BIOFIL®

About TERRAGRO Ltd.

TERRAGRO Limited is a Hungarian-owned company that has been established in 2013 for the marketing and distribution of the BIOFIL soil inoculants.

Scientific background: The BIOFIL products are the result of extensive scientific research in the past 6-8 years. The research team behind the BIOFIL products worked together with experts from the Microbiology Department at ELTE, the Corvinus University, the Budapes University of Technology and Economics, the Science Universities at Szeged, Debrecen and Pécs, the Szent István University at Gödöllő and the Delhi University in India. Several scientific papers have been published in the topic.

Our mission:

Offering solutions to promote agricultural production in low-fertility soils by soil bacterial inoculation.

Serving sustainable plant production by preserving the fertility and quality of one of our greatest treasures, the soil, for generations to come.

Optimizing soil health and function for optimal plant growth with the use of the BIOFIL soil inoculants.

Our product line:

BIOFIL Normal, Acidic & Alkaline

Based on almost 15 years of experience in soil inoculation, the research team has created a fundamentally new range of products that are purposively developed for low-fertility or deteriorated agricultural lands (e.g. acidified, alkaline-saline and sodic soils). The inoculant strains – isolated from different soil types in the Carpathian region – are able to grow and maintain high metabolic activity in unfavourable soil conditions, unlike currently available soil inoculants.

Why are the soil-specific BIOFIL inoculants an absolute novelty? What are the main benefits?

- Soil-specific: soil amelioration and plant growth promotion either in acidic, alkaline, neutral or salinized soil types.
- Native: contains soil-specific bacterial strains isolated from the region.
- Adaptive: the soil inoculant strains are adapted to the local climatic and soil conditions.
- Effective: the strains were tested with colonization-competition methods: no growth or metabolic inhibition occurs between the strains, moreover, certain strains act in synergy.

BIOFIL Post-Harvest

Cellulose-decomposing soil inoculant

The BIOFIL Post-Harvest soil inoculant is recommended to be applied after the harvest of corn and sunflower. Three different bacterial enzymes (cellulase, xylanase and beta-glucosidase) act together in the quick decomposition of lignine-rich stalk residues.

As farmers well know, it takes years for corn and sunflower stalks to degrade, as opposed to grain straw or rape stems. Fibres of corn and sunflower are very rich in lignocellulose, which can be decomposed by only a few species among cellulose-degrading bacteria.

Conventional agrotechnological - which focuses mainly on nitrogen-supply - cannot address this issue, because soil bacteria that produce lignocellulose degrading enyzmes are very few in number.

Intensive plant production measures reduce microbial activity in the soil, which further delays the decomposition of lignaceous plant residues. Naturally, it would take years for 1.5-2 kg/m2 of lignaceous matter to diminish.

Slowly decomposing plant stalks can hinder tilling procedures and impose plant health risks. The BIOFIL Post-harvest helps to prevent such problems and, in addition, releases abundant nutrients that promote the growth of the upcoming cultivation.

BIOFIL Soya soil inoculant bacterial product

- stimulates soil microbial activity
- promotes the growth and development of soybean plants
- improves abitotic stress tolerance and plant health
- enhances crop yield (based on field studies).

The BIOFIL Soya soil inoculant contains a soybean-symbiont bacterial strain, Bradyhizobium japonicum, that effectively associates with the root of soybean, forming root nodules that fix atmospheric nitrogen and supply the host plant. In Hungary, soybean-associated nitrogen-fixing bacteria are not naturally present in the soil.

BIOFIL Pea soil inoculant

The BIOFIL Pea soil inoculant contains a pea symbiont rhizobacterial strain (Rhizobium leguminosarum) that is highly effective in producing nodules – and fixing atmospheric nitrogen within the nodules – on the root of pea (Pisum sativum).

As an effect of inoculation, root nodule formation improves which provides a rich nitrogen supply to the host plant. The growth rate and resistance of plants are promoted, the quality and nutritive value of crops are improved, and yields can increase by up to 20-25%.

For more information, please visit us at:
www.terragro.hu/en/

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