

## Session II Lecture 2

# **High throughput phenotyping : associated tools and methods to assess determinisms of plant and microbiome interactions**

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Plant breeding programs poorly considered root traits and neglected the exploitation of beneficial plant-microbiome interactions to improve plant performance. Innovative breeding strategies to improve food/feed production, relying on innovative phenotyping tools, platforms and methods will be exposed. As such, the characterization of key root traits, their plasticity and the associated molecular basis for resilience of plants to abiotic constraints will lead to more resource use efficient and stress tolerant varieties, valorising interactions with microorganisms to reduce fertilizer use and negative impacts. This best use of technological, digital solutions will contribute to achieving food security, improve human nutrition and promote sustainable agriculture.