



Plant - microbe interactions under Global Change: the microbial perspective

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There is ample evidence that both microorganisms and plants will respond to Global Changes, such as enhanced temperatures, increased nitrogen deposition and atmospheric CO₂ concentrations, or biodiversity loss. Plant and microbial activities are linked, amongst other factors, by belowground carbon allocation and aboveground nutrient allocation, which may be altered under Global Changes to different extents. The effect of Global Changes on the interaction of plants and microbes is therefore often difficult to predict.

In my talk, I will look at plant-microbe interactions from a microbial perspective. I will ask the question what the direct and indirect (plant-mediated) effects of Global Changes are on microbial activities in soil and what this in turn means for plants and for ecosystem-scale fluxes. I will present results from an in-situ drought experiment, from a long-term soil warming experiment and from a plant diversity experiment, where we investigated microbial growth and turnover, carbon and nutrient use efficiency and gross nutrient transformation rates.