

MARCH 16, 2023







As the global population increases, the effects of climate change deepens and natural resources diminish, research is crucial to help farms adapt to these unprecedented developments. FFAR, established in 2014 by the Farm Bill, connects funders, researchers and farmers to pioneer the next frontier of agriculture innovation.









Research Strategy Refresh Objective

DEVELOPING A COMPREHENSIVE RESEARCH STRATEGY

- A multipronged approach resulting in an evidence-based research roadmap
- Robust stakeholder engagement to inform priorities
- Answer key questions:
 - What is the current state of food and agriculture?
 - What do our stakeholders need?
 - Where can FFAR's research have the most impact?
- Align federal research investments, private sector's interests and future needs in agriculture
- Integrate projects across challenges and disciplines



Research Refresh Roadmap

Theory of Change

Stakeholder Input

Analysis

Implementation



The U.S. food and agriculture system supports producers, sustains the environment and equitably nourishes our population

Research provides technologies, knowledge and decision-making tools needed from farm to market

Policies enable profitable business decisions and incentivize positive environmental outcomes

FFAR partners with stakeholders to create user-driven research collaborations

FFAR defines high-impact research priorities

Draft Research Themes

- Sustainable Production Systems Research
- Research on Equitable Access to Nutritious Food
- Convergence Research for Systems Transformation

Potential Research Areas

- Food and Nutrition
 Microbiomes
- Social Sciences
- Crops and Animals
- Soil and Water Mamt.
- Climate Adaptation

- Sensing and Automation
- Data Science
- Systems Modeling

Pathways to Impact

- Stakeholder convenings to identify and co-design research opportunities
- Data Stewardship and Knowledge Infrastructure
- Interdisciplinary Research
- Robust Learning Agenda
- Scientific Workforce Development



Long-Term Impact

The U.S. food and agriculture system supports producers, sustains the environment and equitably nourishes our population.

Nutritious, sustainably sourced, socially equitable and culturally preferred foods are consistently available in all communities.

Agricultural production systems are tailored to site-specific conditions and business goals, yielding:

- High productivity, efficiency and profitability
- Resilience against biotic and abiotic threats
- Robust animal, human and ecosystem health

Question for stakeholder input:

Will the envisioned impacts deliver what we need?



Research Prioritization

FFAR defines high-impact research priorities

From among the areas of need identified by stakeholders, FFAR prioritizes research opportunities that:
• Provide significant benefits to producers and/or food system

- enterprises
- Increase nutrition and ecosystem health Benefit from public-private collaboration

Question for stakeholder input:

What else should we consider when prioritizing research areas?



Draft Research Theme 1

Sustainable Production Systems Research

Fill information and technology gaps (e.g., novel germplasm, sensing technologies, management practices, site-specific decision tools, energy co-production and systems understanding) so producers can profitably adapt systems to changing environmental conditions while meeting sustainability goals.

Question for stakeholder input:

Do you see your research needs in this theme?



Draft Research Theme 2

Research on Equitable
Access to Nutritious Food

Fill gaps in information and technologies for the food system to make highly nutritious, sustainably sourced, socially equitable and culturally preferred foods available in all communities.

Question for stakeholder input:

Do you see your research needs in this theme?



Draft Research Theme 3

Convergence Research for Systems Transformation

Prioritize and nurture convergence science and systems approaches, explicitly integrating biophysical, social and technological perspectives to support transformation of the U.S. food and agriculture system.

Question for stakeholder input:

Do you see your research needs in this theme?



Potential Research Areas

Interdisciplinary research depends on integration of subject expertise across disciplines

- Food and Nutrition
- Social Sciences
- Crops and Animals
- Soil and Water Management
- Climate Adaptation

- Microbiomes
- Sensing and Automation
- Data Science
- Systems Modeling

Question for stakeholder input:

■ What other research disciplines should we consider to maximize our impact?



Get Involved

- Participate in the Public Comment Period
 - Public can provide input for the next 30 days
 - Comments will be reviewed and may be incorporated in the Theory of Change/Research Strategy.
 - Process will be completed in Summer 2023
- Webinar recordings and additional opportunities for participation will be available on our <u>Research Strategy</u> <u>Refresh</u> page.



Public Comment Questions

- 1. What are your initial impressions and reactions to FFAR's Research Strategy Refresh?
- 2. What big challenges or issues are you currently facing in your sector?
- 3. What do you think will be the big challenges or opportunities in the future of your field?
- 4. What do you need research to deliver?
- 5. What else should FFAR consider as we develop, refine and prioritize our research strategy?
- Please elaborate on why you believe FFAR should work on and invest in the topics you mentioned above.
- 7. If available, please include links or citations to any relevant research, evidence or publications to support your comments.





