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Mycotec – cutting edge technology to grow filamentous fungi for agriculture

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Abstract

Filamentous fungi comprise some of the microbes with the highest potential to exert beneficial effects on plant protection and plant nutrition. However, to date humankind can produce only 0.001% of all known filamentous fungi in industrial bio-reactors, and consequently only very few species have made it into widespread use in agriculture.

Main challenge to industrial production is their mycelium. While stirred tank reactors (liquid fermentation) shred the mycelium to pieces, solid state fermentation (SSF) is regarded as hardly scalable due to the high risk of contaminations, lack of process control, and laborious product recovery from solid material.

At Evologic Technologies we have developed Mycotec, a novel fermentation process replacing the solids of SSF by a biopolymer, protecting the sensitive mycelium and allowing even conidia to form. Mycotec will enable the production of filamentous fungi at large scale yielding stable, pure and safe fungal products.