

## Bactivate Turf Blend

**Bactivate® Turf Blend is an easy to use, 3-part soil ameliorant composed of Bioactive Component A & B and your choice of either Bactivate Liquid or Bactivate Plus Liquid. Both Bactivate Liquid and Bactivate Plus Liquid formulations are unique combinations of bacillus bacteria that have been developed as a complete soil rebuilder, providing essential bacteria to the soil while simultaneously developing biological activity.**

**This is a scientific program developed specifically for turf management that assists in achieving optimal soil conditions for microbial enhancement as well as the efficient conversion of nutrients and sunlight to plant energy.**

### A unique microbial fertiliser that puts the right bacteria into depleted soils

- Beneficial soil bacteria
- Increases root mass and length
- Improves soil structure
- Reduce water consumption
- Unlock nutrients for plant use

#### The Bactivate® Bacteria

The Bactivate Bacteria convert the nutrients supplied in the product into useable plant foods. This process is conducted in the area of the plant's developing root system and encourages improvement of the soil structure, thus increasing plant development and yield improvement. Bactivate contains specific, individual antagonistic strains of bacillus bacteria, each of which has a specific function in nature. These functions can facilitate the reduction of chemicals and chemical fertilisers and feed the plant naturally, as nature designed it.

***Bacillus megatherium*** has a strong ability to decompose phosphorus compounds in soil. The bacterium is also a saprophyte (which is to say that it decomposes animal and plant remains in the soil forms accessible for uptake by plants to use for healthy growing. Phosphorus is one of the three major or primary nutrients for plants that were originally rich in the soil.

However, most agricultural soils have a lack of plant- available phosphorus. This, in conjunction with the practice of using phosphate fertilisers in large amounts in search of high yields leads to a situation where there are often significant amounts of phosphorus compounds sitting undissolved in the soil.

The bacillus bacteria in Bactivate with their phosphorus decomposing effect promote the availability of the phosphorus that is often already sitting in the soil after heavy over-fertilisation. *Bacillus megatherium* therefore is of great assistance to improve the utilisation of the phosphorus element in the soil for increased and healthy plant growth.

***Bacillus subtilis*** is known for its capacity to multiply quickly in the soil. It also shares the ability common to the other bacteria in Bactivate in that they can form a tough, protective endospore, allowing the organisms to tolerate extreme environmental conditions. It has a strong capacity to produce proteinase, diastase and pectase. It is the major bacillus that decomposes animal and plant remains into



available nitrogen in the soil. These bacteria live within specialized nodules on the root systems of plants, where they process atmospheric nitrogen into a form available for the plants to use. Thus, *bacillus subtilis* frees up soil nutrients in both soil and air for plant use.

***Bacillus licheniformis*** is a facultative anaerobe bacterium that proliferates in soil. It is capable of encompassing protein and lignin to provide nutrition for plants in forms such as amino acids. It can effectively decompose organic matter in the soil and thereby provides nutrition for the growth of plants. The strain present in Bactivate has extensive colonization and competitive abilities for sustainable soil management and plays a key role in plant growth and performance.

***Bacillus mucilaginosus*** is regarded as a potassium decomposing bacteria with the ability to produce organic acids that generate potassium minerals present in the soil such as silicates, apatite's and phosphorites and release available forms of potassium. This bacillus is also known to act as a sorbent of heavy metals.

***Bacillus brevisbacillus laterosporus*** has been recorded as having a negative impact on some species of nematodes and soil molluscs along with impacts on populations of some Coleoptera species, Lepidoptera species and has been recorded to assist the soil in activating its antimicrobial abilities against *Rhizoctonia solani*, *Fusarium oxysporum* and *Botrytis cinerea*. *B. laterosporus* is considered a plant growth promoting rhizobacteria (PGPR)

## Bactivate Turf Blend

### What's in the box?

The Bactivate Turf Blend comes packaged in one box and there are 2 Bactivate Turf Blends to choose from:

#### BACTIVATE PLUS LIQUID TURF BLEND

1x2L Bactivate Plus Liquid (5 strains of Bacillus)  
1x5L Bioactive Component A  
1x5L Bioactive Component B

#### BACTIVATE LIQUID TURF BLEND

1x2L Bactivate Liquid (3 strains of Bacillus)  
1x5L Bioactive Component A  
1x5L Bioactive Component B

Application Rate: 1 box treats 2 Hectares

### Bactivate® Plus Liquid Contains 5 Strains of Bacillus:

*Bacillus megaterium* 10<sup>9</sup> CFU/mL

*Bacillus subtilis* 10<sup>9</sup> CFU/mL

*Bacillus licheniformis* 10<sup>9</sup> CFU/mL

*Bacillus mucilaginosus* 10<sup>9</sup> CFU/mL

*Bacillus brevis* 10<sup>9</sup> CFU/mL

### Bactivate Liquid Contains 3 Strains of Bacillus:

*Bacillus megaterium* 10<sup>9</sup> CFU/mL

*Bacillus subtilis* 10<sup>9</sup> CFU/mL

*Bacillus licheniformis* 10<sup>9</sup> CFU/mL

**Bioactive Component Blend A** improves plant health and growth naturally by stimulating the biological life in the soil such as beneficial bacteria and fungi.

**Bioactive Component Blend B** contains natural bioactive substances such as vitamins, free amino acids, fulvic acids and alginates to stimulate plant growth and improve plant tolerance to stress. A full range of chelated trace elements is in the formulation to optimise plant nutrition.

#### Benefits of the Bactivate Turf Program

- Drives organic matter turnover and nutrient release
- Reduces salinity at the rhizosphere
- Improve soil structure
- Unlocks phosphorus
- Cycles potassium
- Fixes free nitrogen from the atmosphere
- Improves nutrient uptake
- Improve the turf's immune system
- Assists in biological stimulation
- Increases soil oxygenation
- Repairs degraded soils
- Stimulates root development
- Improves photosynthesis

Enhance the performance of the Bactivate Turf Blend by regularly applying these unique products from Bioactive Soil Solutions:

**+ BactivateBioBoost<sup>+</sup>**

**BactivateSeaweedSolution<sup>+</sup>**

**+ Bactivate**

Contact GTS for more information