



## Manipulation of Hemipteran Vectors Via Microbiome Modifications Network

### What counts as ‘success’ in microbiome modification? A quick historical perspective on microbial management.

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- **Date and Time:** Thursday, March 5, 2026, 15:00 CEST
- **Webinar Link:** Scan the QR to join the mailing list. The webinar link will be sent by email.

**Abstract:** Microbiome modification is becoming a recurring mode of intervention thanks to the development of technologies across agriculture, medicine, and environmental research. The goals that guide these interventions in agricultural settings are commonly related to productivity, stability, and climate mitigation. Success is then inferred from measurable effects such as nutrient mobilisation, pathogen suppression, and material degradation. We examine how assumptions about success shape microbiome research, traveling across fields. We situate microbiome modification in the historical development of industrial agriculture and bio-management. We will explore how microbes are mobilised in efforts of stabilise production or environmental processes through a couple of examples drawn from human medicine, soil ecology, and environmental microbiology. These include faecal microbiota transplantation in *Clostridium difficile* infection, microbial inoculants as rhizosphere modifiers, and plastic-degrading bacteria. We examine how is success framed under different conditions and highlight their limitations guided by the literature.

By treating microbiome modification in agricultural settings as a form of developing management, we aim to ask what kinds of management are currently being pursued and toward which ends. Doing this allows to foreground questions on current ecological conditions, resilience, and the circumstances under which pathogenic effects repeatedly emerge, particularly in highly managed systems. The aim is to reflect on how the goals of microbiome-based interventions align with the ecological systems in which they operate, and how this reflection can guide the development of responsible microbial governance.

#### Speaker’s Bio:

I am currently a doctoral student at the Humboldt Universität zu Berlin and the Leibniz Centre for Agricultural Landscape Research (ZALF), at the intersection of microbial ecology and history of science. I hold a Master’s in Philosophy in Biology and Medicine from the Université de Bordeaux, and practical experimental work in soil sciences during my stay with Prof. Matthias Rillig at the Freie Universität Berlin. I also collaborated with Prof. Louis-Patrick Haraoui



under the CIFAR ‘Humans & the Microbiome’ program, focusing on One Health and microbial interconnectedness. I am particularly interested in multicausal ecological systems, theoretical ecology and governance of microbial communities.