American Society of Agricultural and Biological Engineers (ASABE)  
Annual International Meeting (Virtual)  

A Mini-symposium on  
Transforming Food and Agricultural to Circular Systems 
Monday and Tuesday (July 12-13, 2021)

Transforming existing food and agricultural systems into circular economies will require interdisciplinary, holistic systems approaches to develop pathways that manage transitions by simultaneously addressing multiple challenges, including maintaining the future U.S. economic competitiveness. Professional societies of agricultural disciplines have been major sources of knowledge and technology for food and agricultural systems. However, the problems of the complex, interconnected food systems with natural systems must now be framed with the understanding of limitations of Earth’s finite soil and water resources and unsustainable adverse effects of environmental degradation, food losses and waste, pandemics and other shocks. Solving these problems is beyond the scope of a single discipline. Professional societies can play a critical role by coming together and promoting multiple disciplines to seamlessly work together for transforming to circular systems.

Monday - July 12, 2021

GENERAL OPENING SESSION  
Time: 9:00 a.m. – 10:15 a.m. Central Time Zone (CTZ)  
KEYNOTE PRESENTATIONS

Presiding: Paul Heinemann, ASABE President-Elect

Dr. Kathleen Merrigan Kathleen.Merrigan@asu.edu  
Executive Director, Swette Center for Sustainable Food Systems, Arizona State University  
Topic: A Sustainable US Food System: How do we meet the challenge?

Dr. Martin Scholten martin.scholten@wur.nl  
Principal Advisor Wageningen University & Research, The Netherlands  
Topic: Towards a Resilient and Circular Food and Agricultural Systems for Meeting Global Food and Environmental Challenges

MORNING SESSION  
Time: 10:30 a.m. –12:30 p.m. CTZ  
PANEL DISCUSSION  
Building a Coalition of Societies for Advancing Circular Systems

Moderator: Sue Nokes, ASABE Past Present

After introductory remarks by the panelist the session will then be open for discussion among the panelists and invite questions from the audience. The discussion will address multiple challenges to increase outputs of food and agricultural systems and importance of protecting health of Earth’s ecosystems and supply of natural resources; roles of professional societies, agencies, foundations, and public and private partnerships; and opportunities and actions.

1 For additional information on the Mini-symposium contact: Kati Migliaccio – klwhite@ufl.edu, James W. Jones – jimj@ufl.edu or Brahm Verma – verma@uga.edu
The Panelists

James W. Jones, Distinguished Professor and NAE member - ASABE
Chuck Rice, Chair, NASEM's Board of Agricultural and Natural Resources; Distinguished Professor
Vara Prasad, President of Crop Science Society of America
Madhu Khanna, President of Agricultural and Applied Economics Association
JoAnn Lighty – Dean of Engineering, Boise State University – Am. Institute of Chemical Engineers
John Ruff – Chief Science & Technology Officer, Institute of Food Technologists

AFTERNOON SESSION
After Lunch – Time: 1:00 p.m. to 3:30 p.m. CTZ

INVITED PRESENTATIONS
Current activities for transforming to circular food and agricultural systems

Moderators: James. W. Jones and Kati Migliaccio
Seven, 20-minute presentations.

A.G. Kawamura, A fruit and vegetable grower and former California Secretary of Agriculture
A grower and policy maker's perspectives. C. 1:00-1:20

Saskia Visser, Wageningen University & Research (The Dutch Programs)
Strategic research and knowledge development activities; an example or two of research and some results; adoption of new practices by growers. Share success stories and lessons learned from failures. 1:20-1:40

Bruno Basso, Foundation Professor of Earth and Environmental Sciences, Michigan State University
Current strategic research and knowledge and technology development activities that will contribute to transition of field production systems into circular systems. 1:40-2:00

Geoffrey Dahl, H.B. Weeks Professor of Animal Sciences, University of Florida, and President of American Dairy Science Association
R&D needs for transitioning dairy and other livestock systems into circular economies that simultaneously address multiple societal goals of productivity, resource efficiency, and the environment 2:00-2:20

Cristian Toma – A Grower of products in Vertical Farms, Founder and Chief Science Officer, Kalera
Can vertical farming contribute to the goals of circular economy, and if so, what are the key challenges? How can perspectives from vertical farming be used to inform other food and agricultural systems? 2:20-2:40

Callie Babbit, Associate Professor, Golisano Institute of Sustainability Rochester Institute of Technology
Methods from circular economy, eco-design and LCA for creating sustainable solutions for food systems, emphasizing wastes solutions. 2:40-3:00

Anu Ramaswami, Professor of Civil and Environmental Engineering, Princeton University
Systems science at the urban Food-Energy-Water (FEW) nexus to achieve resource circularity with environmental and health co-benefits 3:00-3:20

Tuesday - July 13, 2021

AFTERNOON SESSION
Time: 1:00 p.m. –3:30 p.m. CTZ

POSTER SESSION

Transforming Food and Agriculture to Circular Systems
Authors of posters will be present a brief overview of their work and respond to questions.