

Food and Agriculture Cyberinformatics and Tools (FACT)

National Institute of Food and Agriculture's Data Science Initiative

Future of Data Analytics in Nutrition: Knowledge Gaps, Data Collection and Quality, and the Role of Supporting Tools for Sustainable Development
July 8, 2018

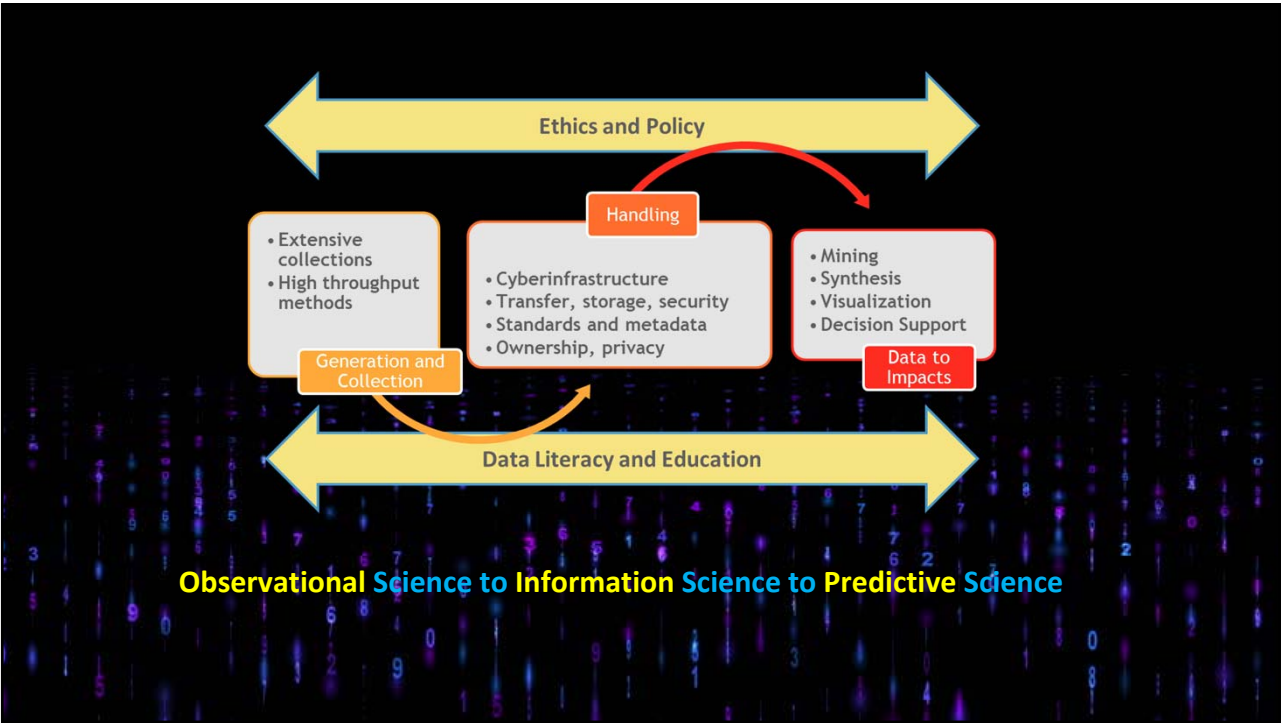
Charlotte Kirk Baer
National Program Leader
National Institute of Food and Agriculture
US Department of Agriculture

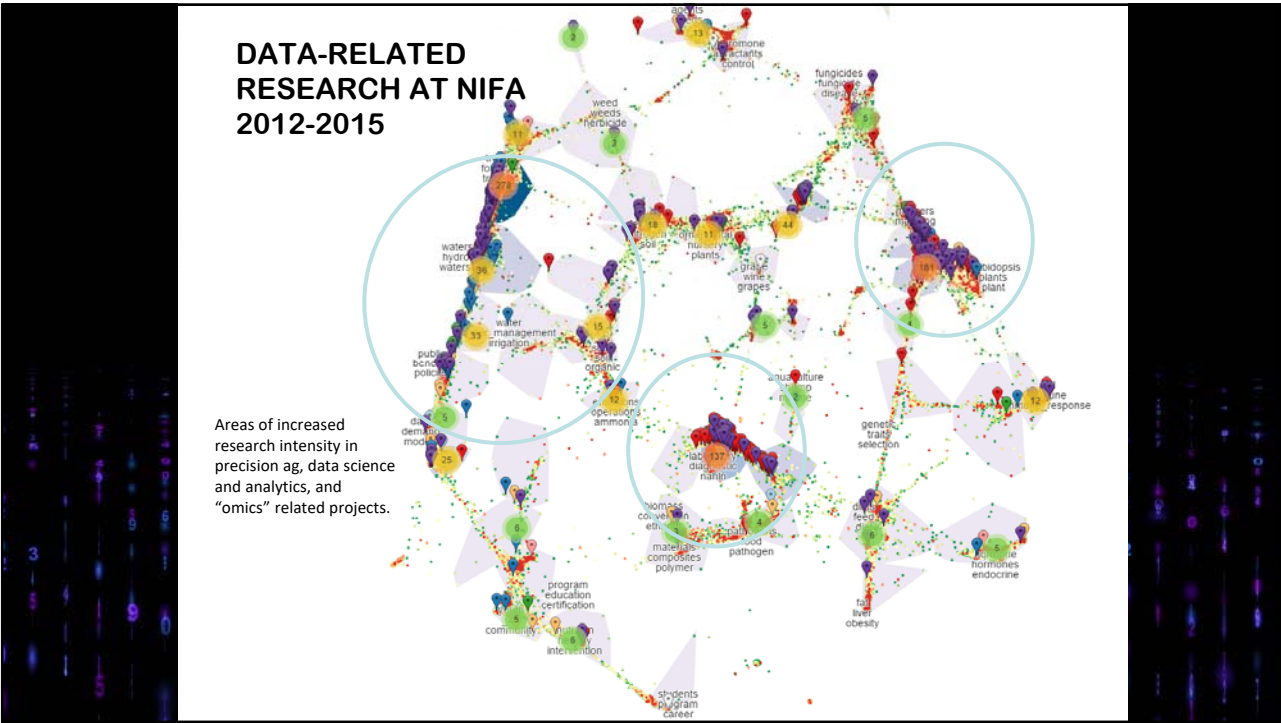
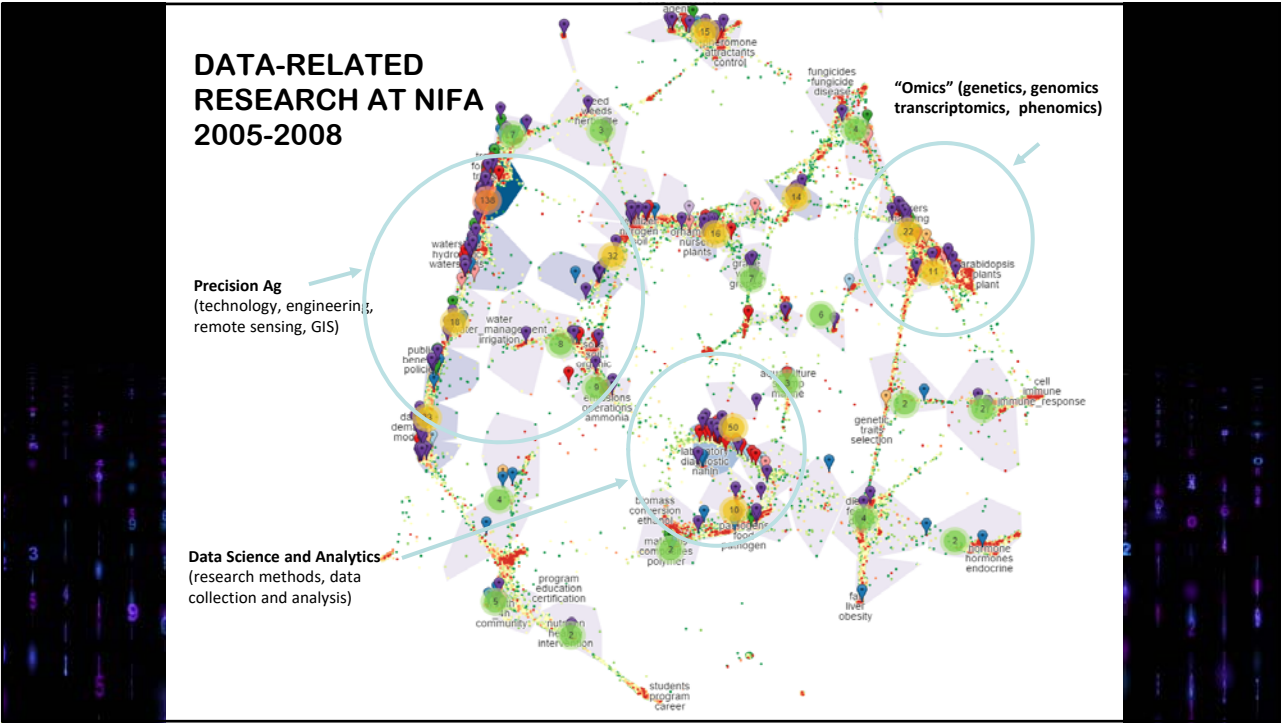
American Society of Animal Science
American Society for Nutrition



A New Narrative for Agriculture

- People and Players
- Products
- Places
- Technology
- Information/Data





Data Summit: Changing the Face, Place, and Space of Agriculture

- 2016
 - Announced NIFA's Food and Agriculture Cyberinformatics and Tools (FACT) initiative (October 2016)
 - Gathered input on needs (Ideas Engine)
 - Chicago – overlapping with Midwest Big Data Hub meetings
- 2017
 - Solicited workshop proposals
 - Funded workshops
 - Big Data for (Sm)ALL Farmers, G2F, Privacy)
- 2018
 - Request for Applications



NIFA's Data Opportunity

D

ata design and Implementation

Build scalable data infrastructure and management systems conceptualize Open Data FAIR principles (findable, acceptable, interoperable, and re-usable) for data

Develop standards and best practices with other Federal and international organizations

A

alysis

Develop data-integration and data-quality tools to improve analytic capability

Design and implement new algorithms and methods for depicting massive data

T

echnologies

Connect multiscale data

Bridge real-time distributed and parallel data systems

Create new methodologies and frameworks for tracking and processing data

Identify new approaches to data archiving and sharing

A

pplications and Human-Technology-Data Interactions

Examine how agricultural data and computer systems are used to improve human-human, human-technology, and human-decision experiences

Integrate visualization with statistical and analytic techniques to support discovery and analysis

Engage students and professionals, teams, universities and public/private sectors

Develop decision support tools that use diverse data sources and BigData analytics to create best value to US agriculture

Current Requests for Research, Education and Extension

- **AFRI Requests for Applications**
 - Education and Workforce Development
 - Fellowships
 - Research and Extension Experiences for Undergraduates
 - Foundational and Applied Science
 - All program areas (Farm Bill priorities)
 - Ag Systems and Technology - Food and Agriculture Cyberinformatics and Tools (FACT) **LETTERS OF INTENT DUE: JULY 25, 2018**
 - Agricultural Economics and Rural Communities
 - Sustainable Agroecosystems: Functions, Processes and Management
 - Sustainable Agricultural Systems



Opportunities

Since 2013

~ \$30M in 60 \$500K grants

In 2018

\$Anticipate ~13 - \$15M across AFRI in \$500K - \$1M grants

-Foundational and Applied Sciences

-Education and Workforce Development

Thank you!