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NATIONAL COALITION FOR FOOD & AGRICULTURAL RESEARCH (NCFAR)

Program:

Enabling Open-source Data Networks in Public Agricultural Research

March 11, 2019
PROGRAM

Welcome and Introduction
DR. ELIZABETH STULBERG
NCFAR REPRESENTATIVE

Distinguished Speaker

DR. SYLVIE M. BROUDE
DEPARTMENT OF AGRONOMY
PURDUE UNIVERSITY

Open Forum

Closing
DR. ELIZABETH STULBERG

NCFAR is a nonprofit, nonpartisan, consensus-based and customer-led coalition that brings food, agriculture, nutrition, conservation and natural resource stakeholders together with the food and agriculture research and extension community, serving as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension, and education.
ABSTRACT

The purpose of this commentary is to document need for and anticipated benefits of developing data-sharing standards, incentivizing researchers to share data, and building a data-sharing infrastructure within agricultural research. The authors present the factors contributing to the current system of agricultural research that has fostered ambivalence toward data sharing; briefly review the success of data-sharing examples from other domains that offer promise for advancing agricultural research; and describe the advantages and shortcomings of emerging data-sharing platforms, networks, and repositories intended to facilitate data sharing in agriculture. Although they focus on accessing and using the full wealth of data generated by research, the authors realize impact from this effort also requires research in food production to de-emphasize smaller-scale, individual-effort studies and pursue larger efforts integrating social, economic, and environmental components. Thus, the ultimate goal is to advance the conversation among agricultural science partners to create a system conducive to data sharing and the team science that are needed to address the complex, “grand-challenge” questions in food systems. The authors highlight key strategies, roles, and responsibilities of partners in agriculture’s science and data enterprise, and they discuss the business case for data sharing as well as ingredients essential to data preservation and curation.

Download this CAST report at cast-science.org/publications.

SPEAKER BIOGRAPHY

Dr. Sylvie Brouder is a Professor and Wickersham Chair of Excellence in Agricultural Research in the Agronomy Department at Purdue University and Director of Purdue’s Water Quality Field Station. Dr. Brouder received her B.A. in biology from Harvard University (1985) and her Ph.D. in ecology from the Ecology Graduate Group at the University of California–Davis (1993). A foundational theme of her program is to advance quantitative approaches and ecological accounting frameworks to inform the valuation of multiple ecosystem services and their synergies and trade-offs. She is an expert in ecological/sustainable intensification of mixed-use landscapes and climate-smart agriculture for food security; her research focuses on field-to-landscape scale nutrient cycling with an emphasis on multivariate statistical and simulation modeling approaches to analysis of environmental data. She collaborates with crop breeders, agricultural engineers, economists and sociologists for an interdisciplinary approach to solving problems. As an Extension Specialist, she has worked on management strategies for resource-use efficiency and on diagnostics to balance production and stewardship goals for major agricultural land uses. Finally, as the director of a Core Facility, she is keenly interested in all aspects of leveraging science and society’s investment in such efforts, including standardization of experimental measurement and data protocols, data sharing (preservation, curation, accessibility and repurposing), cultural barriers to open access, and work-flows for data ingestion in environmental accounting studies.
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