NIFA response to COVID 19 Pandemic

Robbin Shoemaker, PhD
National Program Leader for Economics, NIFA

Presented at
Mississippi State University’s
Food and Agriculture Collaboratory for Transforming Supply

FOOD SUPPLY CHAIN DISRUPTIONS DURING THE COVID-19 PANDEMIC: LESSONS LEARNED AND FUTURE IMPLICATIONS

March 24, 2021
NIFA response to COVID 19 Pandemic

• How NIFA has responded to pandemic
• Overview of projects supported
• Looking ahead at issues
• Support programs for research
What is the National Institute of Food and Agriculture?

• USDA Extramural research agency
• Fund competitive and capacity programs
• Research, Education and Extension
• Land Grants Universities, 1890’s MSI and other
• FY 2021 ~$1.7 billion
We Listened and We Responded.

Coronavirus Disease 2019 (COVID-19): Information for NIFA Partners, Researchers, Stakeholders, Applicants, and Grantees
NIFA Function – COVID-19 Impacts and Actions

• Frequently Asked Questions
  – Application Deadlines
  – Project impacts

• Opportunities
  – AFRI Research and Extension
  – SBIR
  – AFRI Education and Youth Programs
  – Rapid Response Supplements and extensions
We Listened and We Responded.

NIFA – COVID-19 AFRI Program: Rapid Response Foundational Program (A1711)

Topics

• Health and Security of Livestock
• Food and Food Processing
• Well-being of Farm, Food Service Providers, and Rural Americans
• Economic Security

Stats and Status

• 383 queries
• 96 applications
• 15 awards for a total of ~$14 million
# Projects - COVID-19 AFRI Foundational Program (A1711)

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Federal Award</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing the Impact of SARS-Cov-2 and Related Disruptions on the Local Food Supply Chain in Minority Communities in the 1890 Land Grant Regional Network</td>
<td>$1,000,000</td>
<td>Delaware State University</td>
</tr>
<tr>
<td>Susceptibility and the potential adaptation of SARS-CoV-2 in livestock</td>
<td>$978,101</td>
<td>Pennsylvania State University</td>
</tr>
<tr>
<td>SARS-CoV-2 impact on meat production: A farm to plate approach.</td>
<td>$1,000,000</td>
<td>Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td>Efficacy of using ammonium chloride supplements during crisis management to stop growth in various ages of pigs</td>
<td>$750,000</td>
<td>University of Wisconsin</td>
</tr>
<tr>
<td>Investigation of SARS-CoV-2 susceptibility in ruminants and the development of diagnostic tools</td>
<td>$350,000</td>
<td>Kansas State University</td>
</tr>
<tr>
<td>Environmental Control of SARS-CoV-2 within Food Service Establishments</td>
<td>$987,000</td>
<td>University of Arkansas</td>
</tr>
<tr>
<td>Translating SARS-CoV-2 Research Into Practical Solutions For The Meat And Poultry Processing Industry</td>
<td>$1,000,000</td>
<td>Kansas State University</td>
</tr>
<tr>
<td>Efficacy Of Intervention On The Spread Of Novel Coronavirus (SARS-Cov-2) In Farmers Markets/Food Banks From Produce Grown By Local Producers</td>
<td>$516,786</td>
<td>University of Arizona</td>
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## Projects - COVID-19 AFRI Foundational Program (A1711)

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<td>Be the Hero: Education building resources to reduce the transmission of SARS-CoV-2 among migrant and seasonal farmworkers, food service providers, and their communities</td>
<td>$1,000,000</td>
<td>Texas A&amp;M Health Science Center</td>
</tr>
<tr>
<td>COVID-19 in the US Dairy Industry: Development, Delivery and Evaluation of Training Resources for Producers and Workers</td>
<td>$639,000</td>
<td>The University of Texas Health Science Center at Houston</td>
</tr>
<tr>
<td>A Collaborative Approach to Managing SARS-CoV-2 Within the Food Industry; Filling Data Gaps and Impacting Behaviors</td>
<td>$1,000,000</td>
<td>NC State University</td>
</tr>
<tr>
<td>An Integrated Approach to Address COVID-19 Concerns in Food Supply Chain</td>
<td>$1,000,000</td>
<td>Virginia Polytechnic Institute and State University</td>
</tr>
<tr>
<td>Agricultural Supply Chain Disruptions, Costs, and Mitigation Strategies to Enhance Resiliency of the U.S. Food Supply</td>
<td>$458,000</td>
<td>Iowa State University of Science and Technology</td>
</tr>
<tr>
<td>Modeling and training to enhance resilience of the US food system to COVID-19 labor shortages</td>
<td>$1,000,000</td>
<td>Cornell University</td>
</tr>
<tr>
<td>Lessons from COVID-19: Positioning Regional Food Supply Chains for Future Pandemics, Natural Disasters and Human-made Crises</td>
<td>$1,000,000</td>
<td>University of Minnesota</td>
</tr>
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• Translating SARS-CoV-2 Research Into Practical Solutions For The Meat And Poultry Processing Industry
  - investigates the conditions within meat and poultry processing environments to identify areas and surfaces that are at high-risk for contamination and spread of infectious SARS-CoV-2 creating adverse conditions for employee health.

• Agricultural Supply Chain Disruptions, Costs, and Mitigation Strategies to Enhance Resiliency of the U.S. Food Supply
  - enhance the resiliency of the beef, pork, dairy, and egg supply chains by providing evidence of the activities, mechanisms, and investments that will allow them to be more resilient in the face of future COVID-19 or similar disruptions
Livestock Susceptibility:

Chicken, Pigs, Cattle?

*(Kuchipudi, Penn State)*

– SARS-CoV-2 isolates from Asia, Europe, and North America

Deer?

*(Richt, Kansas State)*
Supply Chain:

(Crenshaw, University of Wisconsin)

Efficacy of using ammonium chloride supplements during crisis management to stop growth in various ages of pigs
NIFA – COVID-19 AFRI A7701: Education and Workforce Development

RFA: Rapid Response to Novel Coronavirus (SARS-COV-2): Innovating Formal and Non-Formal Educational Experiences in Food and Agricultural Sciences During the Time of Social Distancing program

K-14 formal and non-formal education

– Social distancing

Grants

– $10 million for national projects

Interest

– 47 applications
**Rapid Response to Novel Coronavirus: Innovating Formal and Non-Formal Educational Experiences in Food and Agricultural Sciences During the Time of Social Distancing program (A7701)**

<table>
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<tr>
<th>Project Title</th>
<th>Award Amount</th>
<th>Institution</th>
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<tr>
<td>Gearing Up for Youth Education and Development for Employment in Agriculture</td>
<td>$2,254,000</td>
<td>Purdue University</td>
</tr>
<tr>
<td>4-H at Home</td>
<td>$3,000,000</td>
<td>National 4-H Council</td>
</tr>
<tr>
<td>Growing Math: Accessible, Cross-Curricular Education in Food and Agricultural Sciences</td>
<td>$1,000,000</td>
<td>Generation Games, Inc.</td>
</tr>
<tr>
<td>Food Experiences for Agricultural Science Training (FEAST)</td>
<td>$800,000</td>
<td>University of Hawaii</td>
</tr>
<tr>
<td>Physically Distant yet Socially Connected: Exploring Agriculture through Immersive Field Experiences and Innovative Solutions</td>
<td>$1,000,000</td>
<td>Oregon State University</td>
</tr>
<tr>
<td>STEMsational Ag: The Virtual Farm</td>
<td>$816,000</td>
<td>Middle Tennessee State</td>
</tr>
<tr>
<td>4-H Northeast Collaborative: Closing the Gap</td>
<td>$685,000</td>
<td>University of New Hampshire</td>
</tr>
<tr>
<td>Rapid Rollout of 8 National Standards-based Rigorous and Remote AFNR Courses for Underserved College-bound Students</td>
<td>$1,000,000</td>
<td>Tennessee State University</td>
</tr>
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Worker Safety:

(Sharkey, Texas A&M)

—Coordination with Promotores (community health workers)

• Communicate, assist, advise, and accommodate migrant and seasonal farmworkers regarding best practices
Social Distancing Projects

• Food Experiences for Agricultural Science Training (FEAST)
  – Teachers and community leaders in the Hawaii and Guam Farm to School Networks to create, distribute, and implement low-technology distance learning resources for agricultural science education.

• 4-H at Home
  – Resource designed to meet growing needs for virtual and non-virtual education resources that can be rapidly adopted at home or by educators and Extension specialists for effective formal/non-formal education of K-12 students and underserved youth.

• Growing Math: Accessible, Cross-Curricular Education in Food and Agricultural Sciences
  – Interactive digital platform with classroom-ready educational resources and teacher support tools to enable the rapid deployment of lessons for students in Grades 3-8 for classroom, at home or in a hybrid model.
Funded Projects – Small Business Innovation Research (SBIR)

• A safe, biological based fogging system
  – disinfectant in common areas such as commercial, and manufacturing operations

• Antiviral nanotechnology-enabled coating for rapid inactivation of SARSCoV-2
  – food manufacturing plants
  – livestock production facilities
Looking Ahead - Issues

• President Biden’s priorities
  – COVID-19
  – Climate Change
  – Racial Equity
  – Economy
  – Healthcare
  – Immigration
Looking Ahead - Issues

• Food Systems
  – Local and Regional Food System
  – Specialization and processor and institutional demands
  – New final demands and implications for supply chains

• Labor
  – Immigration
  – Regulations

• Rural Development
  – Racial equity, e.g., heir’s property
Looking Ahead - Issues

• Research on agricultural supply chains*
  – Measuring supply chains in the agricultural sector and assessing the economic factors that have contributed to changes in supply chain length.
  – Developing metrics for evaluating risk and resilience in the food supply chain.
  – Assessing the role of weather, pandemics, and other natural disasters that might limit crop or livestock production.
  – Studying the role of shipping disruptions, which can arise from political factors such as border closings or from natural factors such as earthquakes or hurricanes, in contributing to supply chain risk.

*taken for call for supply-chain research for NBER conference
Looking Ahead - Issues

• Research on agricultural supply chains*
  – Evaluating the near-term and long-term risks to agricultural supply chains from climate change.
  – Describing the interaction between innovation in the agricultural sector and supply-chain risk.
  – Exploring the nature of supply-chain risks in specific agri-food sectors, such as livestock, organic food, and wine.
  – Consider the impacts of public policies, including agricultural policies, trade policies, and environmental policies, on the nature of agricultural supply chains and their risk of disruption.

*taken for call for supply-chain research for NBER conference
Looking Ahead - Funding Opportunities

• Agriculture & Food Research Initiative (AFRI)–Foundation Programs
  – Agricultural Economics and Rural Communities Programs
    • Economics, Markets and Trade (A1641) (Closes July 15, 2021)
      – Economic analysis of food and agr production, consumption and markets
    • Rural Economic Development (A1661) (Closes June 17, 2021)
      – Research and extension efforts addressing opportunities and barriers to economic development
    • Small and Medium-Sized Farms (A1601) (Closes June 24, 2021)
      – Research and extension activities looking challenges facing smaller farm operations

https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-foundational-applied-science-program
Looking Ahead - Funding Opportunities

• Small Business Innovation Research Program - Phase II
  – must have previously completed a successful USDA Phase I project before applying for a Phase II grant
  – Projects dealing with agriculturally-related manufacturing and alternative and renewable energy technologies are encouraged
  • Closes May 3, 2021

https://nifa.usda.gov/funding-opportunity/small-business-innovation-research-program-phase-ii

Denis Ebodaghe, denis.ebodaghe@usda.gov
Looking Further Ahead - Funding Opportunities

• AFRI - Sustainable Agricultural Systems (A9201)
  • Applications must address one or more long-term goals (for 2021):
    – Sustainable Agricultural Intensification;
    – Agricultural Climate Adaptation;
    – Value-added Innovation; and/or
    – Food and Nutrition Translation.

• $150 Budget for program for 2021

• Awards up to $10 million

• 2021 is closed but will likely be available for 2022
NIFA Information and Resources

- https://nifa.usda.gov/grants
- https://nifa.usda.gov/rfa-list
- https://nifa.usda.gov/programs

Thanks!
robbin.shoemaker@usda.gov