- During planting and seedling stage
- During sluggish plant growth and/or poor weather conditions
- If a plant has a weak canopy or stunted growth

Recommended Preparation / Application Procedures:

The micronized powder can be mixed directly into your soil to make a living soil, or mixed into room temperature water. After mixing with water let the mixture sit for a few hours if possible to let the microbes wake up and reactivate. For best results, add mixture to a Bio-Mixer, aeration, or other pre-mixing tank. This product has been micronized for easy spray application, use 50 size spray tips or larger. If mixture sits for longer than 30 minutes agitation prior to use is recommended. Apply 1 to 2 pounds per acre, mix 10-20 gallons of water per pound at planting and/or foliar. Apply in furrow, band, broadcast or fertigation.

Growing Cycle

The soil is alive with biology like an army with many types of microbes doing different jobs. Research has pointed out that in order to thrive, these tiny creatures require a prebiotic, carbon diet. Pre-biotic carbon supports the biology in transforming mineral and nutrient compounds into available plant nutrition. The growing cycle is an ideal time for a foliar application to balance out the soil conditions and stimulate root growth. **Nitro Booster** is formulated using the proper balance of probiotics, fertilizer and biostimulants to trigger a growth response, causing roots to grow more filaments. This action allows the plant to tap into a new dimension of fertility and more efficiently absorb nutrients.

Using **Nitro Booster (9-2-5-2Ca + Biologicals)** can:

- Provide additional nutrients, creating an energy boost to the young plant
- Re-balance soil conditions creating more available plant nutrition
- Strengthen root filaments to increase nutrient uptake and strengthen viability
- Fortify leaf protection, stimulate root growth and improve vascular health
- Protect plants from bacterial and fungal disease

How Does it Work?

The soil is alive with biology like an army with many types of microbes doing different jobs. Research has pointed out that to thrive, these tiny creatures require prebiotic, carbon diet. Prebiotic carbon supports the biology in transforming mineral and nutrient compounds into available plant nutrition.

What Causes These Actions?

Formulation contains a dynamic and balanced combination carefully balanced strains:

- Bacteria that are essential for the soil food web and root system
- Saprophytic fungi
- Cyanobacteria
- Nitrogen fixing Bacteria
- Trichoderma
- Protozoa
- Endo Mycorrhizae fungi

Our unique Prebiotic delivery system, consisting of complex carbon compounds, carbohydrates, fulvic acid and proteins, nourish the biology as it becomes established, allowing maximum sustainability. Probiotics consume to survive, grow and thrive; by providing the biology with this highly available food it insures the most dynamic outcome. Once the biology is established, the Saprophylic and Mycorrhizae fungi are supplied with the nutrition they need to thrive and restore soil health.

When do I Use this Product?

- Vegetative / Growth Stage
- If a cold snap occurs, to reactivate Calcium and Phosphate absorption

- To stimulate root growth and strengthen weak stand
- As an overall energy boost

Recommended Application:

The micronized powder can be mixed into room temperature water. After mixing with water let the mixture sit for a few hours if possible to let the microbes wake up and reactivate. For best results, add mixture to a Bio-Mixer, aeration, or other pre-mixing tank. This product has been micronized for easy spray application, use 50 size spray tips or larger. If mixture sits for longer than 30 minutes agitation prior to use is recommended. Apply 1 to 2 pounds per acre, mix 10-20 gallons of water per pound at planting and/or foliar. Apply in furrow, band, broadcast or fertigation.

If soil tests are showing some deficiencies and other material needs to be applied this an Ideal time. Here are some other products that could provide support:

- Instant Compost Tea
- Fish Alive
- Sea Star
- Concentrated Liquid Coral Calcium
- Growth Plus

Flowering / Reproduction Cycle

During the reproduction or bloom stage the plant requires a tremendous amount of energy. This is a critical time and many problems can occur such as too much nitrogen, sluggish hormone imbalances or not enough calcium (to name a few). Any of these situations may cause the bloom to abort or not reach its full potential. To avoid these problems we recommend **Bloom Plus**. This product has been carefully formulated to provide the balance of biology and nutrition required in this cycle. A foliar application is easily absorbed providing a much needed energy boost. Properly nourished plants have the energy to hang on to blooms insuring a viable seed set. This product will take the guess work out of the equation and provide optimum nutrition at this critical time to insure the highest quality production.

Using **Bloom Plus (1-2-5-3Ca-2S +Biologicals)** can:

- Provide an optimum balance of biology and nutrition at critical bloom stage
- Buffer excess Nitrogen for this stage to protect blooms and ensure a viable seed set
- Provide adequate Calcium and hormone balance to prevent aborted blooms
- Facilitate consistent nutritional increases in plant vitality
- Create additional protection from bacterial and fungal infections

How Does it Work?

During the reproduction / bloom stage the plant requires tremendous amounts of energy. This is a critical time in the plants development and many challenges may occur, such as too much nitrogen, sluggish hormone imbalances or not enough Calcium (to name a few). Any of these situations may cause the bloom to abort. To avoid these challenges, we recommend a foliar application of Bloom Plus. It is easily absorbed providing a much-needed energy boost. Properly nourished plants have the energy to hang on to more blooms insuring a viable seed set. This product will take the guess work out of the equation and provide optimum nutrition at this critical time to insure the highest quality harvest.

What Causes These Actions?

Bloom Plus utilizes a dynamic and balanced combination of 46 carefully chosen strains:

- 19 strains of Bacteria
- 9 strains of Endo Mycorrhizae fungi
- 8 strains of Saprophytic fungi
- 6 strains of Nitrogen-fixing Bacteria
- 2 strains of Protozoa
- 2 strains of Cyanobacteria

Our unique Prebiotic delivery system, consisting of complex carbon compounds, Fulvic acid, proteins and carbohydrates, nourish the biology as it becomes established-allowing maximum sustainability. Probiotics consume to survive, grow and thrive; by providing the biology with this highly available food; it insures the most dynamic outcome. Once the biology is established, the Saprophytic and Mycorrhizae fungi are supplied with the nutrition they need to thrive and restore soil health.

When do I use this Product?

Apply right before bloom starts, during or immediately after bloom is concluded.

If more than one set, multiple applications are in order

Recommended Application:

The micronized powder can be mixed into room temperature water. After mixing with water let the mixture sit for a few hours if possible to let the microbes wake up and reactivate. For best results, add mixture to a Bio-Mixer or other pre-mixing tank (for maximum effectiveness brew for 8-10 hours). This product has been micronized for easy spray application, use 50 size spray tips or larger. If mixture sits for longer than 30 minutes agitation prior to use is recommended. Apply 1/2 to 1 pound per acre, based on canopy density. Mix 1 pound of **Bloom Plus** with 10-20 gallons of water or 1-2 TBS per gallon of water.

Finishing / Bud Maximization Cycle

Now that the plant is established and reaching maturity, it's time to focus on sizing and production. **Jackpot Plus** is formulated to shift growth from the plant structure to the fruiting body. There are several factors contributing to this outcome: A balance of potassium and calcium assist in the translocation of plant sugars from the leaf blade to the seed/fruit body. Potassium activates an enzyme in the plant responsible for opening the sugar gates and moving sugar and nutrition between plant cells. The resulting extra energy is now more available to the seed/fruiting body. A type of carbon shuts down the excess nitrogen activity resulting in less leaf growth and more energy for production. Phosphate, carbon and kelp create a healthy root zone keeping the rhizosphere active, energizing the roots to absorb more nutrients and ward off disease.

Using **Jackpot Plus (1-3-8-4Ca-2S +Biologicals)** can:

- Provide a carefully formulated balance of nutrients and biology for an optimum harvest
- Create more available energy for faster maturing, uniform sizing and improved quality
- Direct available energy (plant sugars) to transfer from leaves to sizing/production
- Stabilize the balance of calcium, potassium and hormones keeping sugar gates open
- Creates additional protection from bacterial and fungal infections

How Does it Work?

The finishing cycle requires tremendous energy, which causes critical stress to the plant. **Jackpot Plus** provides a specific formulation of nutrients, biology and prebiotics to support the finishing cycle. A balance of potassium and calcium increase the translocation of sugars from the leaf blade to the fruiting body/seed. Potassium activates an enzyme responsible for opening the sugar gates and moving that energy to the fruiting body/seed. A type of prebiotic carbon shuts down excess nitrogen, slowing down the vegetative (leaf and stem) growth. The addition of phosphate, carbon and kelp creates a healthy rhizosphere, strengthening and energizing roots to absorb more nutrients and ward off disease. This formulation is carefully designed to ensure uniform sizing, faster maturation, nutrient density, great flavor and the highest quality harvest.

What Causes These Actions?

Jackpot Plus utilizes a dynamic and balanced combination of 46 carefully chosen strains:

- 19 strains of Bacteria
- 9 strains of Endo Mycorrhizae fungi
- 8 strains of Saprophytic fungi
- 6 strains of Nitrogen-fixing Bacteria
- 2 strains of Protozoa
- 2 strains of Cyanobacteria

Our unique Prebiotic delivery system, consisting of complex carbon compounds, fulvic acid, proteins and carbohydrates, nourish the biology as it becomes established-allowing maximum sustainability. Probiotics consume to survive, grow and thrive; by providing the biology with this highly available food; it insures the most dynamic outcome. Once the biology is established, the Saprophytic and Mycorrhizae fungi are supplied with the nutrition they need to thrive.

When Do I Use This Product?

- When plant is established and reaching maturity

Recommended Application:

The micronized powder can be mixed into room temperature water. After mixing with water let the mixture sit for a few hours if possible to let the microbes wake up and reactivate. For best results, add mixture to a Bio-Mixer or other pre-mixing tank (for maximum effectiveness brew for 8-10 hours). This product has been micronized for easy spray application, use 50 size spray tips or larger. If mixture sits for longer than 30 minutes agitation prior to use is recommended. Apply 1/2 to 1 pound per acre, based on canopy density. Mix 1 pound of **JackPot Plus** with 10-20 gallons of water or 1-2 TBS per gallon of water.

These products are available for additional support:

Complete (4-2-5-3Ca-2S +Biologicals)

An “all in one” product combining the super effective products: **SeaStar**, **PKS & Cal**, **Crop Recycle** and **Soil Infusion**. This combination is an excellent choice for many applications and will supply the diverse needs of any crop, orchard, garden or turf. Designed for easy application, this complex, concentrated, dynamic formulation provides more biology and carbon for maximum benefits. An excellent basic “stand alone” product for many applications.

Instant Compost Tea (3-2-2 +Biologicals)

Use as a foliar 3 to 4 times per growing season to revitalize
Creates additional insect and disease protection

Growth Plus (4-2-5 +Biologicals)

Provides nutrients & creates the energy boost to the young plant. Strengthens root filaments to increase nutrient uptake and strengthen viability, fortify leaf production, stimulate root growth, and improve vascular health while protecting the plant from bacterial and fungal disease.
Use during early stages of plant development

Fish Alive (10-2-1 +Biologicals)

Increase nitrogen levels
Ideal for row crops, legumes, berries, lawns and pasture

Liquid Kelp Plus

Stimulates and energizes root formation
Contains plant growth hormones
Most effective at early stages of plant development

Kelp Plus (soluble powder)

Stimulates and energizes root formation
Contains plant growth hormones
Most effective at early stages of plant development

Phos Cal 30

Use if soil test indicates low phosphate levels
For weed control apply after disking at first emergence of weeds

PKS & CAL

Use if soil test indicates low Sulphur Premium Cal 33

Use if soil test indicated low Calcium
Most effective at planting can be applied at any growth phase

Sea Star

Use on soils low in organic matter
Creates a hostile environment for nematodes
Increase nitrogen levels

Ultra Humate

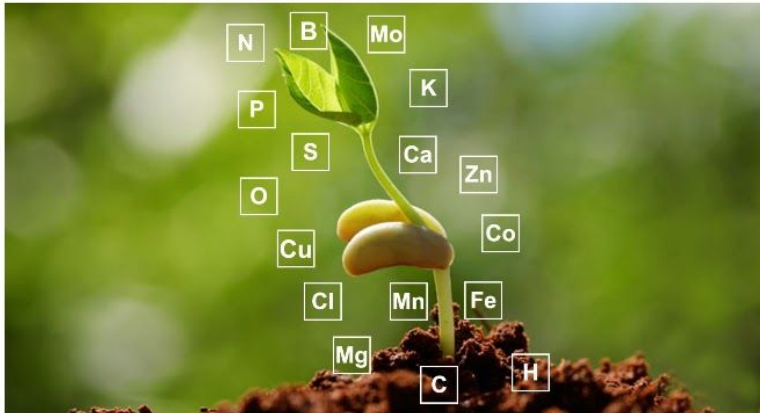
Use in soils that need more carbon
Effective carbon for high clay soils
Use on soils low in organic matter

Fish & Crab

Use on soils low on organic matter
Most effective if applied at planting
Creates a hostile environment for nematodes

K-35

Use if soil test indicates low potassium levels.
Protects plants from damage due to extreme weather conditions (heat or cold) Liquid Coral Calcium
Strengthening to any plant
Use if soil has excessive levels of phosphate
Most effective if applied pre-bloom



MACRONUTRIENTS

Plants use nine essential elements from the soil through their roots & from the air (mainly consisting of nitrogen and oxygen) through their leaves. Include: nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), sulfur (S), magnesium (Mg), carbon (C), oxygen(O), hydrogen (H). The root hair, is the essential organ for the uptake of nutrients from the soil. A healthy root system is key to the ability to grow a healthy plant.

MICRONUTRIENTS

Micronutrients are essential for plant growth and play an important role in balanced crop nutrition. They include boron (B), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo), zinc (Zn), nickel (Ni) and chloride (Cl). They are as important to plant nutrition as primary and secondary macronutrients, though plants don't require as much of them. A lack of any one of the micronutrients in the soil can limit growth, even when all other nutrients are present in adequate amounts.



SOIL BIOLOGICALS

Plants engage in symbiosis with bacteria, algae, fungi, protozoa, chemoautotrophs, nematodes, micro-arthropods, earthworms, and certain insects. The right balance improves nitrogen fixation, reduced negative effects from barren soil, and a healthy and larger effective root surface area. The resulting healthy root system enhances nutrient uptake and stimulates plant hormone production.