Bactiva® 5x

SMALL DETAIL BIG DIFFERENCE

Rhizobacteria (PGPR) and *Trichoderma*

Strengthens all cultures starting at the roots in a biological way

Bactiva® 5x 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® 5x** 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 boost 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 ageing 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® 5x 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® 5x** is compatible with fertilizers. **Copper:** According to the present state of knowledge **Bactiva® 5x** 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® 5x** in water and spray with a sprinkler hose or through the irrigation system. **Germination tray:** Sprinkle 0,2g/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 100-300g/ha in small quantities at intervals of 2-3 weeks. **Cereals:** Apply 100g/ha when sowing. **Nursery (germination tray, container or germination bed):** Apply 200g/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 50g at intervals of 2-3 months. The total annual amount is 100-300g/ha. **Ornamental plants:** Use 40g/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:* 500.000.000 CFU/g (5x10^8 CFU/g) CFU = Colony Forming Units
Beneficial fungi: Stimulation of root growth and resistance	*Trichoderma harzianum*, *T. reesei*, *T. viride, Gliocladium virens*: 500.000.000 CFU/g (5x10^8 CFUg)
Soluble sea kelp extracts	*Ascophyllum nodosum*

Approved for organic farming according to EC Organic Implementation Regulation 889/2008 Art. 3(4)

Herongerstr. 2, D-47638 Straelen, Tel. : (+49) 2834-942300, info@bactiva.de