

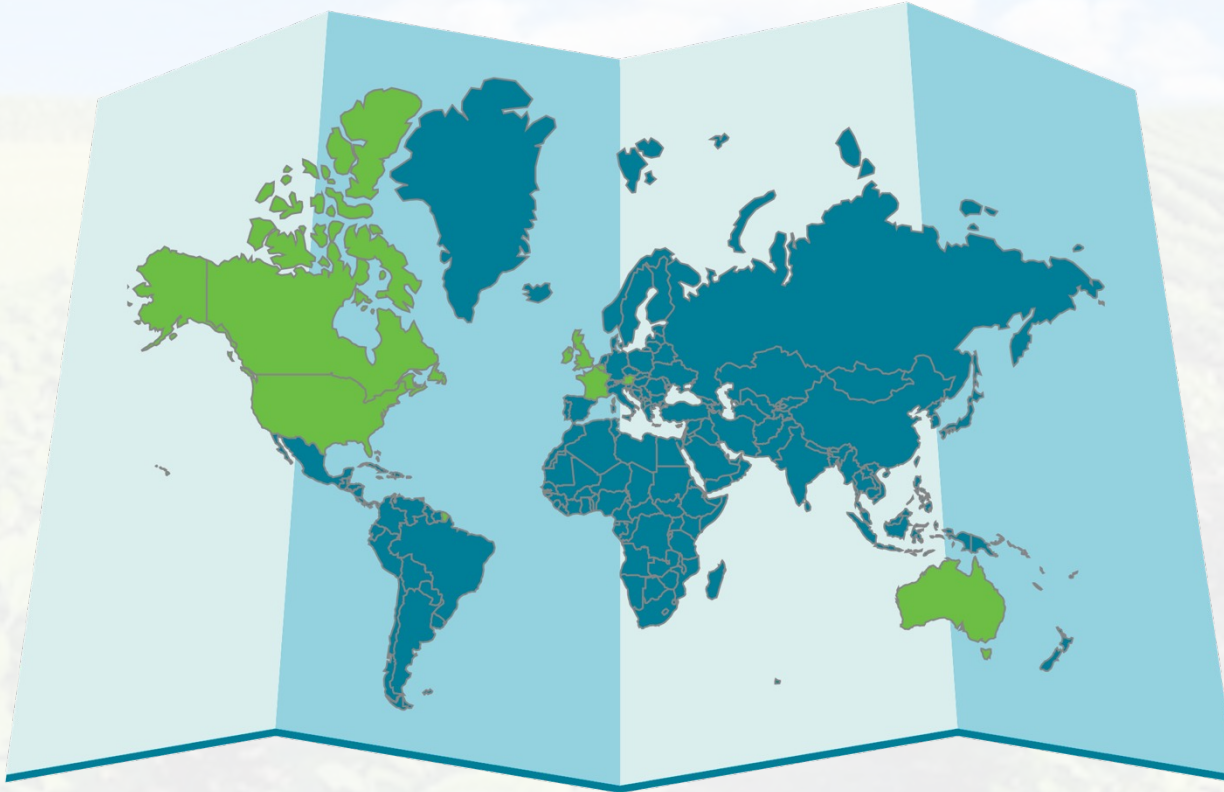


# Phytobiomes: A New Vision for Agriculture

**Name**

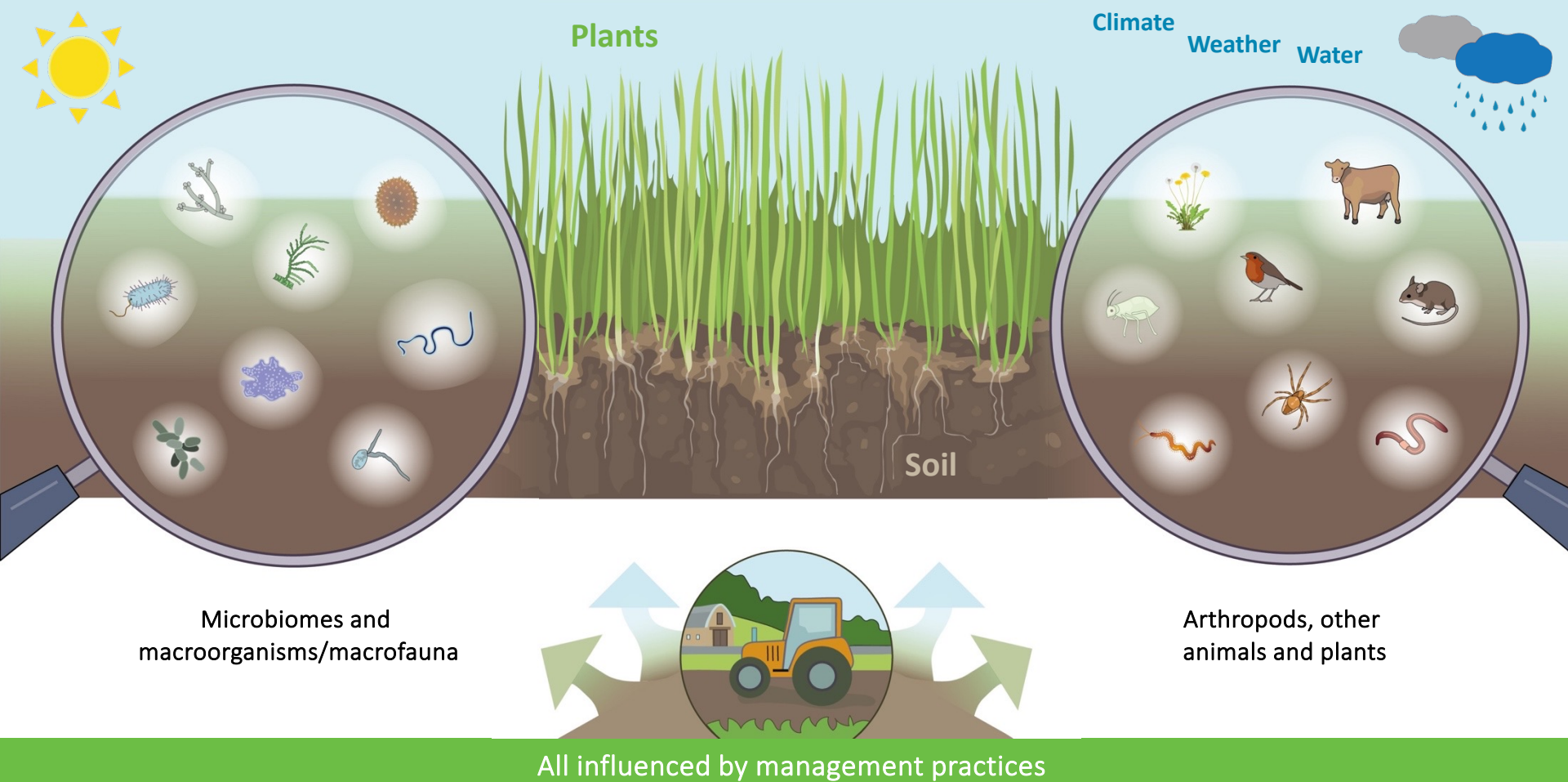
Date

Conference & City Country



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

# Phytophosphorus: Complex Systems of Plant-based Agriculture





# Examples of Phytobiomes

Crop Field



Pasture



Vegetable Garden



Forest



Vertical Farm





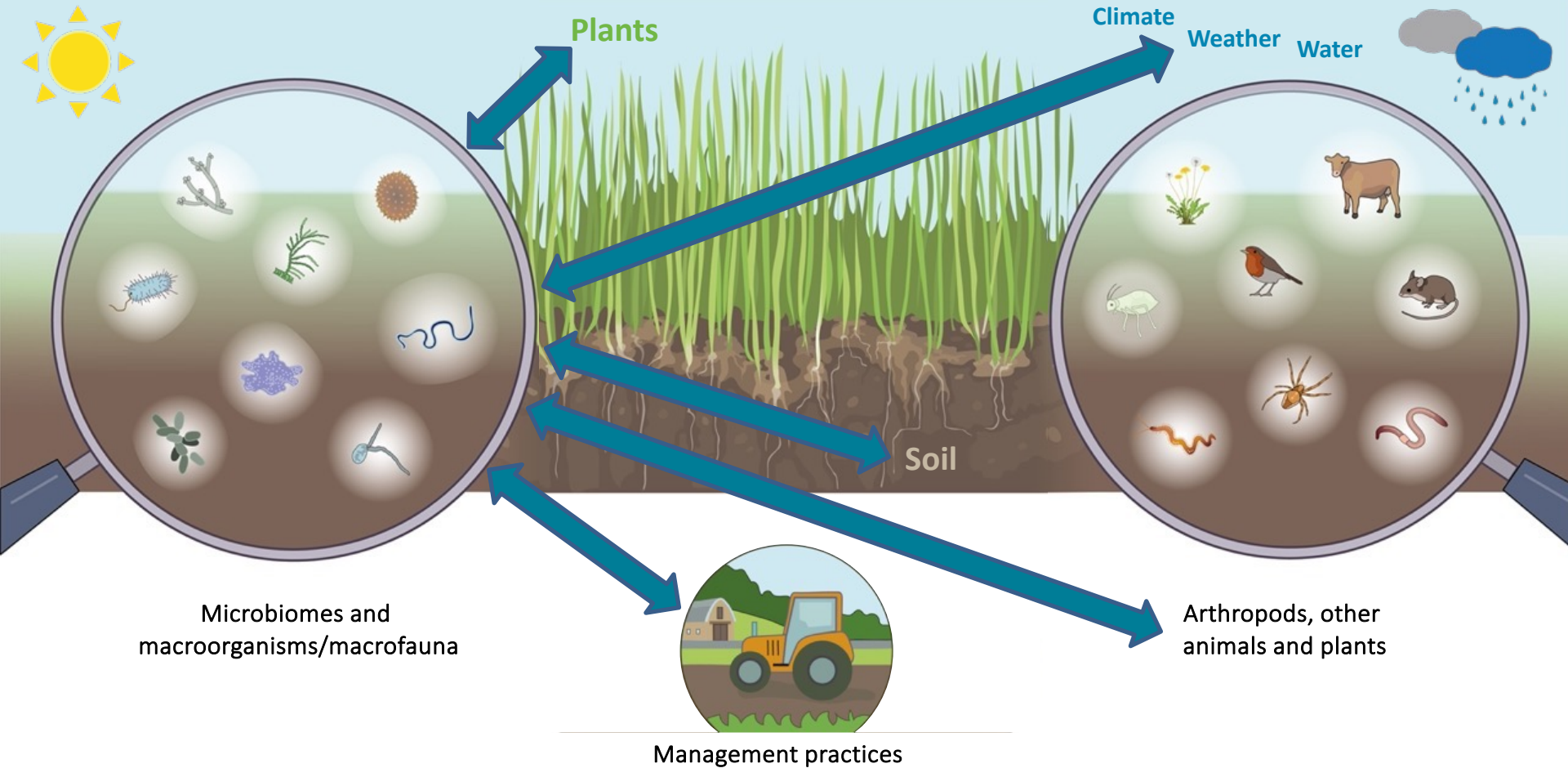
# Holy Grail for Phytobiomics



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



# Phylobiomes: Major Research Gaps





# Research Priorities



Microbiome-knowledge generation



Standards and protocols



Regulatory framework



Data generation & management



Multi-disciplinary capacity building



Precision/digital 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

Lead and coordinate efforts on specific topics



**Soil Health**  
(currently being organized)



**Microbiomes**



**Regulatory**



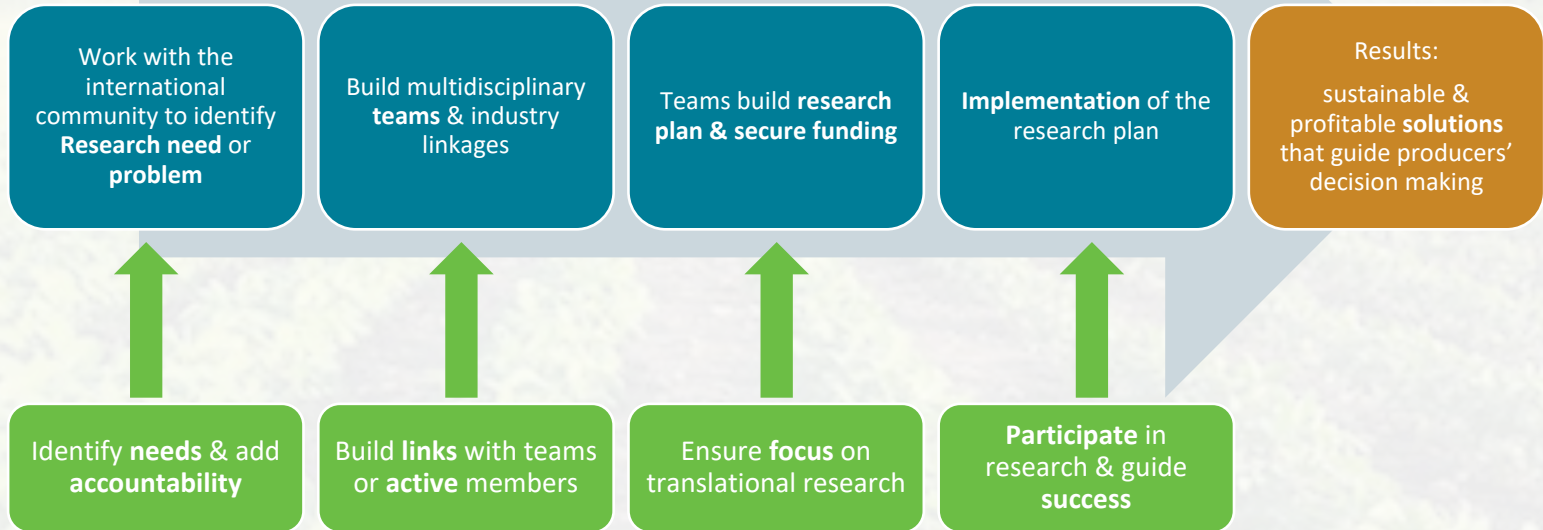
**Animal Microbiomes**



**Controlled Environment Agriculture**



## *Translating Research Outcomes into Results*



## Industry Sponsor Participation

## *Harvesting the Future: Bridging Phytobiomes, Agriculture and Climate*



**19-21 November 2024**  
**St. Louis, MO, USA**

[www.phytobiomesconference.org](http://www.phytobiomesconference.org)

### **Main Scientific topics**

- Climate/weather
- Environmental Data Set
- Plant fitness
- Microbial community assembly and function
- Network analyses within the phytobiome system
- Modeling
- Data – framework, tools and resources, big data
- Genetic linkages
- Carbon sequestration
- Regulatory requirements
- Interactions within phytobiomes for abiotic stress
- Engineering microbes and microbial communities
- Precision agriculture/digital Ag
- Fertilizer, nutrient, and chemical input efficiency
- Product development
- Greenhouse & Field trials
- Controlled Environment Agriculture
- Industry research needs





# Phytobiomes Alliance Sponsors





# Get in Touch with Us



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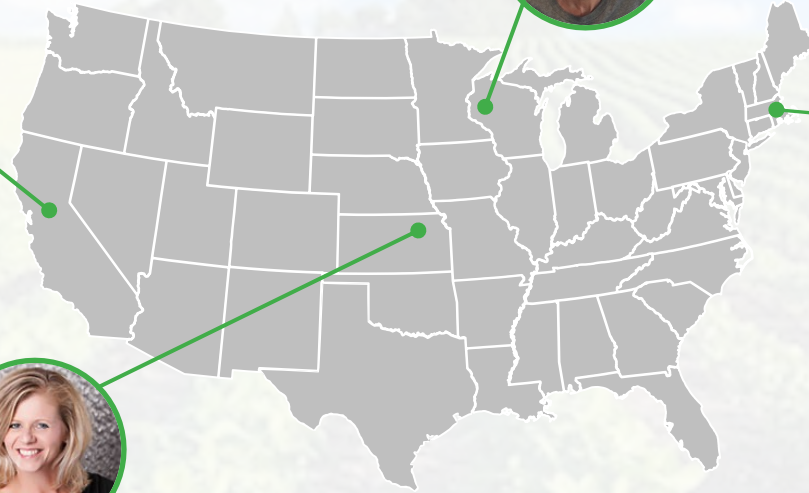
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**Thank you for listening**

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