



MEETING AGENDA

Kickoff Meeting: Working Group on Innovations in Nitrogen Circular Economies (INCE)

April 8-11, 2024

The Banbury Center, Lloyd Harbor, New York

This meeting was organized by

Maya Almaraz, Yale Center for Natural Carbon Capture

Karl Anderson, Supporters of Agricultural Research (SoAR) Foundation

Edward S. Buckler, USDA-ARS at Cornell University

Eric A. Davidson, University of Maryland Center for Environmental Science

Sheri A. Spiegel, USDA-ARS Jornada Experimental Range

and generously funded by

The Cold Spring Harbor Laboratory Corporate Sponsor Program, and

The Foundation for Food and Agriculture Research (FFAR)

MONDAY, APRIL 8

Afternoon Arrivals and check-in at Robertson House

6:00 pm Reception and dinner

TUESDAY, APRIL 9

7:15 am Breakfast

8:30 am **Welcome & Scene-Setting**

Rebecca Leshan, Banbury Center

Eric Davidson, University of Maryland Center for Environmental Science

8:45 am **SESSION 1: The Vision**

Maya Almaraz, Yale Center for Natural Carbon Capture

Sheri Spiegel, USDA-ARS Jornada Experimental Range



- 9:20 am SESSION 2: Meeting Targets**
Edward Buckler, USDA-ARS at Cornell University
- 10:30 am SESSION 3: Possibilities/Impacts of Shifting Nitrogen Flows in Animal and Crop Production**
Chairperson: Doreen Ware, Cold Spring Harbor Laboratory
Sung Woo Kim, North Carolina State University
Alexander Hristov, Pennsylvania State University
Charles Brooke, Spark Climate Solutions
Peter Kleinman (Presenter), USDA-ARS, Sheri Spiegel, USDA-ARS JER
Plenary Discussion
Rebecca McGee, Washington State University
Michael Castellano, Iowa State University
Virginia Jin, USDA-ARS
Plenary Discussion
Organizers: Guidance for Breakout Groups
- 12:30 pm Luncheon**
- 2:30 pm SESSION 4A: Research and Technology Needs**
Breakout Groups
- 4:00 pm SESSION 4B: Research and Technology Needs**
Breakout Groups Reporting
Plenary Discussion
- 5:15 pm END-OF-DAY WRAP-UP**
Edward Buckler, USDA-ARS at Cornell University
- 6:00 pm Reception and dinner**

WEDNESDAY, APRIL 10

- 7:15 am Breakfast**
- 8:30 am DAY TWO INTRODUCTION**
Rob Martienssen, HHMI, Cold Spring Harbor Laboratory



8:40 am SESSION 5: Impacts of Large-scale Nitrogen Shifts on Land, Environment, Producers
Chairperson: Mark Boggess, USDA-ARS U.S. Meat Animal Research Center

Bruno Basso, Michigan State University
Sheri Spiegel, USDA-ARS Jornada Experimental Range
Wendy Yang, University of Illinois Urbana-Champaign
German Mandrini, University of Illinois Urbana-Champaign
Plenary Discussion

Organizers: Guidance for Breakout Groups

9:40 am SESSION 6A: Roadmaps
Breakout Groups

11:00 am SESSION 6B: Roadmaps
Breakout Groups Reporting
Plenary Discussion

12:20 pm Luncheon

2:15 pm SESSION 7: Policy Needs
Karl Anderson, Supporters of Agricultural Research (SoAR) Foundation
Plenary Discussion

4:15 pm SESSION 8: Working Group Direction and Outputs
Chairperson: Eric Davidson, University of Maryland Center for Environmental Science
Plenary Discussion

5:15 pm END-OF-DAY WRAP-UP
Edward Buckler, USDA-ARS at Cornell University

6:00 pm Reception and dinner

THURSDAY, APRIL 11

7:15 am Breakfast

8:30 am DAY THREE INTRODUCTION
Jasmine Bruno, Foundation for Food & Agriculture Research (FFAR)
Organizers: Guidance for Breakout Groups



- 9:00 am** **SESSION 9A: Outputs and Next Steps**
Breakout Groups
- 10:30 am** **SESSION 9B: Outputs and Next Steps**
Breakout Groups Reporting
Plenary Discussion
- 11:40 am** **CLOSING REMARKS**
Chairperson: Edward Buckler, USDA-ARS at Cornell University
Wrap-up and Final Thoughts
- 12:15 pm** Luncheon; Participant Departures

PARTICIPANTS

Maya Almaraz, Yale Center for Natural Carbon Capture
Karl Anderson, Supporters of Agricultural Research (SoAR) Foundation
Bruno Basso, Michigan State University
Mark Boggess, USDA-ARS U.S. Meat Animal Research Center
Charles Brooke, Spark Climate Solutions
Jasmine Bruno, Foundation for Food & Agriculture Research (FFAR)
Edward Buckler, USDA-ARS at Cornell University
Michael Castellano, Iowa State University
Eric Davidson, University of Maryland Center for Environmental Science
Jennifer Dunn, Northwestern University
Emily Geoghegan, Cornell University
Alexander Hristov, Pennsylvania State University
Alexandra Huddell, University of Delaware
Virginia Jin, USDA-ARS
Sung Woo Kim, North Carolina State University
Peter Kleinman, USDA-ARS
German Mandrini, University of Illinois Urbana-Champaign
Robert Martienssen, HHMI, Cold Spring Harbor Laboratory
Rebecca McGee, Washington State University
Dan Northrup, Iowa State University
Paul Reginato, Homeworld Collective
Whendee Silver, University of California, Berkeley
Steven Singer, Advanced Research Projects Agency-Energy (ARPA-E)
Sheri Spiegel, USDA-ARS Jornada Experimental Range
Ying Sun, Cornell University
Doreen Ware, Cold Spring Harbor Laboratory & USDA-ARS
Wendy Yang, University of Illinois Urbana-Champaign
Xin Zhang, University of Maryland Center for Environmental Science