

2nd EUCARPIA Workshop on Implementing Plant-Microbe Interactions in Plant Breeding

When & where: 6 December 2019, UFT Tulln

Workshop direction: Pierre Hohmann, FiBL, CH & Friederike Trognitz, AIT, AT

Description

The workshop aims to strengthen a network among plant breeders and scientist of different disciplines to explore the use of plant-microbe interactions in plant breeding.

In recent years, plant-associated microbes have received considerable attention in research for their ability to improve crop productivity and yield stability. Benefits include improved nutrient uptake and resistance against biotic and abiotic stresses. Influences of crop management, soil parameters and climatic effects are well documented. Knowledge on plant genetic determinants for beneficial interactions with individual microbes (incl. biologicals) and entire communities is growing rapidly. Several reports indicate that not only the host species but also the host genotype play a significant role in driving microbial community composition and activity, selecting for and against particular members of the microbial community. However, to what extent genetic factors are responsible for shaping beneficial plant microbiomes is still poorly understood. Similarly, seed or plant microbiome manipulation via the introduction of biologicals offers great promise, but still suffers from variable outcomes due to insufficient knowledge of the factors involved for a successful integration. In conclusion, there are still many uncertainties on how to implement this knowledge into plant breeding and seed multiplication programmes.

The Workshop is organised by the EUCARPIA Working Group on Plant-Microbe Interactions of the Section Organic and Low-Input Agriculture and will continue to discuss the potential and limitations of implementing the growing knowledge on plant-microbe interactions in plant breeding in order to improve stress resistance, plant nutrition, plant health and general adaptability, and links between upstream disciplines and breeding. This shall foster the dialogue between the different disciplines in order to develop advanced breeding strategies for the future.

Session I: Genetic determinants of plant-microbe interactions

Keynote: **Dr. Davide Bulgarelli** (Royal Society of Edinburgh Research Fellow at Dundee University)

Session II: Integration of plant-microbe interactions into breeding

Keynote: **Dr. Martin de Vos** (Program Scientist Trait Biology at KeyGene N.V.)

Registration & Abstract submission:

For miCROPe participants via www.micrope.org/register until October 6. For workshop-only participants via <https://anmeldeservice.fibl.org/event/2nd-eucarpia-workshop-2019> until November 15. Submit abstracts to pierre.hohmann@fibl.org until **September 30, 2019**.

