BIOCULT

For Fruit, Vegetables & Ornamentals

BELCHIM CROP PROTECTION CANADA

ROOTED IN RESILIENCE

BIOCULT Mycorrhizae & Trichoderma Fungi Inoculant

BioCult is a living microbial inoculant consisting of a diverse team of mycorrhizae and trichoderma species that partner with your crop for more efficient nutrient use, better crop health with resistance to pest pressures, and that boosts resiliency in increasingly stressful field conditions.

It is specially formulated to benefit over 90% of crop species when used as a seed treatment, in-furrow application, bare root treatment, transplant treatment or as a soil drench.

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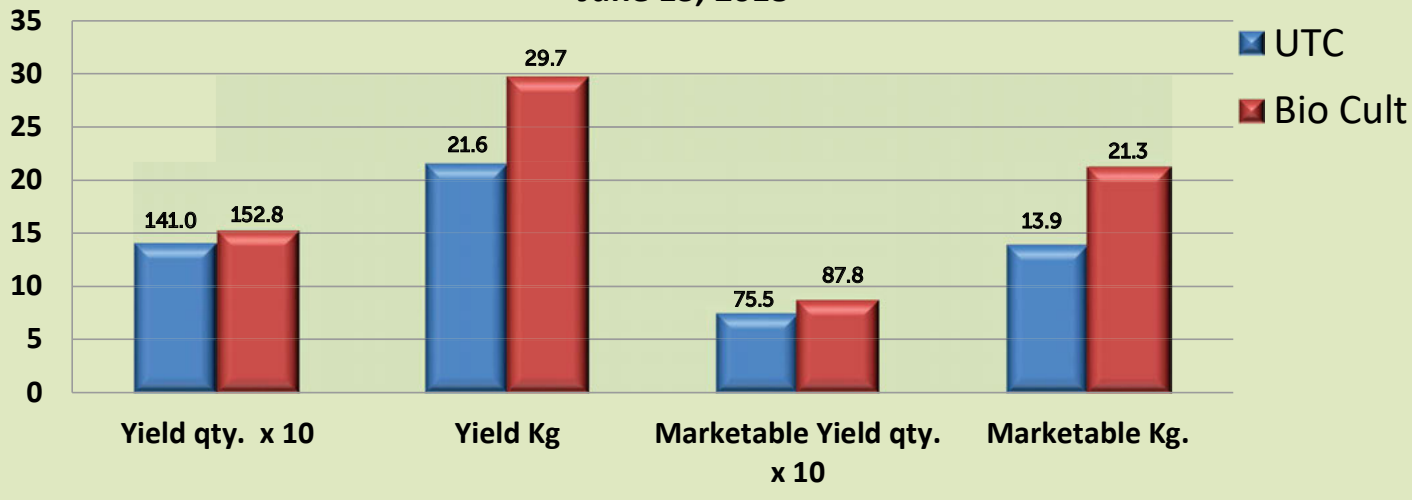
BIOCULT Mycorrhizae is a concentrated water dispersible powder containing large quantities of 3 endo-mycorrhizae species and 5 trichoderma fungi strains.

The fungi in **BIOCULT** colonize the plant root, grow and extend beyond the root zone where they mine the soils for additional nutrients and water that would otherwise be inaccessible.
As a result, nutrient, drought and salt stress are reduced, plant health is improved and biomass and yield are enhanced.

Mycorrhizal fungi also exude glomalin, a sticky, sugary substance that promotes soil clumping (aggregation), improves soil structure and accounts for a large amount of the organic carbon in undisturbed soils. **BIOCULT** increases organic matter in soil, and is a partner in carbon capture.

Atlantic AgriTech Inc. Potato Trial, New Glasgow, PEI

June 13, 2018

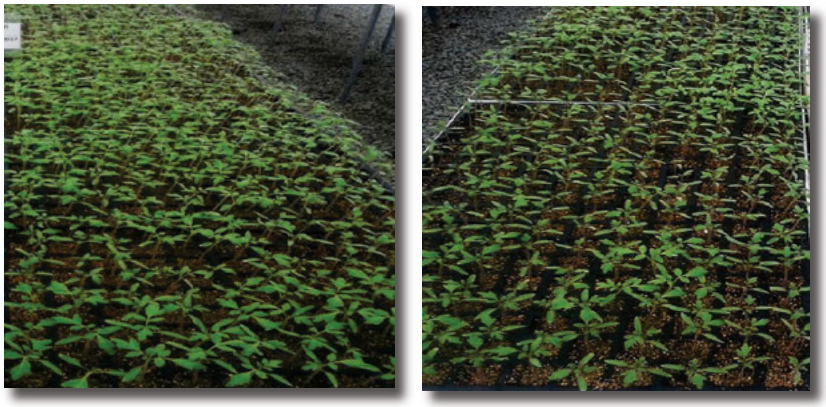


Root structure comparison - Onions

BIOCULT WS Untreated

BIOCULT – longer finer roots

Seed tray comparison - Tomatoes



BIOCULT WS Untreated

BIOCULT – higher germination rate

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3 different mycorrhizae species in BIOCULT

- The three species have been shown to work well together
- Each germinates and colonizes the root at different rates to maximize root association:
  1/ Rhizophagus 2/ Glomus 3/ Claroideoglomus
- With a wide diversity of soil types, growing conditions and plant hosts, a more diverse mycorrhizae inoculant will give better and more consistent results
- All three were selected, tested and proven to have superior performance under various and extreme climatic conditions of heat, salt, drought and flooding.
- All three have been shown to develop beneficial, synergistic associations with Trichoderma sp.

Benefits of Trichoderma in BIOCULT

- *Trichoderma asperellum* enhances the growth and colonization of mycorrhizae
- 5 strains were isolated from different soils and different crops to improve colonization and synergy
- These strains excrete growth promoting substances, stimulating root growth which in turn causes Mycorrhizal germination
- Trichoderma fungi are saprophytic - living off of dead and decaying organic matter breaking down old crop residue

Primary benefits related to improved yield:

- Nutrient solubilisation and uptake
- Drought tolerance and improved water availability
- Enhanced pest defence mechanisms
- Salinity and heavy metal tolerance
- Earlier fruit/grain set which gives more time to bulk up crop yield

Secondary benefits:

- Soil Carbon sequestering
- Enhanced soil structure
- Improved soil organic matter and water holding capacity
- Reduced nutrient leaching
- Improved soil biodiversity and soil health

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BIOCULT APPLICATION GUIDELINES

CROP	CROP GROUP	RATE g / ha	RECOMMENDATIONS
Potato, Carrot, Ginseng	1 – Root & Tuber *	200	**Carrots:** Apply after sowing through the irrigation **Potatoes and Ginseng:** Apply in-furrow, use 100L water/ha
Garlic, Leek, Onion	3 – Bulb Vegetables	200	Apply after transplanting through the irrigation system
Lettuce, Celery	4 – Leafy Vegetable *	200	Apply after transplanting through the irrigation system
Tomato, Pepper	8 – Fruiting Vegetable	200	Apply after transplanting through the irrigation system
Cucumber	9 - Cucurbits	200	Apply after transplanting through the irrigation system
Strawberry, Raspberry	13 – Berries *	200	Apply after transplanting through the irrigation system
Ornamentals		200	Apply after transplanting through the irrigation system
Turf		200	Apply through irrigation after sowing, at emergence or during the growth cycle
TRANSPLANTED CROPS		**RATE**	**RECOMMENDATIONS**
Apples & Pears Cherries & Peaches	11 – Pome fruit 12 – Stone fruit	200g/600 plants	Dissolve the 200g of Biocult Mycorrhizae WS in 30L of water. Apply 50ml of the suspension per plant, directly over the roots before closing the planting hole. **Note:** Keep suspension in constant agitation
Strawberries & Grape	13 - Berries	200g/1200 plants	Dissolve the 200g of Biocult Mycorrhizae WS in 30L of water. Apply 25ml of the suspension per plant, directly over the roots before closing the planting hole. **Note:** Keep suspension in constant agitation
Ornamentals : Shrubs			
ESTABLISHED CROPS		**RATE g / ha**	**RECOMMENDATIONS**
Grapes, Raspberry	13 - Berries	200	Apply through irrigation system at the start of a new growing season
Ornamentals		200	Apply after transplanting through the irrigation system
Apples & Pears Cherries & Peaches	11 – Pome fruit 12 – Stone fruit	200	Apply through irrigation system at the start of a new growing season
Turf		200	Apply through the irrigation system during the growth cycle

* Mycorrhizae do not readily associate with Brassica, Ericaceae or Chenopodiacea families

Always read and follow label directions.
Read the product Safety Data Sheet before use.

BIOCULT PRODUCT DETAILS

For use on: A wide variety of fruits & vegetables
Turf and ornamental plants

Active Ingredients: Glomus mosseae – 400 spores / gram
Claroideoglomus etunicatum – 400 spores / gram
Rhizophagus irregularis – 400 spores / gram
Trichoderma asperellum 1x 10^8 cfu / gram

Formulation: WP

Packaging: 200 gram foil envelope