

Product innovation in tree care: Treatment of wood decay fungi on living trees with Avengelus

Co-exists with
mycorrhizae
and parasitizes
wood decay
fungi

MycoSolutions from St. Gallen offers the following products for previously untreatable fungal diseases of trees a product novelty with the biological active ingredient *Trichoderma atrobrunneum*.

Wood decay fungi belong to two phyla, the Basidiomycota and Ascomycota. Decay fungi are characterized by a long life cycle, which can last for several years. Their inertia makes it difficult for them to adapt to fast-growing antagonists such as *Trichoderma atrobrunneum*. With growth rates of 1-2 mm/day, basidiomycetes are significantly slower growing than *Trichoderma atrobrunneum* with up to 2 cm/day.

Mycoparasitism Common soil- and stem-borne harmful fungi, such as *Kretzschmaria deusta*, *Armillaria mellea*, *Meripilus giganteus*, etc. respond to treatment with our product Avengelus and the infection pressure is reduced. *Trichoderma atrobrunneum* grows specifically towards the hyphae of the fungal pathogens, coils

around the host hyphae with appressoria and penetrates it. By excreting lytic enzymes, the opposing cell walls are degraded and *Trichoderma* feeds on the cell content. With the help of mycoparasitism and the rapid growth of *Trichoderma atrobrunneum*, infection pressure on the tree can be reduced and managed.

Tree cure As wood decay fungi often develop over years until the symptoms appear visually as fruiting bodies, a tree cure with Avengelus over a longer period (several years) is recommended.

Application During the growing season, one dose should be applied four times at intervals of about 4 weeks.

Avengelus Spore Suspension Application rate 2-10 ml per m² of soil and a water application rate of 0.5-1 L

per m² (spores must be rinsed into the first 20-40 cm of the soil or to the roots) If the spores are applied in combination with subsequent rainfall, the amount of water required can be reduced. For fruiting bodies/leaf treatment, dose 30 ml per L of water and apply below 30 °C during a dry period of several days. This allows *Trichoderma* to establish and by keeping the spores from being rinsed from the surface.

Avengelus Granules Spread 2-10 ml of granules per m² of soil before rainfall or water moderately. The spores should be flushed into the first 20-40 cm of the soil to the roots and to the pathogens. If the granules are placed in the planting pit, they should be placed directly with the roots of the plant in contact with the soil.



**BioControl
Agent
Avengelus**



MycoSolutions
inspired by nature



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