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MYCOrtex

Quite simply the ***complete*** biostimulant product

Mycortex contains a range of specially selected microbial and extract-based biostimulants. These are then combined with a carrier specifically chosen for your particular application method, which itself also acts as a food source for the microbes. The benefits that all these biostimulants confer to plants are numerous, creating a healthy bioactive complex in the root zone leading to vigorous and robust plant growth with minimal requirement for additional inputs.

Why choose **Mycortex**?

Unlike nutrient deficiencies, pests, or disease problems, it is difficult to identify a deficiency in the beneficial microbes required for a plant to meet its growth/yield potential. Therefore, **Mycortex** covers *all the bases*, supplying a consortium of microbes and a range of biostimulants known to regularly induce yield uplift in many crops. Furthermore, these components act synergistically, improving their effectiveness and supporting microbial life far beyond the first application. Biotechnica's experts in biostimulant formulation will then prepare your living **Mycortex** to order and tailor the formulation to suit your delivery system (see below). No filler is used, with 100% of ingredients being an active component of the system.

The active components in **Mycortex** include:

Mycorrhizal fungi: It has been long recognised that mycorrhizae enable plants to extract nutrients from the soil much more easily than roots alone. This is because the fungi live in close association with roots. The increased ability of roots to obtain nutrients when in partnership with mycorrhizae is particularly important for the uptake of phosphorus which is poorly soluble and diffuses extremely slowly in soils. Even the uptake of more available nutrients and water is greatly improved through mycorrhizal association. Other benefits of mycorrhizae include increased protection against pests, pathogens and environmental stresses.

***Trichoderma* fungi:** Naturally occurring fungi, which crowd out many plant diseases that attack roots. The fungal species in **Mycortex** have been known to protect plants against such fungal diseases as *Fusarium*, *Pythium*, *Rhizoctonia*, *Phytophthora* and other soil borne pathogens.

Beneficial bacteria: The consortium of bacteria in **Mycortex** is derived from Biotechnica's unique **BactoLife** culture which contains over 20 beneficial species and strains in an optimized ratio to populate the soil and re-establish biological activity. The blend includes *Rhizobia* and *Azotobacter* which fix atmospheric nitrogen, and *Bacillus*, *Saccharomyces* and other strains which help solubilize nutrients and build soil structure. Beneficial microbes also colonise the root zone and provide effective protection against diseases.

Humates The addition of humates (humic and fulvic acids) acts as a balancing agent making nutrients biologically available. Humates are also powerful root growth stimulants thereby setting the conditions for

rapid establishment and robust, disease resistant, growth. Humates act as chelating agents making nutrients more bio-available and retaining them in the root zone.

Saponins: In order to balance and promote microbial activity in the soil, **Mycortex** contains active plant saponins, which have been used to great effect to promote biological activity, particularly in soils low in organic content where they stimulate root development and boost the soil microbial population.

Biotechnica also sell humates as **BioHumate** and saponins as **BioFlow** and **SapoNite** which can be used to stimulate rhizosphere bio-population and/or maintain the biological activity created by the addition of **Mycortex**.

Microbial feedstock; Depending upon your specific application method, additional microbial feedstocks can be added to the formulation. This includes balanced amino acids and complex carbohydrates which sustain microbial growth during the period of plant establishment in the soil and to promote the symbiotic link to the plants.

The main benefits of **Mycortex** are:

- Stimulation and promotion of root growth
- Improved plant nutrition (especially in adverse conditions)
- Nitrogen fixation
- Improved disease resistance
- Enhanced stress resistance (environmental, soil and toxic stress).
- An increase in soil microbes
- Improved soil quality and structure

Application protocols

General points

Suitable for use in both professional and amateur horticulture.

Incorporate into the soil at the time of planting to generate a beneficial microclimate in the root zone.

Because of the requirements for biological growth, results are not immediate with **Mycortex**. It will take a number of weeks for the organisms to develop and multiply and the benefits will become more apparent as time progresses, especially in warmer weather conditions.

Mycortex is not hazardous to humans or animals. However persons with known skin or allergy problems should wear protective gloves and mask. For full details see the Safety Data Sheet (SDS).

Incompatibilities

No known incompatibilities, but Biotechnica cannot predict or guarantee mix success for any product. For dispersible formulations always conduct a bucket test to confirm compatibility.

For some crops the mycorrhizal fungi in **Mycortex** will not be effective, this includes:

- **Non-mycorrhizal plants:** while over 90% of plants will form a connection with mycorrhizal fungi, there are some exceptions. There are no fungi that will form a mycorrhizal connection with *Brassica* crops and a very limited number of ornamental plants (contact Biotechnica for more details). These plants will still form connections with the beneficial bacteria in **Mycortex** and respond to the biostimulant components.
- **Short-lived plants:** Choose a fast-acting biostimulant, such as **Algaflex** seaweed extract, **SeaPhos** or **Amino Acid AM3**.

Root-dip form

For tree and shrub planting **Mycortex** is **formulated with** a moisture-retaining polymer. When combined with water it forms a semi-viscous gel that surrounds the entire root system, helping to maintain hydration

and protect the newly planted sapling. The gel also acts as a food source for the microbes during establishment. As a result **Mycortex** is a unique aid for the establishment of transplanted trees and shrubs by giving the plant the best possible start, particularly in less than ideal conditions.

One 250 g sachet of powder will make approximately 20 litres of liquid dip. This is enough to treat approximately 500 whips, depending on root density. Gradually add the contents of one sachet to 20 litres of water, whilst stirring, to get a good dispersion. Re-mix again after 10 minutes. The product will have developed a creamy consistency after 20 minutes. Because water quality affects the gel structure, slightly more or less water may be required to achieve the desired consistency.

Dip bare roots and allow the excess to drain back into the container. A good coat should cling to the roots. Plant as soon as possible. Because the product is "live" it should be used within 24 hours.
Do not dip specimens that show obvious signs of disease or decay.

Granular form

Containerized plants
2–3 litre pots: apply 10g
10+ litre pots: apply 15–20g.

Established trees: Mix **Mycortex** with sand and insert this mix into holes prepared around the drip line perimeter at 0.25Kg /m^2.

Tree planting (as an alternative to the root dip **Mycortex** formulation)
Apply 5g (1 teaspoon) into the planting hole for root balls up to 2 litres in size. For larger specimens apply 50g for each2.5cm of trunk diameter and mix into the backfill material.

Growing media
Mix in at 2.5Kg/m^3.

Turf
Apply at 5g/litre in top dressing mix worked in after slitting or tining or 1 kg / 500m^2 as a drench. Alternatively tumble in with grass seed at 1kg/ha when reseeding.

Dispersible form

Field crops

Can be applied in solution into a planting furrow with the seed/propagation material or coated onto the seed/propagation material.

- **Seed coating:** tumble seed with a solution of **Mycortex** or with clay based slurry using sufficient to give a uniform coating. If seed is to be dried after coating restrict drying temperatures to below 35°C.

Direct into the planting furrow with the seed/propagation material: Prepare a simple aqueous solution that can be metered or trickled into the furrow together with the seed.

- Apply 150 g/ha of **Mycortex** adjusting the amount per weight of seed according to sowing rate. The dilution rate is not critical and can be adjusted to accommodate the application equipment.

Alternatively use the granular form of **Mycortex** and incorporate into the soil at planting at 10kg/ha via a suitable unit such as a Horstine applicator.

Organic cultivation

Mycortex is approved for use in organic cultivation by the Organic Farmers and Growers Association.

For more information on any of our products see **www.biotechnica.co.uk**