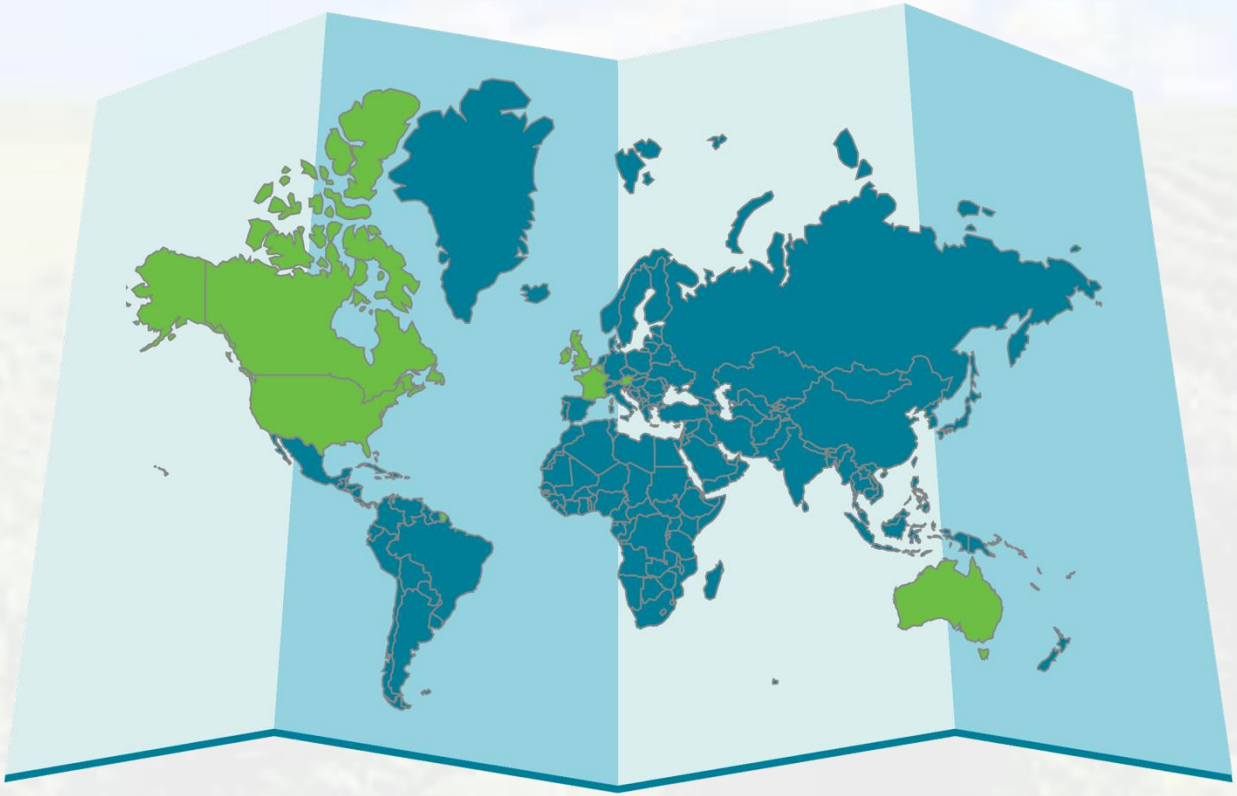
Phytobiomes:
A New Vision for Agriculture

Name

Date

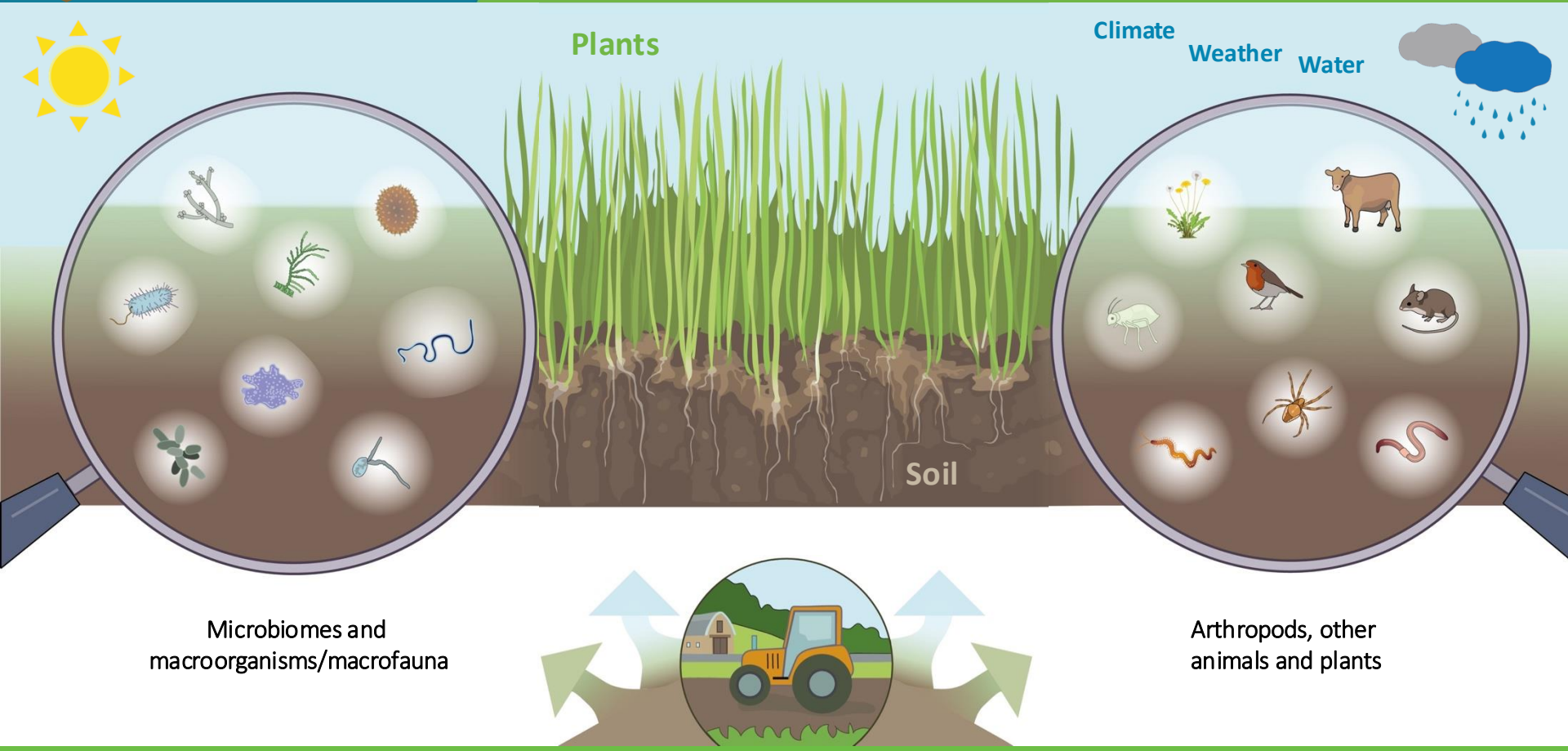
Conference & City Country

International Alliance for Phytobiomes Research



- Nonprofit, precompetitive research consortium
- Industry, Academia, and Government
- 8 countries
- Coordinating a paradigm shift in agricultural research and production

Phytobiomes: Complex Systems of Plant-based Agriculture



Microbiomes and macroorganisms/macrofauna

Arthropods, other animals and plants

All influenced by management practices

Examples of Phytobiomes

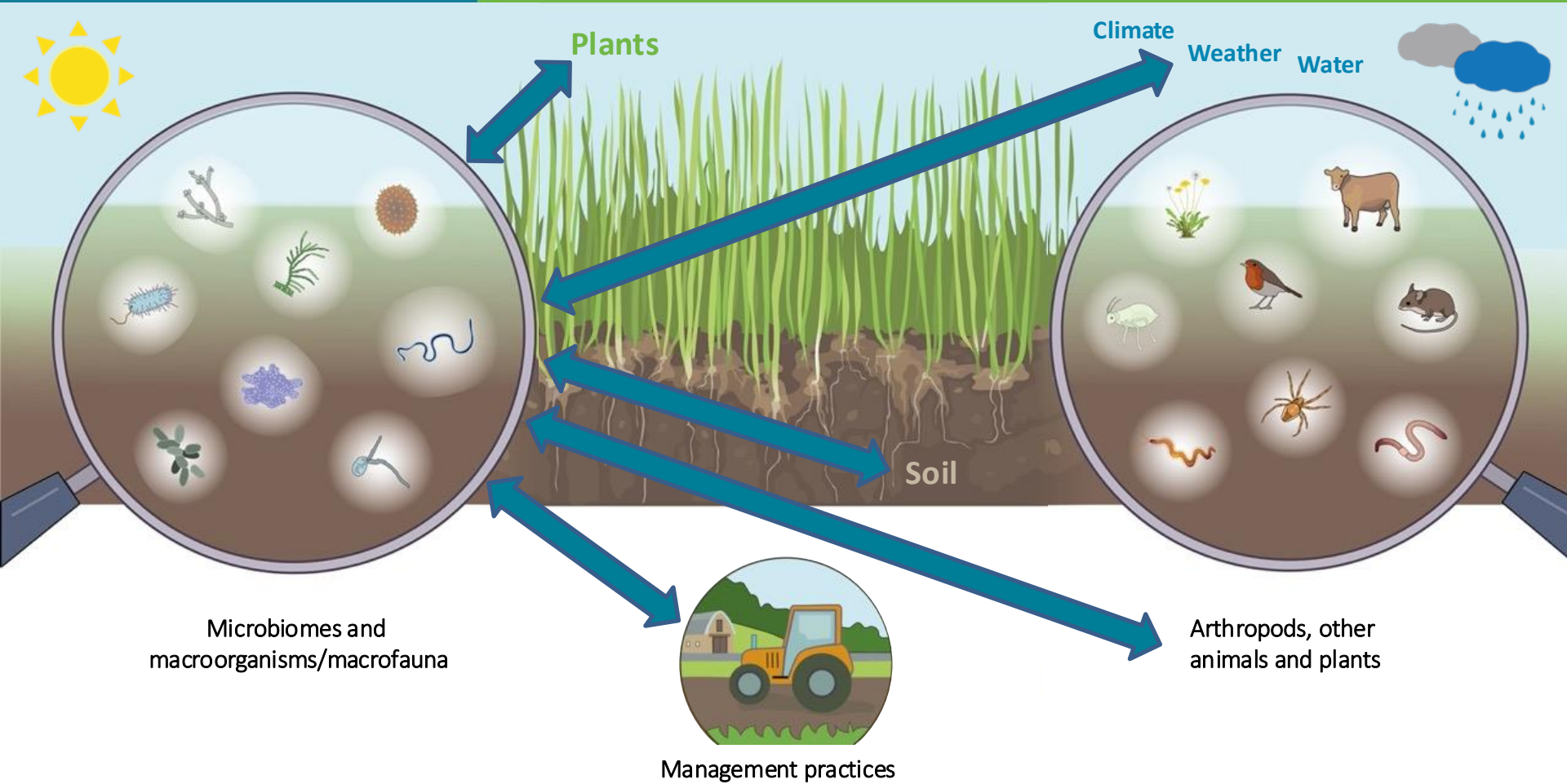
Holy Grail for Phytobiomics

To understand, predict, and control emergent phenotypes within specific phytobiomes for the sustainable production of food, feed, and fiber.

Phytobiomes Alliance Vision

By 2050, all farmers have the ability to use predictive and prescriptive analytics based on geophysical and biological conditions for determining the best combination of plants, management practices, and inputs for a specific site in a given year.

Phytobiomes: Major Research Gaps



Research Priorities

- Phytobiomes-knowledge generation
- Standards and protocols & capacity building for application
- Regulatory framework
- Data generation, management & modeling
- Multi-disciplinary capacity building
- Precision, digital and AI Ag integration

Major Efforts

Projects that Link Components Within the Entire Phytobiomes Network

Sequence-based Classification System for Microbes

Microbiome Standards – International Microbiome & Multi'omics Standards Alliance

Facilitate Regulatory Compliance

Coordination of Microbial Collections and Networks: Public & Private

Establish Linkages with Human and Animal Health & Nutrition

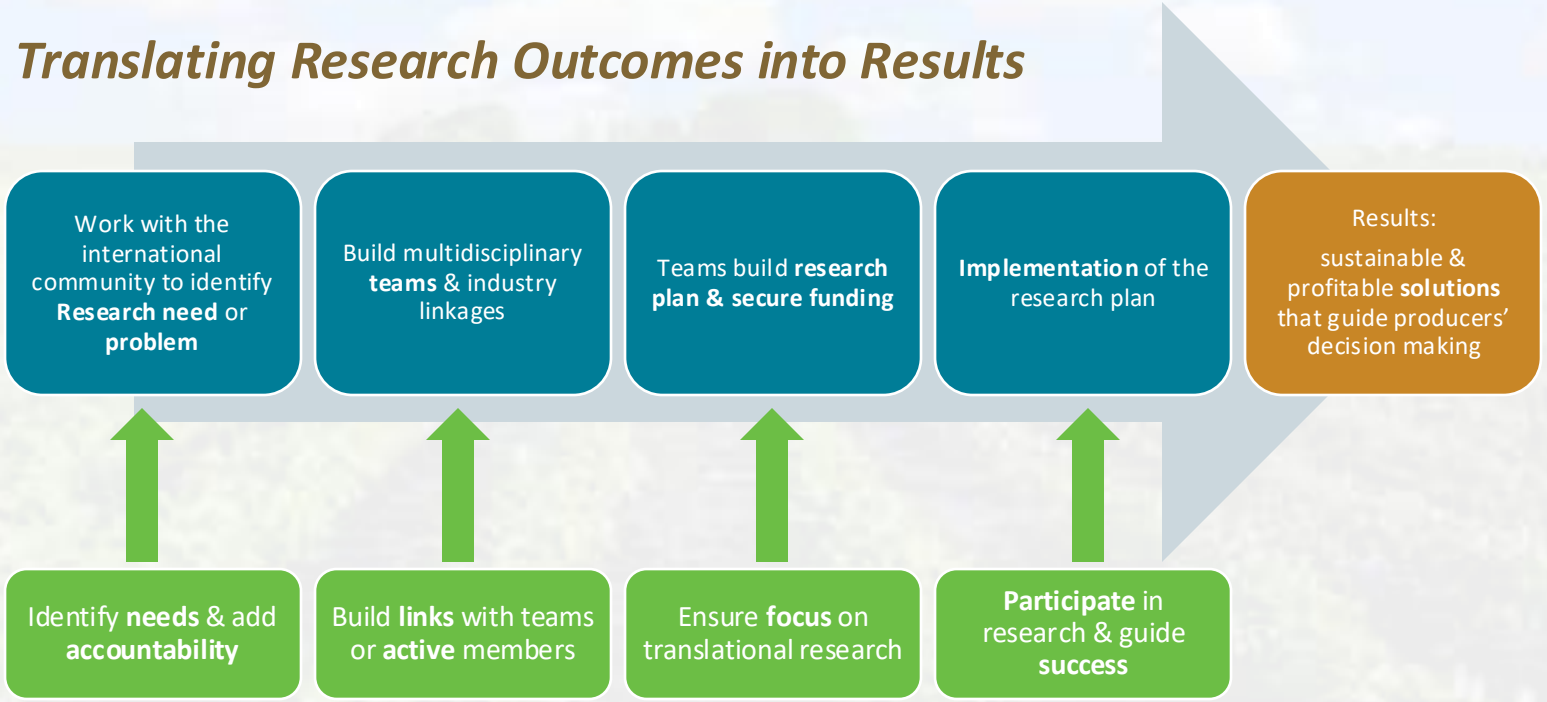
Phytobiomes Alliance Working Groups

Identify gaps and research needs; coordinate efforts on specific topics

- Microbiomes
- Regulatory
- Animal Microbiomes
- Controlled Environment Agriculture
- Soil Health

The Alliance in Action

Translating Research Outcomes into Results



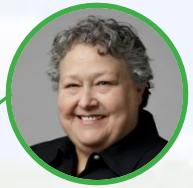
Industry Sponsor Participation

Phytobiomes Alliance Sponsors

Alliance Staff: Get in Touch with Us

Isabelle Caugant
Communications Director
caugant@eversoleassociates.com

Lori Leach
Chief Operations Officer
leach@eversoleassociates.com



Kellye Eversole
Scientific Advisor
eversole@eversoleassassociates.com

Joshua Stein
Project Manager
stein@eversoleassociates.com

Ying Sun
Webinar and Conference Logistics Coordinator
sun@eversoleassociates.com

Dusti Gallagher
Executive Director
gallagher@eversoleassociates.com

www.phytobiomesalliance.org

internationalphytobiomesalliance

@phytobiomes

Thank you for listening

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