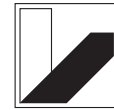


BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

Summer 2022



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday

05.05.2022

12:15 in H8, GEO



Prof. Dr. Johanna Pausch

Agroecology, BayCEER, UBT

Tenure track evaluation: Mycorrhizal Fungi and Soil Carbon Storage

The world's soils are the largest terrestrial reservoir of organic carbon (C). Feedbacks between soil organic C and atmospheric CO₂ will determine the future trajectory of climate change. However, predictions are largely uncertain because we still lack fundamental knowledge of the complex interplay between plants and microorganisms and its influence on C turnover.

Most terrestrial plants live in symbiosis with mycorrhizal fungi. Previous work suggests that on a global scale soil C stocks are linked to the distribution of arbuscular mycorrhizal (AM) or ectomycorrhizal (ECM) plants. To date, it is not clear whether there is a causal relationship between mycorrhizal type and soil C storage. Answering this key question requires novel concepts that consider the mechanistic link between short-term C fluxes from plants to mycorrhizal fungi and C storage as an emerging ecosystem property.

In my presentation, I will give an overview of ongoing and future research on the dynamics of C input by mycorrhizal fungi to soil, their effects on C turnover and their implications for C storage in ecosystems dominated by AM or ECM trees.

