



CONFERENCE SCHEDULE



Conference speakers are listed alphabetically, not necessarily in order of presentations. Schedule and speakers subject to change. A complimentary shuttle bus is available. See the end of this section for times and locations.

Monday | April 29

Nebraska Innovation Campus | Conference Center

2021 Transformation Drive | Lincoln, Nebraska, USA

**7:30 a.m.–
5:30 p.m.**

Registration

Registration Desk, First Floor

Please stop by the Water for Food Global Conference Registration Desk to pick up your nametag and conference materials.

8–9 a.m.

Breakfast

Banquet Hall

Join your conference colleagues for coffee and breakfast before the sessions begin. The buffet will be located next to the conference center banquet hall.

Conference Schedule

Monday | April 29

9–9:30 a.m.

Welcome and Opening Remarks

Auditorium

Welcome

- Mike Boehm, Vice President and Vice Chancellor of Agriculture and Natural Resources, University of Nebraska

Opening Remarks

- Peter G. McCornick, Executive Director, Daugherty Water for Food Global Institute at the University of Nebraska

Remarks

- Congressman Jeff Fortenberry, R-NE District 1

9:30–
10:30 a.m.

Plenary Session I

Auditorium

“How the Irrigation Industry is Driving the Future through Efficient Technologies”

- Deborah Hamlin, CEO, Irrigation Association

“Sustainable Solutions for Water & Food Security – Business Perspectives”

- Mark Edge, Director of Collaborations for Developing Countries, Bayer

Conference Schedule

Monday | April 29

10:30–11 a.m.

Break with Poster Viewing; Exhibit Booths

Near Registration desk, First Floor

11 a.m.–
12:30 p.m.

CONCURRENT SESSIONS

Value of Water

Rooms A1-3

Water transfers are increasingly used to address water scarcity. While transfers are not a new concept, they have been elevated in the policy debate as a drought risk management tool and as a cost-effective way to achieve environmental flow goals. This session will highlight the use of water markets as instruments for water management, applications of water markets to achieve environmental goals, and the role of informal water markets in agricultural and urban settings around the globe. Speakers will discuss opportunities and challenges for water transfers arising from current policy debates, as well as the theories of change underlying the use of water transfers to achieve and scale environmental goals.

Speakers/Panelists:

- Dustin Garrick, Associate Professor and Co-Director of the Smith School of Enterprise and the Environment at the University of Oxford
- Tom Iseman, Director of Water Scarcity and Markets Strategy, The Nature Conservancy, Global Program
- Richael Young, Co-Founder and CEO, Mammoth Trading

Conference Schedule

Monday | April 29

11 a.m.–
12:30 p.m.

CONCURRENT SESSIONS (continued)

Supporting Profitable & Sustainable, Farmer-led Agriculture

Auditorium

Most of the world's more than 570 million farms are small and family-run. Smallholder farms, less than 2 ha, operate about 12% of the world's agricultural land and most of those rely on rain for soil moisture. How can global partners work together to advance farmer-led irrigation systems, including solar-powered irrigation? What is needed to support enabling environments? What's working and what's not? This session will focus on ways to advance farmer-led irrigation solutions through case studies and discussion.

Moderator: Montaha Hassan, Associate Operations Officer, International Finance Corporation, World Bank Group

Speakers/Panelists:

- Jennie Barron, Professor of Water Management in Agricultural Landscapes, Swedish University of Agricultural Sciences
- Rob Bertram, Chief Scientist, Bureau for Food Security, USAID
- Ariana Constant, Director of Programs, Clinton Development Initiative, Clinton Foundation
- Selamawit Damtew, World Bank, Africa Fellow
- Regassa Ensermu Namara, Senior Water Economist, World Bank Water Global Practice
- Petra Schmitter, Research Group Leader, Agricultural Water Management, International Water Management Institute

Conference Schedule

Monday | April 29

11 a.m.–
12:30 p.m.

CONCURRENT SESSIONS (continued)

Innovations in Irrigation

Rooms B1-3

Research and technology advancements in irrigation will be presented and discussed. The session will include work by the Irrigation Innovation Consortium (IIC), a joint initiative between private, public, and university organizations, addressing growing water scarcity in the western U.S. and worldwide. This partnership capitalizes on existing strengths to develop powerful synergies between universities, USDA-ARS, the Irrigation Association, the Irrigation Foundation, the Foundation for Food and Agricultural Research (FFAR), and numerous irrigation equipment manufacturers. The session will include short technical presentations by university partners followed by a panel discussion with representatives from industry partners.

Moderator: Sally Rockey, Executive Director, FFAR

Presenters:

- Jay Ham, Colorado State University
- Cathie Lavis, Kansas State University
- Christopher Neale, Daugherty Water for Food Global Institute, University of Nebraska
- David Zoldoske, Fresno State University

Panelists:

- George Burba, Science & Strategy Fellow, LI-COR Biosciences
- Deborah Hamlin, CEO, Irrigation Association
- John Kastl, Sr. Director of Innovation and Intellectual Property, Valley Irrigation
- Val Kovalskyy, Lead Remote Sensing Scientist, Geospatial Team of The Climate Corporation
- Albert Maurin, Sales & Tactical Marketing Manager, FieldNET & FieldNET Advisor, Lindsay Corporation
- Aric Olson, President, Jain Irrigation

Conference Schedule

Monday | April 29

12:30–
1:45 p.m.

Lunch and Keynote

Banquet Hall

Lunch will be served in the conference center banquet hall, along with a short presentation at 12:45 p.m.

“It’s Irrigation, Jim, But Not as We Know It”

Insights From a Synthesis Report, DFID-ESRC Growth Research Programme

- Bruce Lankford, Professor of Water and Irrigation Policy, University of East Anglia, United Kingdom

1:30–1:45 p.m.

Food-Water-Energy Nexus Student Infographics

The Link, Second Floor

Please stop by to visit with the students showcasing their project posters related to food, water, and energy at the entrance to the hall. Students will only be available for discussion at this time, but posters will remain up for the duration of the conference.

Conference Schedule

Monday | April 29

1:45–2:45 p.m.

Plenary Session II

Auditorium

“Innovations and Technology in the Future of Ag and Water Security”

- Sally Rockey, Executive Director, Foundation for Food and Agriculture Research

“Farm Diversification, Educational Training and Small Scale Irrigation Efforts to Improve Productivity in Emerging African Countries”

- Canisius Kanangire, Executive Secretary, African Ministers’ Council on Water

Conference Schedule

Monday | April 29

3–4:30 p.m.

CONCURRENT SESSIONS

Water: A War Game Scenario

Rooms A1-3

In this session, attendees will examine the value of water through a role-playing activity. Attendees will behave as various actors (e.g. countries, aid organizations, tribal groups, etc.) in a war game scenario to simulate a conflict over water and food security. Throughout the game, water and food are used as currency in exchanges between the actors. The simulation and discussion that follows will highlight the differing values placed on water by each actor and how this relates to real-world water resources management, conflicts over water, and water transfers. The session will be facilitated by staff from the National Strategic Research Institute and the Robert B. Daugherty Water for Food Global Institute.

Conference Schedule

Monday | April 29

3–4:30 p.m.

CONCURRENT SESSIONS (continued)

Close-range and Remote Sensing Technologies and their Role in Mitigating Drought Stress

Rooms B1-3

Innovative, non-invasive proximal and remote sensing approaches for addressing food security under changing climate and dwindling water resources. The session will highlight the critical role that recent and emerging technologies play in increasing our ability to accurately investigate and forecast plant traits important for growth, yield stability/increase, resistance to stresses, and ecosystem resilience in our efforts to mitigate and adapt to unpredictable future growing conditions.

Moderator: Archie Clutter, Dean, Agricultural Research Division, University of Nebraska–Lincoln

Speakers:

- Tala Awada, Associate Dean, School of Natural Resources; Physiological Plant Ecologist; University of Nebraska–Lincoln
- John Gamon, Quantitative Remote Sensing Scientist, University of Nebraska–Lincoln
- Ayse Kilic, Professor and Remote Sensing Expert, School of Natural Resources, University of Nebraska–Lincoln
- Sruti Das Choudhury, Image Analysis Specialist, School of Natural Resources, University of Nebraska–Lincoln
- Yufeng Ge, Assistant Professor, Biological Systems Engineering, University of Nebraska–Lincoln
- Harkamal Walia, Associate Professor, Department of Agronomy and Horticulture, University of Nebraska–Lincoln

Conference Schedule

Monday | April 29

3–4:30 p.m.

CONCURRENT SESSIONS (continued)

Water Quality, Nutrition and Climate Change

Auditorium

Achieving water and food security involves more than irrigation and higher yields. Climate change, especially drought, water quality, changing diets and nutrition, are vitally important components of the puzzle. This session will examine the roles and intersections of these elements in developing solutions for improved water and food security.

Moderator: Claudia Ringler, Deputy Director of Environment and Production Technology Division, International Food Policy Research Institute

Speakers:

- Jesse Bell, Claire M. Hubbard Professor of Health and Environment, University of Nebraska Medical Center
- Martha Mamo, Department Head, John E. Weaver Professor of Agronomy and Horticulture, University of Nebraska–Lincoln
- Martha Rhoades, Research Manager, Xenobiotics Laboratory, University of Nebraska–Lincoln
- Claudia Ringler, Deputy Director of Environment and Production Technology Division, International Food Policy Research Institute

Panelists:

- Graham Christensen, President, GC Resolve, LLC
- Mik Schulte, Operations Analyst, Water in Agriculture Global Water Solutions, World Bank

Conference Schedule

Monday | April 29

3–4:30 p.m.

CONCURRENT SESSIONS (continued)

Water Reuse, an Untapped Resource for Food Production

Room D

The United Nations Sustainable Development Goals for 2030 target reduction of untreated wastewater and increase safe reuse globally. Water reuse is the best way to secure new water supplies for food production. Research has shown that water reuse can be implemented safely and be cost-effective. However, several concerns related to risks to public health and community perceptions impose constraints to move forward. Stakeholders from the academia and private sector will discuss how to face these challenges, understanding the opportunities offered by new technologies, ongoing research, and evolving regulations. This session promises to assess water reuse alternatives from concept to application.

Moderator: Yulie Meneses, Research Assistant Professor, Food Science and Technology Department, University of Nebraska–Lincoln; Water for Food Processing Specialist, Daugherty Water for Food Global Institute

Speakers:

- Wei Liao, Director of the Anaerobic Digestion Research Education Center (ADREC), Michigan State University
- Kurt Schwabe, Professor of Environmental Economics and Policy. University of California Riverside
- Bahman Sheikh, Independent Water Reuse Consultant
- Kristan VandenHeuvel, Research Manager, Water Research Foundation

Conference Schedule

Monday | April 29

4:30–5:30 p.m.

Entrepreneurship Marketplace

Banquet Hall

The High Plains of the U.S. is home to intensive irrigated agriculture, producing some of the world's highest crop yields. Thanks to millions of hectares of cropland and abundant water resources, this region can serve as the perfect incubator for agricultural innovation and a testing ground for new technologies. This world café session will feature agricultural startups headquartered or working in the High Plains of the U.S. Featured companies range from irrigation system providers to entrepreneurs seeking to improve rural data transmission. Learn about new agricultural technologies while discussing the current and future state of agricultural innovation in the High Plains.

Participants:

- John Gates, Chief Science Officer, CropMetrics
- Ramsay Huntley, Vice President and Clean Technology and Innovation Philanthropy Program Officer, Wells Fargo
- Neil Johnson, President and CEO, SmallData Tech
- Oren Kind, Chief Commercial Officer and U.S. General Manager, Phytech
- Vishal Singh, CEO and Founder, QuantifiedAg
- Monty Teeter, CEO, Dragon-Line
- Steve Tippery, President and CEO, RealmFive Agriculture

Conference Schedule

Monday | April 29

6:30–8:30 p.m.

Reception at University of Nebraska State Museum

Morrill Hall, 645 North 14th Street (UNL's City Campus)

Relax and enjoy drinks, appetizers and conversation while perusing Nebraska's largest natural history museum. Exhibits include the world's premier collection of fossil elephants, interactive paleontology exhibits, American Indian exhibits, walk-in wildlife dioramas, hands-on discovery room, planetarium, and much more.

Conference Schedule

Tuesday | April 30

Nebraska Innovation Campus | Conference Center

2021 Transformation Drive | Lincoln, Nebraska, USA

7:30 a.m.
–4 p.m.

Registration

Registration Desk, First Floor

Please stop by the Water for Food Global Conference Registration Desk to pick up your nametag and conference materials.

7:30–8:30 a.m.

Breakfast

Banquet Hall

Coffee and breakfast will be available next to the Banquet Hall.

8:30–8:45 a.m.

Welcome

Auditorium

- Ronnie Green, Chancellor, University of Nebraska–Lincoln
- Mike Boehm, Vice President and Vice Chancellor of Agriculture and Natural Resources, University of Nebraska

Conference Schedule

Tuesday | April 30

8:50–9:30 a.m.

Plenary Session III

Auditorium

“A Water Secure World for All: Sustaining Water Resources, Delivering Services, Building Resilience”

- Jennifer Sara, Senior Director, Water Global Practice, World Bank Group

“Water and Food Security in the State of Bahia, Brazil”

- Leonardo Góes Silva, Secretary of Water Infrastructure and Sanitation, State of Bahia, Brazil

Conference Schedule

Tuesday | April 30

9:30–10 a.m.

Flash Talk Presentations

Auditorium

“Technology and Resilience in Irrigated Row Crop Systems”

- *Hannah E. Birgé, Water & Agriculture Program Manager, The Nature Conservancy in Nebraska*

“Nebraska Strong: Rebuilding after Historic Flood”

- *Steve Nelson, President, Nebraska Farm Bureau*

“Malawi – USA via The Netherlands: How My Career Path Changed My Perspective”

- *Mavuto Banda, double masters degree graduate, University of Nebraska–Lincoln and IHE Delft Institute for Water Education (The Netherlands)*

10–10:30 a.m.

Break

Please stop by the exhibit hall on the main floor to visit with our sponsorship partners and exhibitors. Students will be showcasing their research posters on the second floor.

Conference Schedule

Tuesday | April 30

**10:30 a.m.–
Noon**

CONCURRENT SESSIONS

Policy Strategies for Agriculture Supply Chain Management

Rooms A1-3

This session will include presentations and follow-up discussions on how business models can be developed to be more sustainable and responsive to dynamic global environment, with several case studies. First, influence of policies will be discussed with analytical business models on both supply and demand sides of supply chains, in the context of food marketing and pricing. Following, an industry application will be presented on firm strategies to work with farmers for water conservation in food and beverage production, while another example will present efficient irrigation system development for sustainable food production.

Presenters:

- S. Sajeesh, Assistant Professor, Marketing Department, College of Business, University of Nebraska–Lincoln
- Shivam Gupta, Assistant Professor, Supply Chain Management and Analytics Department, College of Business, University of Nebraska–Lincoln
- Marco Ugarte, Sustainability Consultant, Antea Group
- J. Kalu Osiri, Director of International Business, College of Business, University of Nebraska–Lincoln
 - Kelechi Chibuikem, Graduate student Community and Regional Planning, University of Nebraska–Lincoln
 - Azariah Lawal, Graduate student, School of Natural Resources, University of Nebraska–Lincoln
 - Jacob Monti, Mechanical Engineering, University of Nebraska–Lincoln (Alum)
 - Theo Udeigwe, Director of Research, Institute for the Advancement of Developing Economies

Conference Schedule

Tuesday | April 30

10:30 a.m.–
Noon

CONCURRENT SESSIONS (continued)

Water Footprint: How Light are We Treading?

Auditorium

Water is key to food security, energy production, and sustain human health and ecosystem services. Climate and land use change together with growing populations and dietary changes are straining the globe's freshwater resources. Successful water resources management requires complete understanding of the hydrologic system, current level of water productivity, and water productivity gaps. This improved knowledge can be used to support producers in managing water, as well as decision-makers in developing scientifically sound, economically-efficient and socially acceptable policies. The session and panel will explore the use of local, regional, and global scale data, such as crop yield, applied irrigation water, soil water content, crop canopy parameters, as well as the use of crop modeling and remote sensing, for estimating spatial and temporal variation of crop water productivity.

Moderator: Christopher Neale, Director of Research, Daugherty Water for Food Global Institute

Speakers:

- Mesfin Mekonnen, Post-doctoral Research Associate, Daugherty Water for Food Global Institute
- Galen Erickson, Animal Science Professor, University of Nebraska–Lincoln
- Pasquale Steduto, Regional Strategic Program Coordinator, Food and Agriculture Organization of the United Nations
- Landon Marston, Assistant Professor, Kansas State University

Conference Schedule

Tuesday | April 30

10:30 a.m.–
Noon

CONCURRENT SESSIONS (continued)

Drought Early Warning and Risk Management: Provision of Tools and Services for Informed Decision and Policy Making

Rooms B1-3

Drought is a globally wicked issue. Much progress has been made over the past decade in helping transform science into useful and useable information. The question is, now what? How do we provide services that better inform decision and policy-makers? In this panel, researchers will share case studies of drought monitoring and mitigation projects, tools, information and services being provided in arid regions around the world such as the Middle East/ North Africa (MENA), Brazil, and India, and the United States.

Moderator: Mike Hayes, Professor, School of Natural Resources, University of Nebraska–Lincoln

Panelists:

- Mark Svoboda, Director, Associate Research Professor, National Drought Mitigation Center, University of Nebraska–Lincoln
- Eduardo Martins, President, FUNCEME, Brazil
- Rachael McDonnell, Principal Researcher, International Water Management Institute
- Ravinder Kaur, Principal Scientist, Indian Agricultural Research Institute, India
- Jesse Bell, Claire M. Hubbard Professor of Health and Environment, University of Nebraska Medical Center

Conference Schedule

Tuesday | April 30

Noon–
1:30 p.m.

Lunch and Award Presentation

Banquet Hall

Join us for lunch in the conference center banquet hall. Poster competition awards will be presented during this time. Visit our sponsors and exhibitor booths as time allows on the main floor.

Competition Organizer:

- Lacey Bodnar, Research Project Manager, Daugherty Water for Food Global Institute

Awards presented by:

- Peter G. McCornick, Executive Director, Daugherty Water for Food Global Institute

Conference Schedule

Tuesday | April 30

1:30–3 p.m.

CONCURRENT SESSIONS

Business Models for Smallholder Irrigation

Rooms A1-3

Increasing smallholder access to irrigation is a key policy goal throughout sub-Saharan Africa. Although a large body of previous work has focused on the potential benefits of irrigation provision to smallholders, much less work has been done on how to develop, finance, and scale viable irrigation business models. This world café session will showcase a variety of business models for irrigation service provision that are currently being tested in Rwanda. Speakers include entrepreneurs, agronomists, irrigation engineers and others involved with scaling smallholder irrigation on the ground. Session includes DWFI updates on recent research of innovative irrigation business models in Rwanda.

Presenters:

- William Shyaka Bakunda
Bakunda is a Rwandan entrepreneur and farmer. He returned to Rwanda from Switzerland and began several businesses, including a Kigali boutique hotel and a modern, irrigated farm.
- Samuel Dotun & Charles Kwarteng (Volta Irrigation)
Volta Irrigation is an agritech start-up improving the lives of smallholder farmers in Rwanda. Volta was created by Rwandan college students.
- Grace Mukarasagara
Mukarasagara was an irrigation engineer for a large center pivot project in Kagitumba, now currently funded by the Rwandan Agricultural Board (RAB). Mukarasagara is now a contract consultant with DWFI.
- Fabien Ngoga (EUCORD)
The European Cooperative for Rural development (EUCORD) is a Dutch NGO implementing the CREATE project funded by Heineken and The Netherlands Ministry of Foreign Affairs.
- Petra Schmitter
Schmitter is Senior Researcher at the International Water Management Institute and leads the Research Group on Agricultural Water Management.

Conference Schedule

Tuesday | April 30

1:30–3 p.m.

CONCURRENT SESSIONS (continued)

Keeping it Fresh: Protecting Fresh Water Quality and Mitigating Pollution

Auditorium

This session features three case studies of regions where agriculture has, or has the potential to have, significant impact on water quality. Richard Ferguson will speak about his recent work in setting up the Rwanda Institute for Conservation Agriculture, which will teach and eventually research and extend conservation agriculture principles that impact water quality, including soil erosion and loss of productivity. Brian Krienke and Matthew Helmers will speak about their work in Nebraska and Iowa respectively, sharing recent advances in nitrogen management that rely on both technology and policy.

Moderator: Chittaranjan Ray, Director, Nebraska Water Center

Panelists:

- Richard B. Ferguson, Vice Chancellor, Rwanda Institute for Conservation Agriculture
- Matthew Helmers, Director, Iowa Nutrient Research Center, Iowa State University
- Brian Krienke, Assistant Extension Educator, University of Nebraska–Lincoln
- Martha Kauffman, Managing Director, Northern Great Plains, World Wildlife Fund

Conference Schedule

Tuesday | April 30

3–3:30 p.m.

Break & Sponsor Presentations

Please visit our valued sponsors to learn more about the innovative technologies and best practices they are using to advance water and food security.

3:30–4:45 p.m.

View from the Field

Auditorium

Farmers and those who work directly with farmers from Nebraska, Rwanda, and Brazil provide their perspectives on using technology and innovative practices to improve resilience and sustainability.

Moderator: Letitia Obeng, International Advisory Panel member, Daugherty Water for Food Global Institute

Panelists:

- William Shyaka Bukunda, Entrepreneur and Farmer, Rwanda
- Dean Eisenhower, Professor Emeritus, University of Nebraska–Lincoln; Farmer, Nebraska
- Grace Mukarusagara, Consultant, Daugherty Water for Food Global Institute, Rwanda
- Jerry Stahr, farmer, Nebraska
- Elisa Zancanaro Zanella, farmer, Brazil

4:45–5 p.m.

Closing

Auditorium

- Peter G. McCornick, Executive Director, Daugherty Water for Food Global Institute

Conference Schedule

Tuesday | April 30

5–6 p.m.

Heuermann Lecture

Auditorium

The Heuermann Lectures focus on providing security, and here security means enough to sustain the world, in the areas of food, natural resources, and renewable energy for people, as well as on securing the sustainability of rural communities where the vital work of producing food and renewable energy occurs. Lectures are coordinated by the Institute for Agriculture and Natural Resources at the University of Nebraska–Lincoln and open to the public.

“Managing Water and Agriculture for Sustainable Food Security”

- Mark Rosegrant, Research Fellow Emeritus, International Food Policy Research Institute

6–7:30 p.m.

Closing Reception

Banquet Hall

Relax and enjoy the company of your conference colleagues at the Water for Food Global Conference closing reception, featuring an assortment of hors d’oeuvres, drinks and entertainment by DJ Darkwood and a live band.