Building Sustainable Food Systems

Growing enough food to feed everyone requires further investments in agricultural research, education, and Extension to drive innovation in food production, processing, and distribution—strengthening local and regional food systems across the country.

U.S. agricultural productivity has stagnated over the past decade while other nations have surged ahead. Without stronger public investment, America's food production will fall behind.

What's at stake: Food system failures that threaten our national security, including **food supply interruptions, food waste, food insecurity and hunger, foodborne diseases, economic instability,** and a **growing reliance on costly imports.**

Increased investment in agricultural research, education, and Extension can improve the lives of all Americans by:

Priorities:

- Achieve national and local food security.
- Bolster supply chain resilience.
- Strengthen local and regional markets.
- Expand the bioeconomy.
- Reduce food insecurity.
- Decrease diet-related diseases.
- Increase agricultural biosecurity.

- **Reducing food loss and waste**
  - Current Problem: Each year, the U.S. wastes about 120 billion meals' worth of food at an estimated cost of $382 billion.
  - Land-grant Solutions: Research on repurposing agricultural byproducts, extending product shelf life, developing sustainable packaging, and educating stakeholders to minimize waste from field to retailer.
  - Benefit: Eliminating avoidable food waste will save the average American family $2,913 annually and improve food security and sustainability.
- **Strengthening the sustainability of food supply chains**
  - Current Problem: The complexity of the modern food system makes it challenging to measure, and then reduce, the environmental impacts of food production.
  - Land-grant Solutions: Conduct cost-benefit, life cycle, environmental impact, and social cost-benefit analyses.
  - Benefit: Research will identify opportunities to improve efficiency, reduce inputs, build supply chain resilience, and make food more affordable for consumers.
- **Enabling healthier lifestyles**
  - Current Problem: Poor nutrition is a risk factor for chronic diseases, which have become increasingly common in the U.S. and put a major strain on the healthcare system.
  - Land-grant Solutions: Implement nutrition education and increase access to food to improve diets.
  - Benefit: Reducing diet-related chronic disease will result in a healthier population, a more productive workforce, and a stronger overall economy. A healthier diet could save $50 billion in healthcare costs.
- **Protecting food safety and agricultural biosecurity**
  - Current Problem: Pests, diseases, and pathogens pose a large threat to the food supply. U.S. crop losses due to plant pathogens alone are estimated to cost $21 billion per year. Highly pathogenic avian influenza cost consumers $1.41 billion in 2024.
  - Land-grant Solutions: Developing new surveillance tools and practices to help producers and the entire supply chain with early detection to prevent foodborne contaminants, minimize plant and animal disease outbreaks, and manage pests.

  - Benefit: Improved biosecurity will protect plant and animal health, food safety, and America's food security.
- **Developing better crops and livestock**
  - Current Problem: U.S. agricultural productivity growth, or producing more output with the same inputs, has declined in recent years.
  - Land-grant Solutions: Improve crop and livestock genetics to increase nutritional value and enhance resistance to pests and diseases, and train producers to use technologies adapted to changing weather patterns.
  - Benefit: Innovations will protect the availability of affordable food for consumers and farmers' future profitability.
- **Advancing local and regional agriculture**
  - Current Problem: Local food systems and farmers face societal, environmental, and economic challenges. Between 2017 and 2022, the U.S. lost 141,733 farms, a 7% decline.
  - Land-grant Solutions: Extension programs supporting producer viability in local and regional markets.
  - Benefit: Supporting local and regional food systems will increase domestic food production, reduce food transportation costs, increase net farm incomes, and expand the bioeconomy.
- **Helping agriculture adapt to change**
  - Current Problem: Environmental pressures, economic instability, labor shortages, and shifting consumer preferences threaten the financial sustainability of farmers and ranchers.
  - Land-grant Solutions: Develop and deploy technologies and innovations that address environmental shifts, such as extreme weather and water scarcity, as well as the evolving agricultural labor force.
  - Benefit: New breakthroughs will build resilience in our food system and help farmers thrive economically.

Strategic investment in agricultural research and Extension will help build a resilient, sustainable food system—one that safeguards our national security, strengthens our economy, and secures America's food future for generations to come.