



# Adermatt

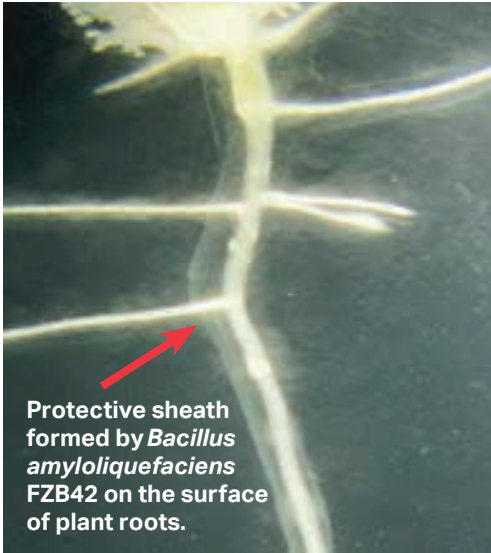
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# RhizoVital<sup>®</sup> 42

Reg. No. B4201, Act 36 of 1947

Bio Crop Protection | Root Health | Plant Vitality



## RhizoVital® 42

Reg. No. B4201, Act No. 36 of 1947

A concentrated liquid formulation of the bacteria *Bacillus amyloliquefaciens* strain FZB42, a non-pathogenic microorganism occurring naturally in the soil.

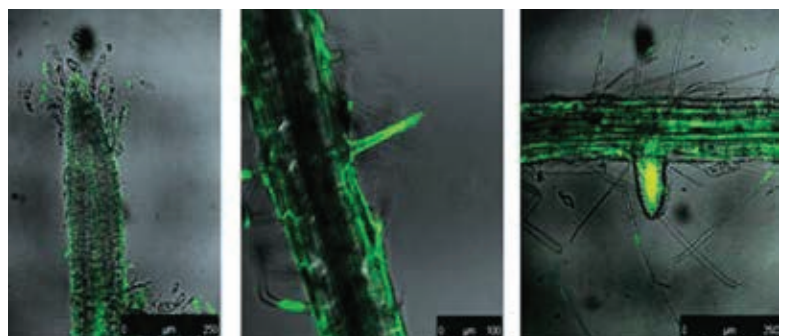
The symbiotic soil bacteria stimulate and protect plant roots, resulting in larger, healthier plants.

### Why use RhizoVital® 42?

Features	Benefits
Root growth stimulation.	Improves general root health and development.
	Increases plant vigour and vitality.
	Aids mobilisation and absorption of soil nutrients, notably phosphate, zinc and manganese.
Root colonisation.	Insurance against root disease.
Induced Systemic Resistance (ISR).	Reduces disease intensity and frequency when used as a preventative measure.
Easy to use.	Versatile application strategies. Compatible with most crop protection products and fertilisers.
Highly concentrated liquid formulation.	Cost effective solution with economical application rates.
One of the most thoroughly researched bacterial products available in South Africa.	Proven history of performance and efficacy.
Effective on a wide range of crops.	Ideal for use as part of an IPM strategy.
Non-toxic, non-GMO and no withholding period.	Suitable for use in organic agriculture.

### How does RhizoVital® 42 work?

*Bacillus amyloliquefaciens* forms a close symbiotic relationship with plant roots. It quickly colonises the root system, forming a protective sheath making it difficult for root pathogens to penetrate. It produces plant beneficial exudates, including plant growth regulators and antibiotics, in the root zone, stimulating root growth and providing protection from disease. The bacterium also aids with the activation of Induced Systemic Resistance (ISR).

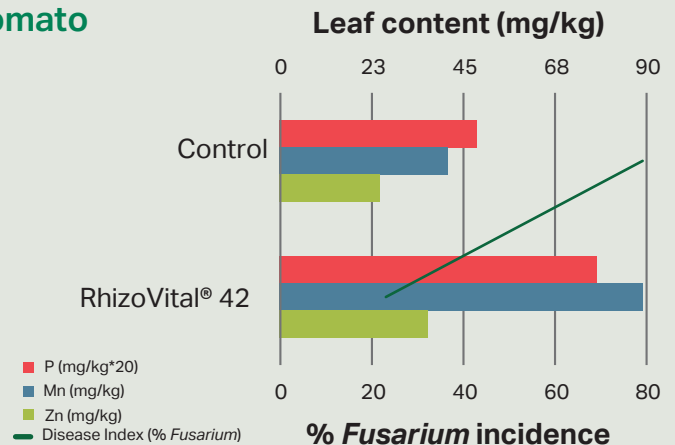


**Image above:** Colonisation of Arabidopsis roots by *Bacillus amyloliquefaciens* FZB42 illuminated under fluorescence microscopy. Root growth tips, root hair and lateral roots are colonised by *B. amyloliquefaciens* FZB42.

# Trial data:

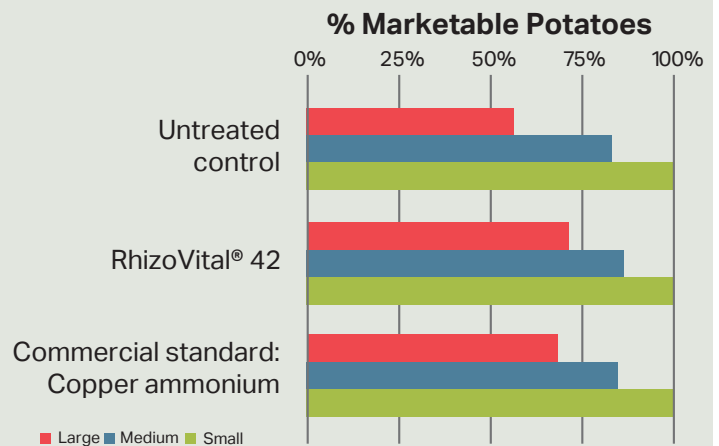
## Effects of RhizoVital® 42 treatment on tomato plants compared with untreated control

**Figures right:** Effect of Rhizovital® 42 on nutrient content and *Fusarium* incidence of tomatoes. Leaf samples from treated plants contained significantly more P, Mn and Zn than the control. *Fusarium* incidence is lower in the RhizoVital® 42 treated plants compared with the untreated control.



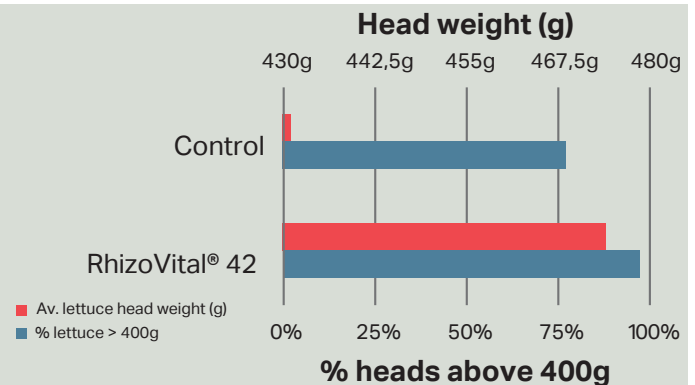
## Effect of RhizoVital® 42 treatment on size distribution of marketable potato yields compared with a commercial standard and an untreated control – Pretoria, 2012

**Figures right:** RhizoVital® 42 stimulates plant growth and yield. The graph shows the stimulating effect of RhizoVital® 42 on potato size distribution in a trial done in 2012. RhizoVital® 42 treatment increased the percentage marketable large potatoes from 56% of the total yield in the untreated control and 68% in the commercial standard, to 72%.



## RhizoVital® 42 on lettuce yield

**Figures right:** RhizoVital® 42 increases lettuce yield compared with an untreated control. The graph shows RhizoVital® 42 on lettuce weights in a trial done in 2016. RhizoVital® 42 treatment consists of a seedling drench before transplant followed by a soil application 5 days after planting.



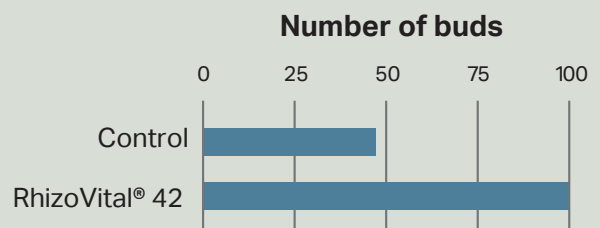
## RhizoVital® 42 on Chrysanthemum plants



**Left:** Chrysanthemum plants treated with RhizoVital® 42 (right) compared with the untreated control (left).



**Left:** Chrysanthemum plants 14 days after treatment (right) compared with untreated control (left).



**Figures above:** RhizoVital® 42 increases the number of buds on chrysanthemum plants in tunnels compared with an untreated control. This graph shows the stimulating effect on RhizoVital® 42 on chrysanthemums in a trial done in 2015. RhizoVital® 42 treatment consisted of two soil drenches 7 days apart. The control treatment averaged 47 buds per plant compared with the RhizoVital® 42 treatment with an average of 99 per plant, an increase of 47% more buds.



# RhizoVital® 42

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Plant Vitality



**Images above:** Wheat seedlings treated with RhizoVital® 42 (right in each photo) compared with a competitor product (left in each photo), showing uniform emergence and seedling development. Healthier seedlings and increased root development led to an increase in yield of 11% over the competitor product.

## Application instructions:

Crop	Method	Rate	Remarks
<b>Row crops</b> (barley, maize, soya, sunflower, wheat)	Seed treatment	0.5 ml/kg seed	Apply directly to seed prior to planting. Seed may be treated up to 2 weeks in advance. Allow seed to dry if storing prior to plant.
<b>Vegetables, ornamentals and small fruit</b> (cucumber, leafy vegetables, tomatoes, strawberries & others)	Drench treatment	Seedling trays: 4 ml/10L water After transplant: 250 - 500 ml/ha	Seedling trays: Drench 1-3 L of solution per m <sup>2</sup> shortly after sowing, germination and or prior to planting. After transplant: Apply as a drench to damp soil, irrigate after application to wash product into root zone. May be repeated monthly.
<b>Root and bulb vegetables</b> (carrots, onions, potatoes)	In furrow or drench treatment	In furrow: 500 ml/80 L water to treat 1 ha Drench: 500 ml/ha	1 <sup>st</sup> application: Applied in furrow after planting. May be mixed with fertiliser or pesticide application or applied through irrigation. 2 <sup>nd</sup> application: Applied at week 4 as a soil drench. 3 <sup>rd</sup> application: Applied at week 8 as a soil drench.
<b>Trees and vines</b> (apples, citrus, grapes & others)	Drench treatment	500 ml/ha	Apply with first root flush of the growing season with sufficient water to wash product into the root zone.

Available in packs: 40 ml, 500 ml, 1 L, 5 L, 20 L

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Healthy Food and Healthy Environment, for all

T: +27 (0) 33 342 3984  
E: support@andermatt.co.za

W: www.andermatt.co.za  
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