the genera Bacillus and Burkholderia had both abilities. The bacterial genomes were sequenced, which should help us to further investigate the mechanisms involved.

P1.1-119

WHAT MAKES A COMPOST SUPPRESSIVE TO SOILBORNE PATHOGENS?

LOGO Anja. (2,3,4), THÜRIG Barbara. (2), OBERHÄNSLI Thomas. (2), MAURHOFER Monika. (4), WIDMER Franco. (3), MAYERHOFER Johanna. (3), **FLURY Pascale. (1)**

(1) Plant Microbe Interactions, University of Basel, Basel, SWITZERLAND; (2) Crop protection - Phytopathology, Research Institute of Organic Agriculture FiBL, Frick, SWITZERLAND; (3) Molecular Ecology, Agroscope, Zürich, SWITZERLAND; (4) Plant Pathology, ETH Zurich, Zurich, SWITZERLAND

Text

Composts have been shown to suppress soilborne pathogens in numerous greenhouse and field experiments. However, the effectiveness of disease suppression is highly variable between composts, and we currently lack reliable indicators to select composts for plant protection. We hypothesize that disease suppression is a complex interplay between abiotic and biotic compost properties. Investigating the microbial communities may help to develop tools for predicting suppressive properties and producing composts with strong biocontrol activity.

In the first part of the project, 17 composts were assessed for disease suppression in a cress–*Globisporangium ultimum* (syn. *Pythium ultimum*) system and assessed for their physico-chemical properties. Their microbial communities were analyzed using an Illumina metabarcoding approach, which identified bacterial taxa that are indicative for disease suppression. This data set has now been extended by 30 additional composts and a cucumber–*G. ultimum* and a cucumber–*Rhizoctonia solani* test system, which revealed differences in disease suppression between pathogens and plant species. The microbial communities are currently assessed by SMRT cell long-read sequencing with the goal to get a high taxonomic resolution to accurately relate the sequencing data with isolates obtained from the composts. Our comprehensive data set provides new insights into the contribution of different abiotic and biotic factors to disease-suppressive activity of composts.

P1.1-120

ENVIRONMENTAL CONDITIONS AFFECT PUCCINIA PUNCTIFORMIS TELIOSPORE LONGEVITY

ASTETE FARFAN Almendra. (1), NORTON Andrew. (1), JAHN Courtney. (1)

(1) Colorado State University, Fort Collins, UNITED STATES

Text

The autoaecious rust-fungus *Puccinia punctiformis* is an obligate biotroph pathogen of *Cirsium arvense*; a cosmopolitan weed and one of the most harmful noxious weeds in