

Mycorrhizae and useful microorganisms

Mycorrhizae (from the Greek “mykos”= fungus and “rhiza” = root) are a typical example of mutualistic symbiosis between plants roots and some kind of soil fungi: they help each other, by using nutrients and exchanging sugars synthesized by the plant and nutrient elements absorbed by fungi, with mutual advantage. The mycorrhizae contained in the Agreennovative range metabolize the minerals in the soil, even the most unusable ones and give them to the plant roots. Plants from their side supply fungi sugars produced by the photosynthesis, that are essential nutrients for them. Thanks to this symbiosis fungi can proliferate, so that pathogens are compelled to compete for space and nutrients.

Plants with mycorrhizae are able to better absorb nutrients from the soil and to defend themselves from the attacks of pathogens, they have a higher endurance to stress factors and grow faster, compared to plants without mycorrhizae.

In soils poor in microorganisms introducing mycorrhizae is a successful strategy, in order to recover fertility and to put the basis for a healthy and environmental friendly crop, good both under safety and nutritional point of view.

Useful microorganisms: into the rhizosphaera there are many kind of useful microorganisms, including Rhizobacteria and Antagonistic Fungi, which play usefule and healthy roles by means of different actions, such as minerals fixation, metabolizing of nutrients, production of phyto-hormones that have a PGPR effect (Plant Growth Promoting Rhizobacteria).

In addition antagonistic fungi are able to oppose pathogens, both by a myco-parassitism way and by producing metabolites with fungicide or bactericide action. Plants with mycorrhizae can take the highest advantage of these useful microorganisms, due to their more developed root system.

The best results for crops are obtained by an appropriate association of mycorrhizae and different useful microorganisms, specifically selected and stabilized, to best perform the specific function they are assigned to.



A healthy and well fed plant is able to defend itself with lower use of chemicals!



The natural and innovative solution for your crops

Agreennovative® is a trademark of:

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**INNOVATION
IN ORGANIC
AND
CONVENTIONAL
FARMING**



Natural products for crops health and soil fertility

All the *Agreenovative*[®] range of microorganisms are registered in the Italian fertilizers register (S.I.A.N.) and they are all allowed for use in organic farming

The product is based on an appropriate association of different species of antagonistic fungi: Trichoderma harzianum, Trichoderma viride, Clonostachys rosea. RIZACARE's main role is to protect the root system from pathogens, by means of different modes of action: myco-parasitism, production of secondary metabolites or enzymes, competition for space and nutrients. It acts against Sclerotinia, Rhizoctonia, Pythium and Fusarium. In addition Rizacare perform an important role in plants grow promoting, due to auxins production.

🦠 Formulation: LIQUIDO.
📏 Dosage: 2,5 - 3,5 kg/ha.

Based on an appropriate association of mycorrhizal fungi belonging to Glomus genus (G. intraradices), Frankia genus Actynomicetes and PGPR bacteria, as Pseudomonas vanvouverensis, able to perform an important and direct stimulation and protection of the root system. Thanks to the mutualistic symbiosis with roots, RIZA PF increases the resistance and the adaptation ability of plants to the environmental stress factors and improves the nutrients absorption efficiency. It promotes the roots extension and increases the number of roots hair, It also improves the nitrogen fixation, due to the Actynomicetes role. RIZA PF allows a significant decrease in fertilizers use and It can also be given by fertirrigation.

🦠 Formulation: POWDER and GRANULE 0,2 – 0,6 mm.
📏 Dosage: powder: 2 - 4 kg/ha; granule 15 - 20 kg/ha, about 30 gr/hole, into growing media 4 - 5 kg/m3.

The product is based on appropriate association of Actynomicetes belonging to Streptomyces genus (S. griseus) and Pseudomonas genus (P. lurida), that are PGPR bacteria. SHELL SP has immediate and evident effects on plant growth promoting. It is also effective in roots protection: it produces a fast increase, elongation and growth of roots cells, by producing useful metabolites. In addition It supports the production of siderophores, iron chelating agents able to make iron available for plants. Iron is an essential nutrient for plants healthy growth, in order to keep a good leaves color. SHELL SP is particularly recommended to overcome stressing situations, coming from environmental factors (for ex. Bitter cold, dryness).

🦠 Formulation: POWDER.
📏 Dosage: 2 - 3 kg/ha.

Prodotto specifico per il contrasto dei nematodi, costituito da una selezionata associazione di funghi antagonisti: Pochonia chlamydosporia e Lecanicillium psalliotae, in grado di controllare la popolazione di nematodi sia galligeni sia cisticoli presenti nel terreno, attraverso differenti azioni su uova e larve: parassitismo, produzione di enzimi e degradazione dell'involucro chitino delle uova. Grazie alla sua azione preventiva su uova e larve, **NEMACARE** previene la proliferazione dei nematodi nel terreno. NEMACARE promuove inoltre lo sviluppo dell'apparato radicale, attraverso un'azione micorrizo-simile.

🦠 Formulato: LIQUIDO.
📏 Dosaggio: 2,5 - 5 kg/ha oppure 300 - 500 ml/100 lt acqua.

RIZACARE
ROOTS PROTECTION
TRICHODERMA BASED

RIZA PF
ROOTS STIMULATION
MYCORRHIZAE BASED

SHELL SP
ENHANCED ROOTS
STIMULATION

NEMACARE
CONTROLLO DEI NEMATODI



FOLIAR
TREATMENTS

FILLOCARE
FOLIAR PROTECTION
B. SUBTILIS BASED

FILLOCARE
PLUS
ENHANCED
FOLIAR PROTECTION

ENDBAG MB
INSECTS PEST CONTROL

ENDBAG LL
INSECTS PEST CONTROL

ROOT
TREATMENTS

SOIL
TREATMENTS

NUTRISOIL
SOIL BIO-ACTIVATOR

The product is based on fluid yeast extract and dark brown algae, characterized by the presence of helpful and healthy bacteria, belonging to Bacillus genus: B.subtilis and B. subtilis subsp. inaquosorum. FILLOCARE's main function is to protect the foliage, by fighting a number of damaging fungi and bacteria, such as Botrytis, Rhizoctonia and root rots, thanks to its production of fungicide and bactericide molecules. FILLOCARE carries out its protective action also on the root system. In addition to the protective function, FILLOCARE performs a biostimulant action, through the production of specific enzymes, able to make nutrients available for plants, such as organic nitrogen and phosphorus and through the production of secondary metabolites with a PGPR effect, such as subtilisin and indole-acetic acid.

🦠 Formulation: LIQUID.
📏 Dosage: 2,5-3,5 kg/ha or 300 - 500 ml/100 lt water.

The product is specifically designed for foliar treatments, It's based on Aureobasidium pullulans, ubiquitous fungus, naturally growing also on leaves and fruits. FILLOCARE PLUS acts as a broad spectrum decomposing agent, It can metabolize chemicals, like residuals from agronomic practices. It also performs a pathogen control function, such as Botrytis and Monilia, extending this way the post harvest shelf life of vegetables and fruits.

🦠 Formulation: POWDER.
📏 Dosage: 200 - 300 ml/100 lt of water.

The product is based on an appropriate association of insects-parasitic fungi belonging to Metharizium and Beauveria genus. It acts by contact and parasitism: as It get in touch with insects body, It damages the cuticle and penetrate inside, where It reproduces, thus multiplying its action. ENDBAG MB's paramount function is to protect plants from insect pests, damaging both root systems and leaves. The specific association of Metharizium anisopliae and Beauveria bassiana is particularly effective in opposing the establishment of several species of insect pests, such as thrips, aphids, wireworms, whiteflies, cutworms, spider mites. ENDBAG MB is the more effective when used at the first signs of attack. The product is not harmful for bees and other pollinate insects.

🦠 Formulation: LIQUID.
📏 Dosage: 250 - 350 ml/100 lt of water.

The product is based on an appropriate association of insects-parasitic fungi belonging to Lecanicillium genus. As ENDBAG MB, it acts by contact and parasitism. ENDBAG LL's paramount function is to protect plants from insects pests, damaging leaves. The specific association of Lecanicillium longisporum and Lecanicillium muscarium is particularly effective in opposing the establishment of some species of insect pests, such as aphids and whiteflies. The product is not harmful for bees and other pollinate insects.

🦠 Formulation: LIQUID.
📏 Dosage: 250 - 350 ml/100 lt of water.

Selected rhizosphere microorganisms broad.spectrum consortium, It's composed of PGPR bacteria, like Pseudomonas spp and Bacillus spp, Actinomycetes belonging to Streptomyces genus and mycorrhizogenic fungi. These microorganisms can fast grow on the organic material of the soil, thus producing the best conditions for plants health and growth. Nutrisoil acts as a bio-activator for soils and growing media, by improving their biological fertility. It's useful for the bio-restoration of soils depleted by bad agronomic practices.

🦠 Formulation: LIQUID and SOLID.
📏 Dosage: liquid 5 - 7 kg/ha; solid:15 - 20 Kg/ha, into growing media 3 - 4 kg/m³.