

CONFERENCE SCHEDULE



waterforfood.nebraska.edu/wff2016

Plenary sessions from the conference will be streamed live on our website. Videos of all the sessions will be archived on our YouTube channel and available for viewing by April 30.

Nametags will be provided. Registration materials will be available to all conference participants at the Nebraska Innovation Campus Conference Center on Monday.

SUNDAY / APRIL 24

LINCOLN MARRIOTT® CORNHUSKER HOTEL

1:30 – 5:00 p.m. **The Opportunities and Challenges of Expanding Smallholder Irrigation in sub-Saharan Africa**
Co-convened by the Bill & Melinda Gates Foundation, KickStart International and the Water for Food Institute; in partnership with CGIAR Research Program in Water, Land and Ecosystems

Despite the relative abundance of water in sub-Saharan Africa, only a tiny fraction of agricultural land in the region is irrigated. Smallholder farmers could dramatically improve their agricultural production by using small-scale technologies to irrigate from shallow groundwater. Smallholder farmers in this region are starting to irrigate, but to move Africa toward full food security, millions more need to join them. We must better understand the constraints that are holding back irrigation development, and create and implement a set of public and private approaches to overcome these obstacles. This collaborative workshop will serve as a springboard for a new campaign supporting expanded irrigation in sub-Saharan Africa. Join us to define the challenges facing smallholder farmers from technical, economic, social and environmental perspectives and develop a framework for solutions.

1:30 – 1:35 p.m. **Welcome and Workshop Goals**
Julie Wroblewski, Strategy Advisor and Consultant, Bill & Melinda Gates Foundation and Pivotal Ventures; Los Angeles, California
Roberto Lenton, Founding Executive Director, Water for Food Institute; Lincoln, Nebraska

1:35 – 1:40 p.m. **Opening Remarks**
Jeff Raikes, Co-founder, Raikes Foundation; Board Chair, Water for Food Institute; Seattle, Washington

1:40 – 1:55 p.m. **Introduction to Smallholder Irrigation in sub-Saharan Africa**
Martin Fisher, Co-founder and CEO, KickStart International; Nairobi, Kenya

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- 1:55 – 2:10 p.m.** **Groundwater Availability for Irrigation in sub-Saharan Africa**
Karen G. Villholth, Principal Researcher, Groundwater Management, International Water Management Institute; Pretoria, South Africa
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- 2:10 – 2:25 p.m.** **Yield Gaps in Irrigated and Rainfed Agriculture in sub-Saharan Africa**
Ken Cassman, Emeritus Robert B. Daugherty Professor of Agronomy, University of Nebraska–Lincoln, Faculty Fellow, Water for Food Institute; Lincoln, Nebraska
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- 2:25 – 2:40 p.m.** **Lessons About Irrigation from Agricultural Water Management**
Claudia Ringler, Deputy Division Director, International Food Policy Research Institute; Washington, D.C.
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- 2:40 – 2:50 p.m.** **Break**
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- 2:50 – 3:50 p.m.** **Breakout Discussions**
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- 3:50 – 4:00 p.m.** **Presentation of Discussion Outcomes**
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- 4:00 – 4:45 p.m.** **Panel Discussion**
• *Moderator: Martin Fisher*
• *Meredith Giordano*, Advisor, Research Strategy and Management, International Water Management Institute; Washington, D.C.
• *Melissa D. Ho*, Managing Director, Africa, Millennium Challenge Corporation; Washington, D.C.
• *Pasquale Steduto*, Deputy Regional Representative for the Near East and North Africa Region, Food and Agriculture Organization of the United Nations; Cairo, Egypt
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- 4:45 – 5:00 p.m.** **Conclusion**
Julie Wroblewski and Roberto Lenton

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5:15 – 7:30 p.m. **Transportation**
Motorcoach transportation from the Lincoln Marriott® Cornhusker Hotel to the Mary Riepma Ross Media Arts Center. The loading zone will be located on 13th Street, just north of the hotel's main entrance. The theater is a short distance (.4 miles) away for those who prefer to walk.

8:30 – 9:30 p.m. **Transportation**
Return motorcoach transportation from the Mary Riepma Ross Media Arts Center to the Lincoln Marriott® Cornhusker Hotel. The loading zone will be located on 13th Street, in front of the theater's main entrance. The hotel is a short distance (.4 miles) away for those who prefer to walk.

MARY RIEPMA ROSS MEDIA ARTS CENTER/VAN BRUNT VISITOR CENTER

5:30 – 7:00 p.m. **Welcome Reception**
Enjoy a delicious menu of hors d'oeuvres, wine and craft beers or soft drinks

7:00 – 8:30 p.m. **World Premiere of "Thirsty Land"**
A new documentary sponsored by the Water for Food Institute and the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln. "Thirsty Land" tells the story of extreme drought, agriculture and the water crisis in the western United States and how these challenges impact farmers, local communities and the environment. Director Conrad Weaver interviewed farmers, ranchers and researchers from central Nebraska to the Central Valley of California to learn how they are managing their water resources to continue to produce food for our world.

8:30 – 9:00 p.m. **Q & A with "Thirsty Land" Director Conrad Weaver, President, ConjoStudios, LLC; Emmitsburg, Maryland**

CONFERENCE SCHEDULE

MONDAY / APRIL 25

NEBRASKA INNOVATION CAMPUS CONFERENCE CENTER

7:00 a.m. – 6:00 p.m. Transportation

Roundtrip motorcoach transportation between the Lincoln Marriott® Cornhusker Hotel and Nebraska Innovation Campus. The hotel loading zone will be located on 13th Street, just north of the main entrance. The Nebraska Innovation Campus loading zone will be the parking lot on the north side of the building. A shuttle will be available at both locations throughout the day. It is approximately a ten minute ride each way.

Registration

The registration desk will be located on the main floor of the Nebraska Innovation Campus Conference Center – to the west of the meeting rooms.

7:30 – 8:30 a.m. Breakfast

8:30 – 10:00 a.m. Plenary Session I



Hank M. Bounds, President, University of Nebraska; Lincoln, Nebraska
Welcome

Jeff Raikes, Co-founder, Raikes Foundation; Board Chair, Water for Food Institute; Seattle, Washington
Catalytic Philanthropy

Roberto Lenton, Founding Executive Director, Water for Food Institute; Lincoln, Nebraska
Introduction of the new Water for Food Institute Executive Director-elect

Peter G. McCornick, Deputy Director General of Research, International Water Management Institute; Executive Director-elect, Water for Food Institute; Colombo, Sri Lanka
The Future of Water and Food Security

Water for Food Institute Board of Directors and Leadership
Special presentation by Board Chair Jeff Raikes

- Formal dedication of the B.H. Jain/University of Nebraska Water for Food Collaborative Program
- Award bestowed to *Anil B. Jain*, Managing Director, Jain Irrigation Systems, Ltd; Jalgaon, India, in memoriam of *Bhavarlal Hiralal Jain*, Founder Chairman of Jain Irrigation and “Champion of Agricultural Water Management”

10:00 – 10:30 a.m. Break with Poster Viewing

CONFERENCE SCHEDULE

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10:30 a.m. – 12:00 p.m. Plenary Session II



Pat Mulroy, Senior Fellow, Climate Adaptation and Environmental Policy, Brookings Institute; Practitioner in Residence, Saltman Center for Conflict Resolution, William S. Boyd School of Law, University of Nevada Las Vegas; Maki Distinguished Faculty Associate, Desert Research Institute; Las Vegas, Nevada
Perspectives on Partnerships in Water Management

Melissa D. Ho, Managing Director, Africa, Department of Compact Operations, Millennium Challenge Corporation; Washington, D.C.
Challenges and Opportunities in Achieving Food Security in Africa

12:00 – 1:00 p.m. Lunch and Keynote Address

Martin Fisher, Co-founder and CEO, KickStart International; Nairobi, Kenya
Advancing Productivity for Smallholder Farmers in sub-Saharan Africa through Irrigation

1:00 – 2:30 p.m.



Industry Panel

Those who work in the business of agricultural production will discuss their perspectives on the role of private industry in partnering with producers, agencies and non-profits to increase water and food security. The panel will provide an interesting opportunity for a wide ranging discussion of public-private partnerships at different points along the "farm to table" spectrum.

Moderator: Ronnie D. Green, Chancellor-elect, University of Nebraska–Lincoln

Panelists:

- *Randy Barker*, Managing Director, FarmLink; Kansas City, Missouri
- *Anil B. Jain*, Managing Director, Jain Irrigation Systems Ltd.; Jalgaon, India
- *E. Robert Meaney*, former Chairman International, Valmont Industries, Inc.; Riverside, Connecticut
- *Chris Tingle*, Head, Enogen Commercial Operations, Syngenta, Minnetonka, Minnesota
- *Michael W. Willer*, Vice President, Research and Development, North America, Ecolab; St. Paul, Minnesota

2:30 – 3:00 p.m. Break

CONFERENCE SCHEDULE

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3:00 – 5:00 p.m.

Concurrent Sessions I, II, III



Session I: Irrigation Technology for Smallholders (Auditorium)

This session will cover different aspects of irrigation for smallholders with examples of how technologies, such as small pumps, drip and sprinkler irrigation systems implemented at different scales and others, are being used to benefit smallholder farmers. Examples of projects being developed will be discussed, including public-private efforts. The importance of governance structure and farmer organizations will also be highlighted.

Moderator: Christopher Neale, Director of Research, Water for Food Institute; Lincoln, Nebraska

Opening Remarks: Timothy Prewitt, CEO, iDE; Denver, Colorado

Speakers:

- *José Luis Arumí, Director, Water Resources Department, Faculty of Agricultural Engineering, CRHIAM Water Center, Universidad de Concepción; Chile*
- *Gary P. Merkley, Water for Food Institute Global Fellow; Irrigation and Hydraulic Engineer, Senior Supervising Engineer, Natural Resources Consulting Engineers, Inc.; Fort Collins, Colorado*
- *Stuart Taylor, Vice President, Global Initiatives, iDE; Winnipeg, Canada*

CONFERENCE SCHEDULE

MONDAY / APRIL 25 / CONTINUED

3:00 – 5:00 p.m

Concurrent Sessions I, II, III, continued



Session II: Water and Food Processing (First floor north)

Water reconditioning and reuse represent a potential opportunity to reduce the water footprint from food products through conservation initiatives. However, several concerns related to investment, contamination risks and additional environmental impacts (energy) impose constraints to move forward. Stakeholders from academia, government agencies and the private sector will discuss how to face these challenges and understand the opportunities and limitations for food processors. Furthermore, tools for the decision-making process will be revised. This session promises to assess water conservation initiatives from a holistic approach, with the higher objective of contributing to the successful implementation of such initiatives in the food industry sector.

Moderator: Rolando A. Flores, Water for Food Institute Faculty Fellow; Professor and Department Head, Department of Food Science and Technology; Director of the Food Processing Center, University of Nebraska–Lincoln

Panelists:

- *Yulie Meneses Gonzalez*, PhD Candidate and Research Assistant, Department of Food Science and Technology, University of Nebraska–Lincoln
- *Rebecca Milczarek*, Research Agricultural Engineer, U.S. Department of Agriculture – Agricultural Research Service; Albany, California
- *Christopher Simmons*, Assistant Professor, Department of Food Science and Technology, University of California, Davis
- *Greg Thoma*, Bates Teaching Professor of Chemical Engineering, University of Arkansas; Fayetteville, Arkansas
- *Bing Wang*, Assistant Professor, Department of Food Science and Technology, University of Nebraska–Lincoln

CONFERENCE SCHEDULE

MONDAY / APRIL 25 / CONTINUED

3:00 – 5:00 p.m.

Concurrent Sessions I, II, III, continued



Session III: Mitigating the Effects of Climate Change on Water and Food Security and Public Health (First floor south)

The connections between climate change, water budgeting and the agricultural environment have significant effects on public health of the surrounding communities. It is vitally important to build adaptive capacity in the agricultural sector to ensure food security, while also safe-guarding water quality and quantity. Dealing with the environmental impacts of climate change requires adaptation and thoughtful crop selection to maintain sufficient availability of food, while also minimizing water use. Additionally, it is important to examine the effects of climate change on agronomic pests and invasive species in both managed and unmanaged plant communities, and the interactions between animals and humans. Developing public-private partnerships to address these complex issues is a key element to mitigating the effects of climate change by identifying opportunities to build capacity and implement solutions, locally to globally.

Moderator: Ken Haar, Nebraska State Senator; Malcolm, Nebraska

Panelists:

- *Jon Padgham, Deputy Director, START; Washington, D.C.*
- *Elizabeth VanWormer, Water for Food Institute Faculty Fellow; Epidemiologist and Assistant Professor of Practice, School of Veterinary Medicine and Biomedical Sciences and the School of Natural Resources, University of Nebraska–Lincoln*
- *Lewis H. Ziska, Plant Physiologist, U.S. Department of Agriculture – Agricultural Research Service; Beltsville, Maryland*

5:00 – 5:30 p.m.

Break

LINCOLN MARRIOTT® CORNHUSKER HOTEL

5:30 – 7:00 p.m.

Reception with Live Music by The Bottletops

7:00 – 9:00 p.m.

Farm-to-Table Gala Dinner and Faculty Recognition

The menu will feature locally sourced beef, chicken or vegan option and fresh produce.

The dinner will provide an opportunity to recognize Water for Food Institute Faculty Fellow *Ken Cassman*, Emeritus Robert B. Daugherty Professor of Agronomy at the University of Nebraska–Lincoln, for his significant contributions to improving global water and food security. Award presented by UNL Chancellor-elect *Ronnie D. Green*.

CONFERENCE SCHEDULE

TUESDAY / APRIL 26

NEBRASKA INNOVATION CAMPUS CONFERENCE CENTER

6:30 a.m. – 8:00 p.m. Transportation

Roundtrip motorcoach transportation between the Lincoln Marriott® Cornhusker Hotel and Nebraska Innovation Campus. The hotel loading zone will be located on 13th Street, just north of the main entrance. The Nebraska Innovation Campus loading zone will be the parking lot on the north side of the building. A shuttle will be available at both locations throughout the day. It is approximately a ten minute ride each way.

7:00 – 8:00 a.m. Breakfast

8:00 – 9:00 a.m.



View from the Field Panel

Nebraskans involved in the production channel will share their experiences and vision for the future of improving agricultural production and water security.

Moderator: John T. Heaston, Private Consultant; Lincoln, Nebraska

Panelists:

- *John Berge, General Manager, North Platte Natural Resources District; North Platte, Nebraska*
- *Owen Palm, CEO, 21st Century Equipment, LLC; Scottsbluff, Nebraska*
- *Roric Paulman, Owner and Operator, Paulman Farms; Sutherland, Nebraska*

9:00 – 9:45 a.m.



Plenary Session III

Richard L. Sandor, Chairman and CEO, Environmental Financial Products; Chicago, Illinois

Carbon Credits and Water

9:45 – 10:00 a.m. Break with Poster Viewing

CONFERENCE SCHEDULE

TUESDAY / APRIL 26 / CONTINUED

10:00 a.m. – 12:00 p.m. **Concurrent Sessions IV, V, VI**



Agricultural Entrepreneurship (First floor south)

The session will focus on the rapidly-growing agricultural entrepreneurship ecosystem. Entrepreneurial activities encompass small early stage start-ups as well as more established companies. Product and process innovations with a broad range of applications will be discussed in the session, including smart sensors, crop advisory and irrigation management services, and financing and water trading systems. This session will use a world café format, which will allow participants to engage in multiple discussions with the featured entrepreneurs about their specific value propositions, business models, the challenges of scaling, and their experiences with agricultural entrepreneurship.

Moderator: Nick Brozović, Director of Policy, Water for Food Institute; Lincoln, Nebraska

Introductory comments: Richard L. Sandor, Chairman and CEO, Environmental Financial Products, LLC; Chicago, Illinois

World Café Topic Leaders:

- Kian Alibakhshian, Founder and CEO, Smart Water Metering, Inc.; Ontario, Canada
- Randy Barker, Managing Director, Business Development, FarmLink; Kansas City, Missouri
- Brennan Costello, Marketing Lead, Student Entrepreneur, FarmAfield; Lincoln, Nebraska
- Barclay Rogers, Co-founder and CEO, Good Earth Irrigation; Livingston, Montana
- Adam Wolf, Founder and CEO, Arable; Princeton, New Jersey
- Richael Young, Co-founder and President, Mammoth Trading; Lincoln, Nebraska

CONFERENCE SCHEDULE

TUESDAY / APRIL 26 / CONTINUED

10:00 a.m. – 12:00 p.m. **Concurrent Sessions IV, V, VI continued**



Agricultural Technology (First floor north)

Effective application of emerging agricultural technologies related to efficient water use will be critical to achievement of sustained global food security. This goal is only possible through integrated, systems approaches to research and development, and innovative partnerships within and across the public and private sectors. This session will bring together perspectives across a range of important new technologies, and experience with innovative partnership and development models.

Moderator: Archie C. Clutter, Dean, Agricultural Research Division; Director, Agricultural Experiment Station, Institute of Agriculture and Natural Resources, University of Nebraska–Lincoln

Speakers:

- *Michael Dowgert*, Vice President of Sales and Marketing, CropX; Tel Aviv, Israel
- *Daniel Schachtman*, Professor, Department of Agronomy and Horticulture, University of Nebraska–Lincoln
- *Scott A. Shearer*, Professor and Chair, Department of Food, Agricultural and Biological Engineering, Ohio State University; Columbus, Ohio
- *Arthur Zygielbaum*, Water for Food Institute Faculty Fellow and Research Associate Professor, School of Natural Resources, University of Nebraska–Lincoln

CONFERENCE SCHEDULE

TUESDAY / APRIL 26 / CONTINUED

10:00 a.m. – 12:00 p.m. **Concurrent Sessions IV, V, VI continued**



Information Technology (Auditorium)

Panelists will discuss their project failures, successes, and future opportunities of how to use information technology to collect, analyze, and produce stakeholder value added products to improve agricultural livelihoods. The process of developing and implementing new information technology with stakeholder groups requires functional private-public partnerships. The speakers will provide insight into this complex process from their own diverse set of projects involving information technology.

Moderator: Trenton Franz, Water for Food Institute Faculty Fellow; Hydrogeophysicist and Assistant Professor, School of Natural Resources, University of Nebraska–Lincoln

Speakers:

- *Jay Angerer*, Associate Professor, Blackland Research and Extension Center; Director, Center for Natural Resource Information Technology; Senior Scientist, Norman Borlaug Institute for International Agriculture, Global Livestock Early Warning System, Texas A&M University; College Station, Texas
- *Kelly Caylor*, Associate Professor and Director of Princeton Ecohydrology Lab, Department of Civil and Environmental Engineering, Princeton University; Princeton, New Jersey
- *Colin Everson*, Water for Food Institute Global Fellow; Hydrometeorologist, South African Earth Observation Network; Honorary Professor, Hydrometeorology and Remote Sensing, University of KwaZulu-Natal; Pietermaritzburg, South Africa
- *Luke H. MacDonald*, Deputy Director, Water Institute, Johns Hopkins University; Baltimore, Maryland
- *Ammar Wahbi*, Technical Officer, Soil and Water Management and Crop Nutrition Section, International Atomic Energy Agency, Joint FAO/IAEA Program; Vienna, Austria

12:00 – 1:15 p.m. **Lunch and Award Presentations** for Poster and Photography Competitions

1:15 – 1:30 p.m. **Break**

CONFERENCE SCHEDULE

TUESDAY / APRIL 26 / CONTINUED

1:30 – 2:30 p.m.



Plenary Session IV: Big Data: Partnerships to Leverage Data for Water and Food Security

Discussion of challenges, emerging trends, partnerships and the future of Big Data

Co-convener by the Foundation for Food and Agricultural Research, U.S. Water Partnership and the Water for Food Institute

Moderator: Christopher Neale, Director of Research, Water for Food Institute; Lincoln, Nebraska

2:30 – 3:15 p.m.



Closing Panel

Moderator: Margaret Catley-Carlson, Water for Food Institute International Advisory Panel Member and Vice Chair, Canadian Water Network; Vancouver, Canada

Panelists:

Uma Lele, Independent Scholar and Development Economist; Water for Food Institute International Advisory Panel Member; Washington, D.C.

E. Robert Meaney, former Chairman International, Valmont Industries, Inc.; Riverside, Connecticut

Peter Rogers, Gordon McKay Research Professor, School of Engineering and Applied Sciences, Harvard University; Water for Food Institute International Advisory Panel Member; Cambridge, Massachusetts

Ann Willet, Director of Strategic Alliances for Food, Fuel and Water, Nebraska Innovation Campus; Lincoln, Nebraska

2:30 – 3:15 p.m.

Closing Remarks

Roberto Lenton, Founding Executive Director, Water for Food Institute; Lincoln, Nebraska

3:30 – 4:00 p.m.

Break

4:00 – 5:30 p.m.



Closing Plenary and Heuermann Lecture

Sally Rockey, Executive Director, Foundation for Food and Agriculture Research; Washington, D.C.

Something New in Agriculture: Making a 'Foundation' for Funding, Partners and Innovation

Rockey will highlight new ways of thinking about public-private partnerships and how to leverage collaboration to drive innovation in food and agriculture. The lecture will include different approaches to public-private partnerships and address where those partnerships have the greatest potential for impact in the food and water security space.

5:30 – 7:30 p.m.

Reception

Enjoy a Latin American-themed reception in celebration of the 2018 World Water Forum in Brasilia, Brazil. Music by renowned jazz vocalist Jackie Allen and her Latin jazz band.