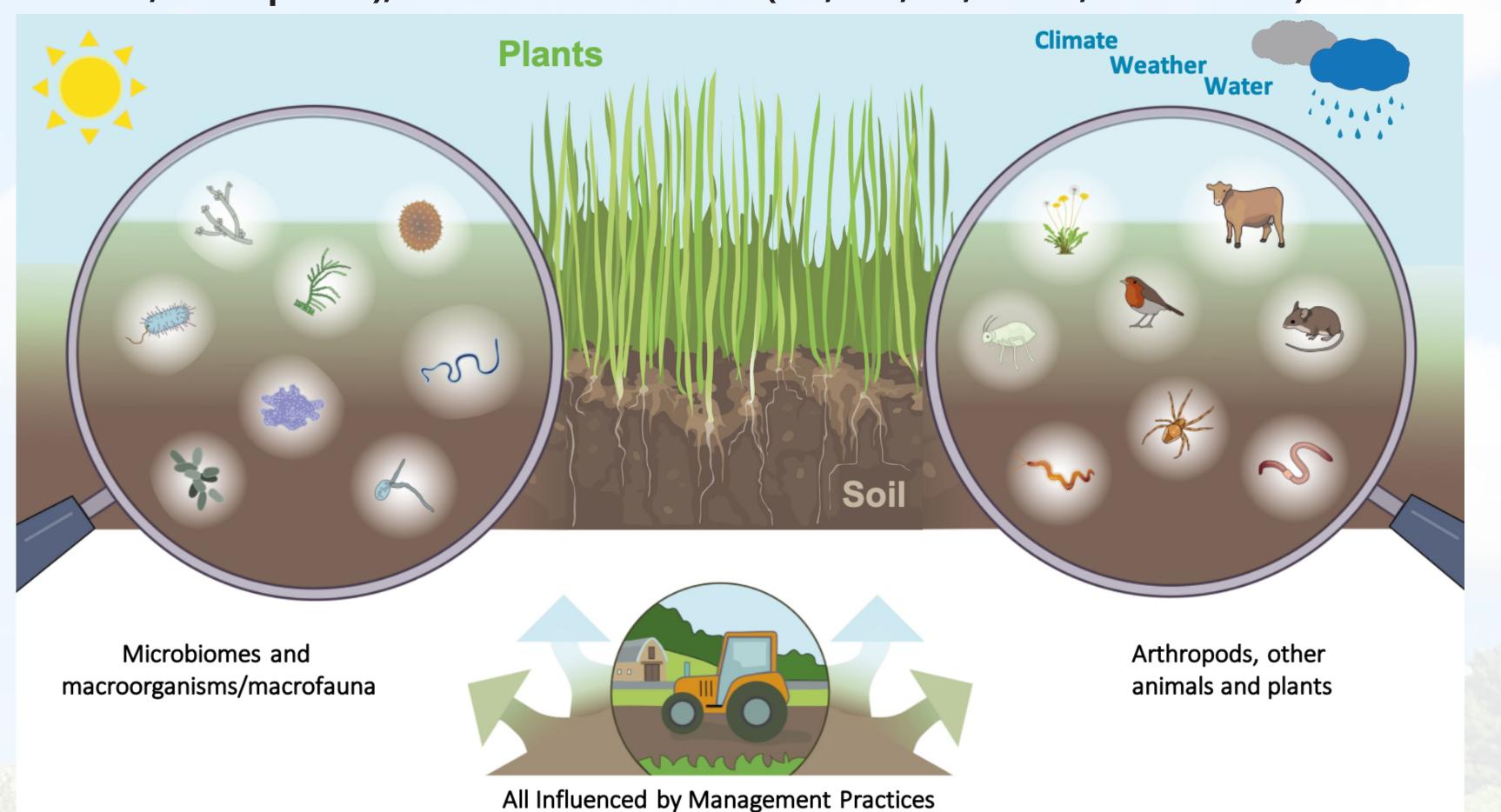
INTERNATIONAL ALLIANCE FOR PHYTOBIOMES RESEARCH

THE PHYTOBIOMES ALLIANCE

The mission of the International Alliance for Phytobiomes Research is to establish a science and technology foundation for site-specific, phytobiome-based enhancement of sustainable food, feed, and fiber production.

PHYTOBIOMES: COMPLEX SYSTEMS OF PLANT-BASED AGRICULTURE

Phytobiomes consist of all organisms living in, on, or around plants (e.g., microbes, animals, other plants), and the environment (i.e., soil, air, water, and climate).



FUNDED COORDINATED PROJECTS

Alliance

Institute, UK

- Microbes4Climate Microbial services addressing climate change risks for biodiversity and for agricultural and forestry ecosystems: enabling curiosity-driven research and advancing frontier knowledge

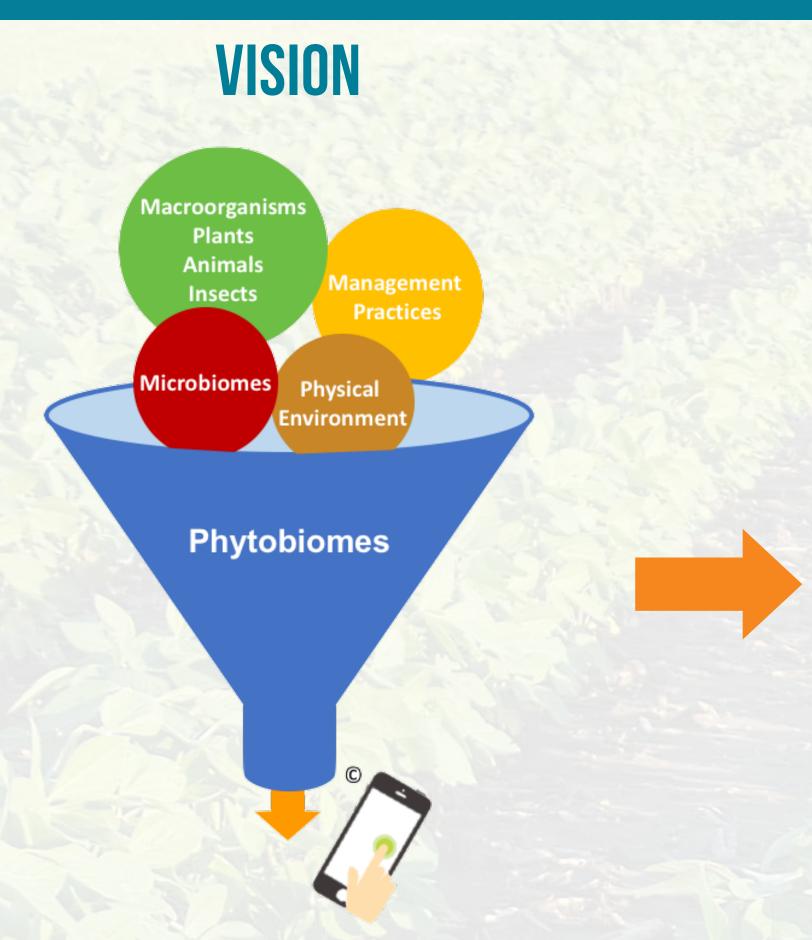
 Funded by Horizon Europe Framework Programme (HORIZON) Coordinator: MIRRI, Portugal
- Novel microbiome technologies to increase profitability for Australian horticulture Funded by Hort Innovation, Australia Coordinator: Kirsty Bayliss, Murdoch University
- USCCN United States Culture Collection Network
 Funded by the National Science Foundation (NSF), USA Coordinator: Dusti Gallagher, Phytobiomes Alliance
- Improved Identification and Detection of Select Agent Ralstonia solanacearum Strains Threatening the US Potato Industry

 Funded by the USDA Animal Plant Health Inspection Service (APHIS), USA Coordinator: Kellye Eversole, Phytobiomes
- Root2Res Root phenotyping and genetic improvement for rotational crops resilient to environmental change

 Funded by Horizon Europe Framework Programme (HORIZON) Coordinator: ARVALIS, France and The James Hutton
- CIRCLES Controlling mIcRobiomes CircuLations for bEtter food Systems
 Funded by the EU Horizon 2020 research and innovation programme Coordinator: Marco Candela, University of Bologna, Italy
- MASTER Microbiome Applications for Sustainable food systems through Technologies and EnteRprise

 Funded by the EU Horizon 2020 research and innovation programme Coordinator: Paul Cotter, Teagasc, Ireland
- The UK Crop Microbiome Cryobank
 Funded by the Biotechnology and Biotechnology Sciences Research Council (BBSRC) UK Research Innovation
 Coordinator: Matthew Ryan, CABI, UK
- SUCSEED Stop the use of pesticides on seeds
 Funded by the Agence National de la Recherche (ANR), France Coordinator: Matthieu Barret, INRAE, France

STRATEGIES AND PRIORITIES OF THE PHYTOBIOMES ALLIANCE



Phytobiome-enabled next-generation precision agriculture

STRATEGIES

- Identify research, resource and technology gaps and develop roadmaps to fill them
- **Coordinate and manage projects to address gaps**
- >>> Facilitate international and public-private collaborations
- >>> Focus on pre-competitive science
- Develop an interdisciplinary community of researchers committed to advancing phytobiomes science
- **Empower industry growth and profitability**

SHORT TERM PRIORITIES

Enhance understanding of the interactions between plants, microbiomes, and other components of phytobiome systems

Link site-specific and temporal geophysical and biological data

Develop databases that support correlation studies between biological and geophysical phytobiome components

Draft standards, protocols, check-lists (minimum information, sampling, reference datasets, regulatory requirements...)

Deploy genome sequence-based classification system for microbes

Design preliminary models for several agroecosystems (crops, forage, trees...)

Draft regulatory science roadmap for microbials



PHYTOBIOMES ALLIANCE SPONSORS





































