



CONTRIBUTIONS OF ECONOMICS TO NIFA PRIORITIES

For decades, applied economists have been involved in multidisciplinary efforts to address critical problems relating to the nation's food supply, resource conservation, environmental quality, energy use, and the role of agriculture in international development. More recently, alternative energy sources, climate change, child nutrition, and world hunger have received increasing emphasis. Science and technology hold the promise to solve the problems, but final resolution will depend on economic, social, and political feasibility. Understanding the economic aspects of the problems and proposed solutions is the key to successful implementation.

Economics is the science of choosing among competing demands for a limited set of resources. These choices are inherent in the NIFA Priorities of Global Food Security and Hunger; Climate Change; Sustainable Energy; Childhood Obesity; and Food Safety. The resources to respond to these priorities are limited and important choices must be made about allocating these resources. Economics offers a framework for choosing among these competing demands for given resources in order to best improve societal welfare.

Traditionally, economics has contributed to the underlying research through its focus on social and market factors that affect consumer and firm behaviors. More recently, economists have brought an analytical perspective that integrates biophysical and environmental knowledge with an understanding of how domestic and global markets work and of the importance of balancing efficiency, equity and sustainability objectives.

The ever increasing need to understand the impacts of public and private investments and decisions also provides a strong role for social science research. Economists have a long and credible track record in measuring the payoffs to public and private investments in agricultural research. The results of work in this area can provide invaluable support to the case for a strong program of public research and education in the agricultural sciences. This information can also help guide strategies for public investments in countries where agricultural productivity is lagging and natural resources are being stressed.

What Economists Can Contribute

The economics framework provides an analytical and comprehensive empirical approach to address societal problems, especially when that framework is integrated with the research of other sciences. Below are a few questions to which economic analysis offers insights.

Food Safety and Nutrition

- How do consumers respond to information—including nutritional labeling claims on food—and what are the costs and benefits of nutritional labeling policies? What are the effects of agricultural policies, food prices, “fat taxes,” and subsidies on food consumption, nutritional intake, and health of consumers?
- Are food assistance programs, including school meals, effective at improving dietary intakes and health? What factors contribute to designing programs to address the nutritional concerns of today's children and other targeted groups?

Bioenergy, Climate, and Environment

- What are the private and societal costs of alternative policies and courses of action in terms of food and energy security, environmental quality and economic welfare of various groups of citizens?
- How can markets provide information about the choices of consumers and producers to improve predictions and inform policy makers?

Food Production and Sustainability

- Which policies can assist in meeting the rising world demand for cereals, animal protein, water and energy in environmentally sustainable systems?
- How can public policies guard the safety of the agri-food supply chain as it becomes more international and complex?

Family, Youth and Communities

- How will increased demand for ecosystem services and alternative energy sources affect rural communities?
- What factors increase the vulnerability of rural communities to climate change? How could federal, state and local policy changes increase community resilience to anticipated and unanticipated changes associated with global warming?

Needs and Opportunities

Accompanying the summary we have white papers that profile some of the research agricultural and applied economists have conducted in recent years. These white papers are just a sample of work that has been done by researchers that the NIFA staff may be the most familiar.

Economics contributes to the underlying research through its focus on social and market factors that affect consumer and firm behaviors. As a result of economic studies, decision-makers have a better understanding of the system-wide interrelationships especially the interface between the biological, physical and social sciences. Many of these issues are best studied with models of human responses and reactions to incentives—factors that are often treated as exogenous by physical scientists. Specifically, inclusion of economics in the RFA and the evaluation process is important to help fully address the important, broad societal questions being addressed by NIFA.

Ongoing access by the USDA Chief Scientist to economists who know and understand the NIFA Priorities will be invaluable. They can both create support for the agricultural sciences and guidance of a more productive national program of research and education.

In the first decade of the twenty-first century, society faces new questions and challenges. With new challenges, food, agricultural and resource economists have the opportunity to provide the critical information for private and public decisions contributing to society's resolution of those challenges.

900 Second Street, NE
Suite 205
Washington, DC 20002
Phone: 202-408-8522
www.cfare.org

