## BayCEER Kolloquium

Lectures in Ecology and Environmental Research



Summer 2023

Donnerstag/Thursday 22.06.2023 12:15 in H6, GEO



Prof. Dr. Steffen Kolb Microbial Biogeochemistry, ZALF

## **Microbiomes in Agricultural Ecosystems – Their Roles for a Sustainable Land Use**

Agricultural ecosystems in central Europe are impacted by the societal decisions made and practices applied in land use. More than 50% of the land surface are grass and crop lands in Germany. Soils life includes a huge and complex biodiversity of microorganisms that interacts with other soil life and plants - the microbiome. Soil microbiomes are essential for fundamental ecosystem functions that include greenhouse gas sink and source functions, and nutrient cycling that is the basis for plant productivity. Thus, soil microbiome-mediated ecosystem functions will be the key topic of the talk. I will present recent research from my group Microbial Biogeochemistry at ZALF (Leibniz Center for Agricultural Landscape Research) and will give insights for discussion into two recent research topics that are linked to land management and land use intensity in plant production: (a) the role of microbiomes for the methane sink in managed temperate grasslands and (b) their adaption and controls to nitrogen turnover and productivity in cereal cropping systems.



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The lectures are an interdisciplinary platform for students, junior and senior scientists. Scan the QR code or visit our homepage for abstracts and further information:

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