

# BACTIVATE 3

**Bactivate 3 is a combination of 3 bacillus bacteria developed specifically to perform on turf, grass and pasture. It rebuilds soil structure, provides essential bacteria to the soil and in turn, stimulates biological activity.**

Bactivate 3 contains individual powerful dominating strains of bacillus bacteria, each of which has a specific function within biology. When active, these functions can assist in the reduction of chemicals and chemical fertilisers, improve the immune function of the crop/plant, improve the soil structure, increase growth rates, crop yield as well as improve the overall quality of the crop/plant.

Specific benefits of Bactivate 3 include:

- improves recovery after paddock grazing/cutting,
- decreases use of chemicals and chemical fertilisers,
- unlocks bound soil nutrients such as phosphorous and makes potassium more readily available,
- regulates soil pH at the root zone for optimal performance,
- improves soil structure, root mass and moisture holding capacity for enhanced turf performance, growth and drought tolerance,
- increases grass nutrition to benefit herd health,
- reduces stress and attacks from pests and pathogens,
- increases silage, hay volumes and quality,
- improves yields, decreases inputs and increases your profits.

Bactivate 3 can be used year round, stored for up to 6 months from date of delivery, and requires no holding period for animals.

For best results, Bactivate 3 should be used in conjunction with Bactivate BioBoost Enhance and Bactivate Seaweed.



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## Product Analysis

Bactivate 3 (Liquid) Biological Analysis:

Item
Bacillus subtilis
Bacillus licheniformis
Bacillus megaterium

## Organisms in the Bactivate Product Range

Organism	Scientifically supported function <sup>1</sup>
Bacillus subtilis	Shown to alleviate stress generated by soil salinity; solubilising soil inorganic phosphate; and remove soil organic contamination  It is able to combat the impact of pathogens by releasing a number of natural enzymes and antibiotics
Bacillus licheniformis <sup>2,4</sup>	Nitrogen fixers. Solubilises Phosphorus
Bacillus megaterium <sup>2,3,4</sup>	Secrete organic acids that can mobilise insoluble nutrients like phosphorus  Active in soil matter breakdown and turnover

1. Search data obtained from the Web of knowledge.
2. The organism can synthesize phytohormones particularly auxins and cytokinins to stimulate plant growth. In such studies plant seeds were subjected to bacterization. Relevant paper: Sokolova et al., 2011; Probanza et al., 1996; Gutierrez Manero et al., 1996; Ortiz-Castro et al., 2008; Prashanth and Mathivanan, 2010.
3. Organisms are considered as 3rd class bio-additives, consisting of products of microbiological synthesis. 1st class of bio-additives are easy assimilating substances of biogenic microelements and the basic nutrient elements (N, P, and K). The 2nd class bio-additives are constructed on the basis of plant growth promoter factors and cell stimulators (Vinaro and Dirina, 2007).
4. Study of inoculation of the bacterium in soil showed the plant growth stimulation effect can be explained not only by their N<sub>2</sub>-fixation and/or P-solubilization ability but also by their production of hormone-like secondary metabolites (Cakmakci et al., 2007).

## Application Rates

Aerial application	For best results, mix into tank with Bactivate BioBoost Enhance & Bactivate Seaweed Solution. Minimum mixing rate is 1:100	1.25L/ha
Boom sprayers & under-tree sprinklers	For all types of spray equipment, use the area normally covered by one tankful to determine how much product to add	1L/ha
Drip or micro-irrigation systems	For use in all fertigation systems	1L/ha
Overhead sprinklers: Travelling or Pivot irrigators	The amount of concentrate needed per hectare of irrigated area for 10mm of irrigation is 1L to 2L	0.1L to 0.2L per mm of irrigation
Small volume applications	1.5mL per litre in hand sprayers and knapsacks; 15mL per 9L watering can	



For more information on Bactivate Program and our range of supplementary products, please contact: [sales@bactivate.com](mailto:sales@bactivate.com) or your preferred Bactivate Distributor.

[www.bactivate.com.au](http://www.bactivate.com.au)

