## B1. Application of mycorrhizal inoculations in agriculture production

### Collaboration:
- Institute of Botany, AS CR, v.v.i. : Dr. M. Vosátka
- Mendel University in Brno, Faculty of Horticulture, Lednice: doc. Pokluda, Ing. Nedorost
- biotechnological company Symbiom: Dr. A. Látr
- Szent István University (Hungary) – Dr. K. Posta
- Volcani Center, Israel – prof. Kapulnik

## B2. The role of mycorrhizal symbioses and associations in coniferous forest

### Collaboration:
- Institute of Botany, AS CR, v.v.i. : Dr. Vohník, Mgr. Kohout, T. Lukešová, T. Antl
- Global Change Research Centre AS CR, v.v.i. -doc. P. Cudlín (former joint projects, COST action)
  - University of Tartu (Estonia) – Dr. Tedersoo
- University of Lund (Sweden) – prof. Wallander

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Department of Experimental Plant Biology,  [http://kfrserver.natur.cuni.cz](http://kfrserver.natur.cuni.cz)  Charles University in Prague, Faculty of science
Current research projects:

B1. in collaboration with Symbiom company and
and Dr. Vosátko z IB AS ČR:

B2-1. COST OC09057 Development of sustainable production scheme of selected vegetable species on the basis of mycorrhizal biotechnology
PI: doc. Albrechtová

B2. in collaboration with the Department of Mycorrhizal Symbioses, Institute of Botany:

B2-1. COST OC10058 Roots, ectomycorrhizas, and below ground carbon balance of Norway spruce forests of Central Europe
PI: doc. Albrechtová, coinvestigator Dr. M. Vohník

B2-2. GAUK 2011/320311 Role of DSE (Dark Septate Endophytes) in plant community of forest ecosystem
The goal of the study is to test and adjust optimal cultivation of selected vegetable species in combination with yield increase and improvement of plant nutrition quality (e.g. antioxidat contents, mineral nutrients etc.) using microbial inoculation – combination of mycorrhizal and saprothropic fungi pre-inoculated on plant biomass.
B1. Application of mycorrhizal inoculations in agriculture production

Publications and outputs from last 5 years:


Hernádi I, Sasvári Z, Albrechtová J, Vosatka M, Posta K (under preparation): Field application of commercial arbuscular mycorrhizal (AM) inoculation increases yield of spice pepper (Capsicum annuum L. var. longum cv. Szegedi) and affects indigenous AM fungal community

Laboratory of ecophysiological anatomy
Research topic B) Ecophysiology of mycorrhizal symbioses and associations

Department of Experimental Plant Biology, http://kfrserver.natur.cuni.cz Charles University in Prague, Faculty of science
B2. The role of mycorrhizal symbioses and associations in coniferous forest

B2. in collaboration with the Department of Mycorrhizal Symbioses, Institute of Botany:

Current research projects:

B2-1. COST OC10058 Roots, ectomycorrhizas, and below ground carbon balance of Norway spruce forests of Central Europe
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B2. The role of mycorrhizal symbioses and associations in coniferous forest

CREW – in collaboration with: the Department of Mycorrhizal Symbioses, Institute of Botany:


Department of Experimental Plant Biology, http://kfrserver.natur.cuni.cz Charles University in Prague, Faculty of science
Current research projects:

B2-2. GAUK 2011/320311 Role of DSE (Dark Septate Endophytes) in plant community of forest ecosystem


- Dark Septate Endophytes are ubiquitous plant root endophytes, their physiological impact is not well understood yet. DSE fungi connect with their mycelia root systems of different plants and this interconnection may influence plant nutrition uptake and can mediate interactions between the plants.

What impact have selected representatives of DSE on host plants? Can DSE mediate interactions between ericoid plants and conifers within the forest ecosystem?
B2. The role of mycorrhizal symbioses and associations in coniferous forest

Current research projects:

B2-1. COST OC10058 Roots, ectomycorrhizas, and below ground carbon balance of Norway spruce forests of Central Europe
PI: doc. Albrechtová, spoluřešitel Dr. M. Vohník

- Interactions of allochthonous plants and mycorrhizal fungi can contribute to an invasive character of those allochtonous mycorrhizal plants depending on 1) diversity of mycorrhizal fungi and 2) different carbon allocation into belowground plant biomass or mycorrhizal structures.

How the invasive specie - Eastern White Pine influence the autochtonous mycorrhizal communities?
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Current outputs and publications:


