Bactiva GmbH
SMALL DETAIL BIG DIFFERENCE

Bactiva®

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Rhizobacteria (PGPR) and *Trichoderma*

Strengthens all cultures starting at the roots in a biological way

Bactiva® is a water dispersible soil inoculant, which strengthens the plant root and enhances the resistance. The product is of a powdery texture and contains a highly potent strain of *Bacillus subtilis* and several species of the beneficial fungus *Trichoderma*, which strengthen plants in a natural way. **Bactiva®** is a rooting agent that stimulates the growth of roots through bacteria that produce plant hormones (Gibberellins, Cytokinins), such as *Bacillus megaterium* and *Pseudomonas fluorescens*. The bacteria and *Trichoderma* stimulate strong root growth throughout the entire growing period. In addition, they are indispensable tools during the plant germination phase or during the restoration of damaged roots. The bacteria fix nitrogen and make chemically inaccessible phosphorus soluble. Thereby they provide elements, which plants cannot take up otherwise. Biostimulants excite the biological activity of the soil. In association with the microbial ingredients, they enhance the level of cell division and lateral bud development, whereas the aging process of plant tissues is delayed.

Benefits:

Increases	Reduces
Transplant survival • Nutrient availability • Root mass • Flowering and color (flowers) • Cell division • Harvest and production • Water and nutrient uptake • Respiration and photosynthesis • Lateral bud development • Plant performance under stress	Loss of plants • Damage due to frost • Use of chemical fertilizers and fungicides

Compatibility:

Bactiva® is compatible with the majority of fungicides if mixed together only briefly. However, avoid the use of biocides like hydrogen peroxide and chlorine during application. In general, **Bactiva®** is compatible with fertilizers. **Copper:** According to the present state of knowledge **Bactiva®** is compatible with copper concentrations commonly used in the root zone. Though gram-negative bacteria like *Pseudomonas* fall out at these concentrations, *Trichoderma* and gram-positive bacteria (*Bacillus*) are generally compatible.

Application:

Apply the product when the sun´s ultraviolet radiation does not harm the beneficial microorganisms. **Vegetables:** Dilute **Bactiva®** in water and spray with a sprinkler hose or through the irrigation system. **Germination tray:** Sprinkle 1g/germination tray 5 days after sowing. Apply the same amount a few days before transplant. Each time drench the product to the roots with additional water. **Production in the field or greenhouse:** Apply a total of 0.5-1.5kg/ha in small quantities at intervals of 2-3 weeks. **Cereals:** Apply 500g/ha when sowing. **Nursery (germination tray, container or germination bed):** Apply 1kg/70,000 plants per month during the first 3 months. Afterwards use the same amount every 2 months. **Turf and grasses:** Use single doses of 250g at intervals of 2-3 months. The total annual amount is 0.5-1.5kg/ha. **Ornamental plants:** Use at least 200g/1,000m^2 in intervals of no more than four weeks.

Storage:

Store in a cool, dry place. Avoid high temperatures and direct sunlight. Product shelf life is up to 18 months.

Ingredients:

Beneficial bacteria: Nitrogen fixation, solubilization of phosphorus, production of plant growth hormones	*Bacillus subtilis*, *B. polymyxa*, *B. megaterium*, *Pseudomonas fluorescens*: 100,000,000 CFU/g (10^8 CFU/g) CFU = Colony Forming Units
Beneficial fungi: Stimulation of root growth and resistance	*Trichoderma harzianum*, *T. reesei*, *T. viride*, *Gliocladium virens*: 100,000,000 CFU/g (10^8 CFU/g)
Vitamins	Biotin, folic acid, B, B2, B3, B6, B7, B12, C and K
Amino acids	Plant proteins
Soluble yucca extracts	*Yucca schidigera*
Soluble sea kelp extracts	*Ascophyllum nodosum*

The product can be used in organic farming according to EU Eco-Regulation 2018/848
Product under the Mutual Recognition Regulation (EU); No. 2019/515: Base country Germany
Listed by FiBL as an input for organic agriculture in Germany

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