

Sustainable Food Systems



Overview:

United States food and national security depend on transformative innovations driven and delivered by Land-grant University research and Extension to build a resilient and adaptable food system. By advancing diverse approaches in production, processing, and distribution across regions, food supply chains in all agricultural and food sectors are strengthened, reducing the risk of disruptions. Delivering these innovations creates a food system that meets current needs while preparing for future challenges—ensuring it remains economically resilient, socially equitable, and environmentally sound, securing the nation’s food supply for generations to come.

Outcome Goals and Impacts:

- Achieve national and local food security by producing 95% of our food domestically, increasing local and regional farm net incomes by 20%, and reducing food waste by 50%.
- Bolster supply chain resilience by strengthening local and regional markets to meet 15% to 25% of local demand, reducing the carbon footprint of food transportation by 25%, and expanding the bioeconomy.
- Reduce food insecurity by cutting the number of U.S. households experiencing low food security by 50%.
- Decrease diet-related diseases by 40% in all communities.
- Safeguard the food supply with a 50% increase in agricultural biosecurity through the creation and adoption of tactics to prevent foodborne contaminants, minimize plant and animal disease outbreaks, and manage pests from production to consumption.

Opportunities:

- **Promote innovation** across the agricultural continuum and advance strategies for regionally focused agriculture.
- **Enhance sustainability** by conducting cost-benefit, life cycle, environmental impact, and social cost-benefit analyses to assess improvements in local, regional, national, and international food systems and implement the results.
- **Reduce waste** by repurposing agricultural byproducts, extending product shelf life, implementing sustainable packaging, and educating stakeholders to minimize waste from field to retailer, thereby enhancing food security.
- **Encourage healthier lifestyles** by promoting science-based solutions, increasing access to affordable, nutritious, and safe food, and expanding education to support individuals in adopting healthier habits.
- **Ensure food safety** by developing and adopting new surveillance tools and approaches for early detection of pests, diseases, and pathogens across the food chain.
- **Improve crop and livestock genetics** to increase nutritional value and enhance resistance to pests and diseases in commodity crops, fresh fruits, vegetables, and livestock, and train local producers on deploying new technologies that take advantage of new and changing environments.
- **Adapt to change** by developing and deploying technologies and innovations that address environmental shifts and the evolving agricultural labor force.

Risks of Inaction:

Food system failures and disruptions threaten national security. Without increased investment, the U.S. risks falling behind in developing and delivering resilient, sustainable, and efficient farm-to-table practices. This stagnation could lead to increased food supply interruptions, food waste, food insecurity and hunger, foodborne diseases, economic instability, and a growing reliance on costly imports. Ultimately, a lack of innovation jeopardizes national security, food security, global economic competitiveness, health, and the stability of rural communities.

Crosscutting Education Outcome Goal:

Workforce Development: Annually train an additional XX college students and XX 4-H members in food, agriculture, and renewable natural resources to meet the increasing demand for a skilled workforce. Recruitment efforts will focus on engaging youth and adult learners from diverse backgrounds and experiences.



Funding Requirement:

America’s future prosperity relies on Land-grant Universities delivering groundbreaking discoveries for a resilient, sustainable tomorrow. Achieving this requires bold investments in USDA capacity and competitive funding and aligned federal programs.