Tri-Cure™

Biological fungicide

Tri-Cure is still the first and only fully registered biological fungicide for the control of *Rhizoctonia, Fusarium* and *Phythium* in maize, wheat, soybeans, bean crops, potatoes and vegetable crops. The active ingredient - *Trichoderma harzianum* is multi-functional in terms of the role it plays in biocontrol and growth stimulation, it also has excellent results in the control of sub-lethal pathogens and plant defence mechanisms.

MBFi manufactures various formulations of Tri-Cure namely WP (Wettable Powder) or SP (Soluble Powder) for practical and effective application. We use a unique fermentation process called SSF (Solid State Fermentation), ensuring our product contains highly active biological control fungi - *Trichoderma harzianum*, and several key enzymes. These enzymes play a significant role in the results of the treated crops.

Enzymes and their results:

Xylanase → Helps *Trichoderma* to colonize roots. Xylanases is the second most important structural polysaccharide in plant cell walls.

Chitanase → Controlling plant-pathogenic fungi. Chitinases, the degradation of chitin, is the most important structural polysaccharide in fungi.

Esterase → Helps both in root colonization and control of plant-pathogenic fungi. Esterases helps in a number of different degradation mechanisms, including plant and fungal cell-wall depolymerisation.

Cellulases → Helps *Trichoderma* to colonize roots. Cellulases is the degradation of cellulose, which is the most important structural polysaccharide in plant cell walls

The advantages of key enzymatic activity in biocontrol formulations:

1. Through the presence of chitinases and esterases, the control of plant-pathogenic fungi is active straight after treatment and even before the *Trichoderma* has germinated and grown to a mycelium.
2. Through the presence of xylanases and cellulases, root colonisation starts straight after seed germinates.

Biological control of crop root diseases

Tri-Cure is active immediately after planting the seed.

Our Technologies

PROTEIN DEFENSE

SSF
Solid State Fermentation

✓	Contains min of 2 Billion spore/gram
✓	First fully registered *Trichoderma harzianum* per crop in RSA
✓	Shelf Life of 9 months
✓	Highest concentration of enzymes means better disease control
✓	Tri-Cure goes to work from time of application.
✓	Leading to higher yield potential.

Tri-Cure SP Registration No: L9425 Act 36 of 1947
Tri-Cure WP Registration No: L8295 Act 36 of 1947
Active Ingredient: Trichoderma Harzianum 2 x 10^9 spores/gram
Registration Holder: N Laboratories (PTY) LTD - Reg No.: 2015/165672/07

Dr. K Rumbold – Wits University: Tri-Cure has proven advantages over other biocontrol products, because it contains enzymes that are doing the job even before sporulation and mycelium has grown, bearing in mind that sporulation takes place only up to a week after the planting (depending on environmental conditions). Tri-Cure is active right after planting the seed.

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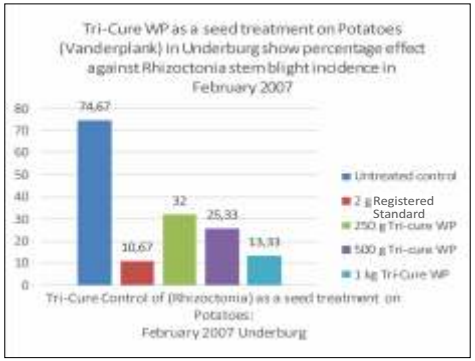
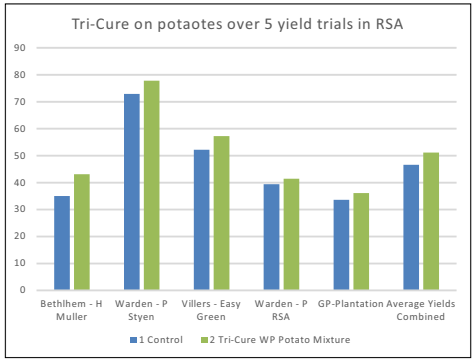
Trichoderma Harziunum is a biocontrol symbiotic fungi that colonizes the root of the plant. This fungi's primary function is parasitize the plant pathogenic soil fungi. This fungi also has several other benefits to the plant like: growth stimulation of the roots via IAA production in the roots creating large roots with more fine hair roots, will increase environmental buffering of the plant to the likes of soil pH, water logging, cold, heat stresses, while also increase phosphatase to solubilize phosphorous in the soil making it available to the plant.

Tri-Cure Details:

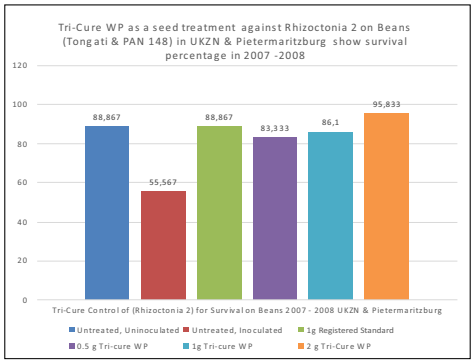
- **Act 36 of 1947:** L8295 (WP) & L9425 (SP)
- **Active Ingredient:** *Trichoderma Harzianum*
- **Formulation:** WP / SP
- **Chemical group:** Microbial
- **Strain:** MIT-04
- **FRAC Code:** NC (not classified)
- **Colour Band:** Green

Potatoes

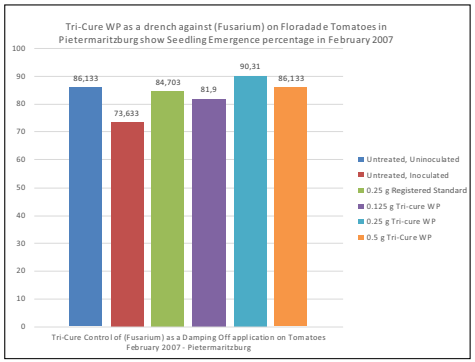




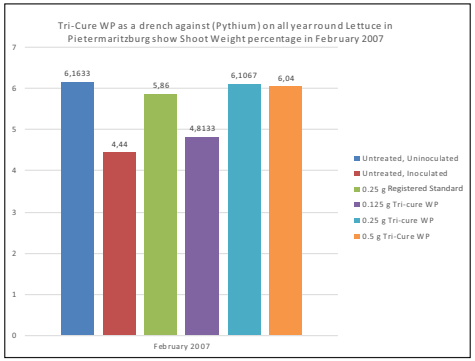
Beans



Tomatoes



Lettuce



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