

**Procon Environmental Technologies (Pty) Ltd**



# **Plant & Soil Stimulant**

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## **Plant & Soil Stimulant**

Soil & Plant Bio stimulants contain substances and/or micro-organisms whose function when applied to plants or the rhizosphere is to stimulate natural processes to enhance/benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, and crop quality.

A plant to plant-based bio-enzyme / probiotic bio stimulant bring about enhancement of the growth of a soil microorganism resulting from physical and chemical alteration of the soil and the contribution of excretions and organic debris of roots within a rhizosphere.

The microbial component of soil plays a critical role in keeping soil alive and functional, exercising several indispensable functions like soil formation, decomposition of dead and decayed organic matter, cycling of macro and micronutrients and removal/transformation of toxic chemicals into non-toxic forms. Free-living beneficial bacteria imparting health benefits to crop plants are collectively called as plant growth-promoting rhizobacteria.



The product is further enhanced with a natural anionic surfactant M3T acting as a carrier and spreader that reduces the surface and interfacial tension of water resulting in the application droplet size being reduced from 80 micron to 0.1 micron ensuring readily uptake and transfer of probiotics, nutrients and other plant-based material. This means less product to do the same job as the plant is able to access nutrients easier leading to increases in plant hydration, nutrient uptake, and plant growth and the grower's profits.

### **Features and Benefits**

The addition of M3T to Bio Tech Soil & Plant Bio Stimulant Concentrate formulation boosts the chemical application utilised in farming as follows: -

- A. Reduces water surface tension 80 micron to 0.1 of a micron
- B. Increases transporting ability of the chemical application, spreading the application more evenly
- C. Ensures increase penetrating ability of the chemical application due to the very high emulsification ability
- D. Secure 95% adhesive ability on the surface application
- E. Higher surfactant and adhesive properties result in considerably lower water mixing agent, reducing the chemical quantities in application such as:
  - Folio-feeders
  - Liquid Soil & Plant Bio Stimulant through central pivots, drip or micro irrigation
  - Soil penetration and decomposition
  - Natural descale and anti-corrosion of piping, filters, irrigation resulting an increase pump efficiency saving power and maintenance



- Higher penetration with less water achieving the same if not better result
- Soil & Plant Bio Stimulant Concentrate penetrating ability in soil and improved absorption by the plant root system – strong base means strong folio growth, flowering, and crop
- M3T has a memory and this allows water to continue to penetrate the root system naturally
- The addition of Soil & Plant Bio Stimulant Concentrate give you strong Cytokinin's meaning more natural cell growth and plant growth

#### **Directions for use:**

- Shake container before use
- Keep container closed when not in use
- Store in a cool (less than 25°C) dry place away from direct sun light
- Do not mix with other chemicals or with herbicides
- Do not store diluted product – once diluted use
- Dilute with clean water for use if only applied to a foliar spray mix 3% V/V with H<sub>2</sub>O
- Dilution for soil treatment / irrigation mix 3% V/V per 1000 liter H<sub>2</sub>O

#### **Application For Foliage Treatment**

Bio Tech GTX Soil & Plant Bio Stimulant Concentrate should be applied as foliar spray until leave / foliage is thoroughly wet.

For best results application should be performed during times when the crop / plant has the right environment for optimum photosynthesis and at the recommended stages of growth.

#### **For Soil Treatment**

Apply as per dilution for irrigation.



## **Product Composition**

- Bacteria Counts : 2 X 10<sup>9</sup> /ml
- Bacteria Type : Bacillus consortium
- Enzyme production :

*Protease – breaks down proteins into amino acids.*

*Lipase – breaks down fatty acids and glycerol.*

*Amylase – amylases catalyse the break-down of starch into sugars which are then further used as a food source by the bacillus.*

*Cellulase – breaks down cellulosic material.*

*Urease - catalyzes the hydrolysis of urea into break-down products.*

*Esterase - splits esters into an acid and an alcohol in a chemical reaction with water called hydrolysis.*

*Xylanase – help in breaking down organic cell walls.*

What this means – the bacillus use the multitude of enzymes produced to break down the components of organics to provide microbial degradation at the smallest level for ease of absorption.

*Appearance: Straw coloured*

*Fragrance: Neutral / Sweet Earthy*

*Form: Brown Liquid*

*Shelf life: 24 months (in un-opened container)*

*pH: 7.0-8.0 (20X) (Performance properties effective pH range - 5.0-10.0)*

*Temperature Range – 3 to 45 0C*

*Packaging: 25 litre containers*

