

2014 Explanatory Notes  
Economic Research Service

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## ECONOMIC RESEARCH SERVICE

### Purpose Statement

The Economic Research Service (ERS) was established in 1961 from components of the former Bureau of Agricultural Economics principally under the authority of the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627). The mission of ERS is to inform and enhance public and private decision making on economic and policy issues related to agriculture, food, the environment, and rural development.

Activities to support this mission and the following goals involve research and development of economic and statistical indicators on a broad range of topics, including but not limited to global agricultural market conditions, trade restrictions, agribusiness concentration, farm business and household income, farm and retail food prices, food borne illnesses, food labeling, nutrition, food assistance programs, agrichemical usage, livestock waste management, conservation, genetic diversity, technology transfer, and rural employment. Research results and economic indicators on such important agricultural, food, natural resource, and rural issues are fully disseminated to public and private decision makers through published and electronic reports and articles; special staff analyses, briefings, presentations, and papers; databases; and individual contacts. More information on ERS' program is contained on the ERS Web site ([www.ers.usda.gov](http://www.ers.usda.gov)).

The ERS headquarters is in Washington, D.C. ERS does not have any field offices. As of September 30, 2012, there were 375 permanent full-time employees.

ERS did not have any direct Office of Inspector General (OIG) or Government Accountability Office (GAO) audits or evaluations conducted during 2012.

During 2011 and continuing into 2012, an external panel of experts in farm financial analysis was assembled to conduct a comprehensive review of the Agricultural Resource Management Survey (ARMS) process for constructing financial statements and to provide recommendations regarding possible changes to questionnaire content, variable summarization methods, and data collection procedures. During the review, the external panels received briefings on the ARMS process, asked questions of the process, and then met to discuss possible recommendations. A symposium was held at the Agricultural and Applied Economics Association's (AAEA) annual meeting to further vet recommendations. A special issue of the *Agricultural Finance Review* was published in 2012 that provided the outcome of the review and panel recommendations.

ERS underwent two reviews pertaining to its IT systems in 2012. The first review was a security "assessment and authorization" of ERS' IT infrastructure and operations conducted by the USDA Office of the Chief Information Officer (OCIO). This review is conducted every three years in order to maintain the "authority to operate." ERS' policies, procedures, and IT configurations were reviewed to ensure compliance with Departmental security requirements.

The second review is a study/evaluation conducted by Deloitte to identify alternative IT architectures in order to address the issues and opportunities found in ERS' operations. The process started in February 2012, with the Performance Work Statement and the Agriculture Acquisition Regulation (AAR) approval process, conducted internally prior to work by Deloitte. At the conclusion of Phase I in November 2012, Deloitte addressed these areas in its recommendations: (1) Relocation of IT infrastructure; (2) Application centralization; (d) Desktop virtualization; and (4) Public web site. Phase II of the review is ongoing in 2013.

In 2012 the Government Accountability Office (GAO) began a study of the program, Trade Adjustment Assistance to Farmers (TAAF). Although ERS participated in the study, the final GAO Report (GAO-12-731) contained no conclusions or recommendations concerning ERS. The objectives/key questions of the study were: How has the TAAF program operated under the modifications made in 2009? To what extent have program beneficiaries used technical assistance and cash payments to adjust to increased imports? The TAAF program is administered by the Foreign Agriculture Service (FAS), and ERS provides technical assistance by conducting analysis of petitions for adjustment assistance to verify the decline in receipts for petitioned commodities and to assess possible causes, including imports.

The Lean Six Sigma review of administrative processes for the Agency's hiring management and reporting, document initiation and tracking, and specific budget execution activities was completed in late 2012. These reviews led to three specific outcomes. First, the accuracy and timeliness of the hiring management and reporting processes were improved by the application of Lean Six Sigma processes. These efforts have also improved the transparency of the processes used to develop the hiring management report. Second, the Lean Six Sigma review pointed to the need for earlier review of and attention to the resolution of unliquidated obligations. As a result, staff are now creating and reviewing unliquidated obligation reports earlier in the fiscal year than they had in the previous three years, and they are reporting on the resolution of those obligations to senior managers on a regular basis. Finally, as a result of the review of the Agency's document initiation and tracking procedures, an additional Lean Six Sigma project was initiated to determine the attributes of a tracking system based upon the electronic routing of administrative and financial forms. The primary goal of this project was to provide greater visibility to the initiators of acquisition, human resource and other administrative and financial requests as to the current status of requests, as requests move through the various stages of processing. As a result of that effort, the Agency is working with experts in other USDA agencies to expand access to budget transaction information, which will improve transparency of budget actions as transactions move from commitments and obligations to expenditures and disbursements in the official financial system.

ECONOMIC RESEARCH SERVICE

Available Funds and Staff Years

(Dollars in thousands)

Item	2011 Actual		2012 Actual		2013 Estimate		2014 Estimate	
	Amount	SY	Amount	SY	Amount	SY	Amount	SY
Salaries and Expenses:								
Discretionary Appropriations.....	\$81,978	401	\$77,723	374	\$78,199	385	\$78,506	385
Rescission.....	-164	-	-	-	-	-	-	-
Adjusted Appropriation.....	81,814	401	77,723	374	78,199	385	78,506	385
Lapsing Balances.....	-688	-	-547	-	-	-	-	-
Obligations.....	81,126	401	77,176	374	78,199	385	78,506	385
<u>Obligations under other USDA appropriations:</u>								
Foreign Agricultural Service.....	326	1	248	1	690	1	175	1
Social Security Administration.....	0	-	55	-	-	-	-	-
Food and Nutrition Service.....	1,200	-	1,500	-	1,750	-	1,200	-
National Science Foundation.....	0	-	25	-	-	-	-	-
Agricultural Research Service.....	3	-	58	-	-	-	-	-
Office of the Chief Economist.....	57	-	204	-	15	-	15	-
Nat'l Inst.of Food and Agriculture.....	90	-	3	-	33	-	6	-
U.S. Int'l Trade Commission.....	0	-	25	-	-	-	-	-
Internal Revenue Service.....	0	-	10	-	-	-	-	-
Nat'l Agricultural Statistics Svc.....	95	-	61	-	6	-	-	-
Total, Other USDA Appropriation.....	1,771	1	2,189	1	2,494	1	1,396	1
Total, Economic Research Service.....	83,585	402	79,912	375	80,693	386	79,902	386

ECONOMIC RESEARCH SERVICE

Permanent Positions by Grade and Staff Year Summary

Grade	2011 Actual Washington DC	2012 Actual Washington DC	2013 Estimate Washington DC	2014 Estimate Washington DC
Senior Executive Service.....	8	6	6	6
GS-15.....	75	71	72	72
GS-14.....	84	78	80	80
GS-13.....	92	89	90	90
GS-12.....	54	52	57	57
GS-11.....	38	34	38	38
GS-10.....	1	1	1	1
GS-9.....	20	15	17	17
GS-8.....	6	5	5	5
GS-7.....	8	4	3	3
GS-6.....	2	3	3	3
GS-5.....	2	4	4	4
GS-4.....	5	7	4	4
GS-3.....	5	4	4	4
GS-2.....	2	2	2	2
Total Permanent Positions.....	402	375	386	386
Unfilled Positions, end-of-year.....	-29	0	0	0
Total Permanent, Full-Time Employment, end-of-year.....	373	375	386	386
Staff-Year Estimate.....	402	375	386	386

ECONOMIC RESEARCH SERVICE

The estimates include appropriation language for this item as follows:

Salaries and Expenses:

*For necessary expenses of the Economic Research Service, \$78,506,000.*

ECONOMIC RESEARCH SERVICE

SALARIES AND EXPENSES

2013 Estimate.....	\$78,199,000
Budget Estimate, 2014.....	<u>78,506,000</u>
Change in Appropriation.....	+307,000

Summary of Increases and Decreases  
(Dollars in thousands)

	2011 <u>Actual</u>	2012 <u>Change</u>	2013 <u>Change</u>	2014 <u>Change</u>	2014 <u>Estimate</u>
Discretionary Appropriations:					
Research Innovation for Improving Policy Effectiveness.	0	0	0	+\$2,500	\$2,500
Food Assistance and Nutrition Research Program.....	\$4,408	-\$1,000	0	0	3,408
Commodity Outlook Programs.....	5,217	-500	0	0	4,717
Biotechnology in American Agriculture.....	401	-401	0	0	0
IT equipment.....	1,500	-225	0	-275	1,000
Macroeconomic analysis.....	400	-200	0	0	200
Production of print copies of <i>Amber Waves</i> .....	48	-48	0	0	0
Intramural research on the economics of invasive species	1,000	-165	0	0	835
Situation and outlook reporting for fertilizer use and trad	600	-150	0	0	450
Staff streamlining in ERS situation and outlook program	1,200	-200	0	0	1,000
Cooperative Agreements and Collaborations.....	3,800	-507	0	-449	2,844
Interagency Agreements .....	5,559	0	0	-400	5,159
Agricultural Resource Management Survey (ARMS).....	8,000	0	0	-1,350	6,650
Environmental Services.....	1,800	-695	0	0	1,105
Pay costs.....	0	0	0	+448	448
Other Ongoing Research.....	47,881	0	+476	-167	48,190
Total Appropriation or Change.....	<u>81,814</u>	<u>-4,091</u>	<u>476</u>	<u>+307</u>	<u>78,506</u>

ECONOMIC RESEARCH SERVICE

Project Statement  
Adjusted Appropriations Detail and Staff Years (SY)  
(Dollars in thousands)

Program	2011 Actual		2012 Actual		2013 Estimate		Inc. or Dec.		2014 Estimate	
	Amount	SY	Amount	SY	Amount	SY	Amount	SY	Amount	SY
Discretionary Appropriations:										
Economic Analysis & Research...	80,831	395	76,789	368	\$77,265	379	+\$307	-	77,572	379
Homeland Security.....	983	6	934	6	934	6			934	6
Subtotal.....	81,814	401	77,723	374	78,199	385	+307	-	78,506	385
Rescission.....	164		-		-				-	
Total Appropriation.....	81,978	401	77,723	374	78,199	385	+307	-	78,506	385
Rescission.....	-164		-		-				-	
Total Available.....	81,814	401	77,723	374	78,199	385	+307	-	78,506	385
Lapsing Balances .....	-688		-547		-		-		0	
Total Obligations.....	81,126	401	77,176	374	78,199	385	+307	-	78,506	385

Project Statement  
Obligations Detail and Staff Years (SY)  
(Dollars in thousands)

Program	2011 Actual		2012 Actual		2013 Estimate		Inc. or Dec.		2014 Estimate	
	Amount	SY	Amount	SY	Amount	SY	Amount	SY	Amount	SY
Discretionary Obligations:										
Economic Analysis & Research...	80,143	395	76,242	368	77,265	379	+\$307	-	77,572	379
Homeland Security.....	983	6	934	6	934	6			934	6
Total Obligations.....	81,126	401	77,176	374	78,199	385	+307	-	78,506	385
Lapsing Balances .....	688		547		-				-	
Total Available.....	81,814	401	77,723	374	78,199	385	+307	-	78,506	385
Rescission.....	164		-		-				-	385
Total Appropriation.....	81,978	401	77,723	374	78,199	385	+307	-	78,506	385

### Justification of Increases and Decreases

(1) A net increase of \$307,000 (\$78,199,000 and 385 staff years available in FY 2013) for economic analysis and research.

Base funds for the Economic Research Service will continue to provide economic and other social science research and analysis to inform public and private decision making on agriculture, food, natural resources, and rural America. The Agency's mission is to anticipate food, agricultural, agri-environmental, and rural development issues that are on the horizon, and to conduct sound, peer-reviewed economic research on these issues. ERS is also the primary source of statistical indicators that, among other things, gauge the health of the farm sector (including farm income estimates and projections), assess the current and expected performance of the agricultural sector (including trade), and provide measures of food security here and abroad. Most of the Agency's research is conducted by economists and social scientists through an intramural program of research, market outlook, and analysis.

Cutting base funding for ERS would target its core programs for economic research and analysis. One example would be the inability to purchase sufficient retail scanner data that have previously supported research projects. Reduced data purchases means less capacity for food market, price, and choice analysis. Other core programs that could be affected include food markets research and its analysis and reporting on food retail structure, food retail price competition, and investigations into the influence of structure and competition on food prices and food choices. A decrease to Environmental Services would impact baseline information on farmer practices and the design of markets and incentive programs. A reduction to analysis of rural well-being would result in a reduced capacity for research on trends in poverty, inequality, housing, and the relative well-being of disadvantaged groups.

The ERS program supports all of the USDA Strategic Goals: Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving; Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources; Help America promote agricultural production and biotechnology exports as America works to increase food security; and Ensure that all of America's children have access to safe, nutritious, and balanced meals. Our program is aligned with the strategic vision put forth by the Research, Education, and Economics Mission Area Action Plan for USDA science.

The FY 2014 budget request of \$78,506,000 continues to fund ERS' core programs and in addition, supports a new program enhancement, *Research Innovations for Improving Policy Effectiveness*, which is directly related to mission area goals, reflecting key Administration priorities. In addition, ERS proposes an initiative for FY 2014 that will fund enhancements of its general information technology support through the redirection of IT funding.

In FY 2014, ERS will continue its core program of research, data analysis, and market outlook. Highlights of ERS' FY 2014 programmatic activities include:

- ERS will conduct research on linkages between rural community wealth and health care provision, based on a survey being conducted during FY 2013. The research will help improve understanding of the roles that rural communities play in recruiting and retaining health care providers and the impacts this has on rural economic development. Understanding such roles and impacts informs policy initiatives to address inadequacies in rural health care services and promote rural development. The Office of Rural Health Policy of the Department of Health and Human Services and USDA's Rural Development Mission Area are among the potential users that have expressed interest in information generated from the survey's results. Information from the survey will assist them in identifying ways to improve access to health care services in rural areas and promote both human health and rural community prosperity (USDA Strategic Goal 1, Assist rural communities to create prosperity so they are self-sustaining, re-populating, and economically thriving).



- ERS research outputs in 2014 will include an assessment of the extent to which USDA conservation programs provide “additional” environmental benefits (i.e., benefits that would not have been realized in the absence of incentives). This research also provides evidence on alternative program rules that could be applied to conservation programs or to environmental markets to increase program performance by encouraging farmers to adopt additional practices. This research will also assist USDA program management agencies, such as the Farm Services Agency (FSA) and the Natural Resources Conservation Service (NRCS), the Office of Management and Budget (OMB), and the Congress as they seek to improve estimates of the benefits of conservation program features for use in program design and rule-making processes (USDA Strategic Goal 2, Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources).
- ERS will conduct research on agricultural export restrictions. The research will examine both the motives and market consequences (for trade volumes and prices) of these restrictions for major commodities and countries. It will also examine alternative policies to export bans, quotas, and taxes that are less market-distorting, as well as how regional trade agreements can constrain the use of these and other trade controls. The USDA Office of the Chief Economist and the Office of the Special Trade Representative will benefit from this information and analysis, especially in assessing and responding to agricultural export restrictions imposed by other countries (USDA Strategic Goal 3, Help America promote agricultural production and biotechnology exports as America works to increase food security).
- ERS will produce an annual assessment of the prevalence and intensity of global food insecurity in key developing countries in 2014, as well as projections to the year 2024. The assessment will identify key drivers of global food insecurity. Improvements to the ERS modeling system will allow for more analysis of changing income and consumption patterns on food security, as well as creating better tools for analyzing the impact of impacts of price and weather shocks. The analysis stemming from this activity has been and will continue to be used by decision makers in USDA, United States Agency for International Development (USAID), and non-governmental organizations in making resource allocation decisions for their programs (USDA Strategic Goal 3, Help America promote agricultural production and biotechnology exports as America works to increase food security).
- ERS will conduct research exploring the relationship between extended futures market trading hours and price volatility surrounding important news releases. The research will help to increase understanding of how recently expanded Chicago Board of Trade trading hours for Grains, Oilseeds and Ethanol might affect volatility and price discovery in these markets, and the implications (if any) for timing of USDA news releases. This work will help to ensure that new information released by USDA is incorporated into markets in an orderly and efficient manner, and could therefore have important implications for the broad community of commodity market participants that rely on the WASDE and other USDA reports to gauge market conditions. Preliminary analysis based on previous changes to the cotton market was found by USDA’s Chief Economist and World Board Chair to be highly informative (USDA Strategic Goal 3, Help America promote agricultural production and biotechnology exports as America works to increase food security).
- ERS will conduct research that focuses on food purchase choices of low income households using the new *National Food Acquisition and Purchase Survey (FoodAPS)*. *FoodAPS* is designed to capture household information and food acquisition data from a nationally representative sample of 5,000 households. This research will help USDA understand how the Supplemental Nutrition Assistance Program (SNAP) influences food purchases and food security. In addition, ERS will use the data to study: the influence of food access on food choice and dietary quality; the response of food purchases to changes in income and prices; the influence of dietary knowledge on purchase patterns and food choice; the relationship between food acquisition patterns and levels of food security; and differences in food acquisition patterns for SNAP households and low-income households not participating in SNAP. Research findings will support decision making on policies and programs for the USDA Food and Nutrition Service (FNS) and other Federal agencies, such as the Center for Disease Control (CDC) and the Department of Health and Human Services (HHS) who are working on obesity and food choice issues, as well as allow outside stakeholders who work on food assistance policy issues to be

better informed about low-income household food choices (USDA Strategic Goal 4, Ensure that all of America's children have access to safe, nutritious, and balanced meals).

- ERS will conduct research on factors that influence the success of the Healthy, Hunger-Free Kids Act of 2010 (HHFK) using both existing data and a pilot study in Washington, D.C. schools. Major changes in the nutritional requirements for school meals from the HHFK offer an opportunity for improving children's diets and health. At the same time, they present problems of acceptance and raise concerns about cost. Research in this area will focus on: (1) A study of DC public schools that will test the success of behavioral economics-based approaches in increasing student acceptance of new, healthier school meals; and (2) A study that will investigate how small differences in menu offerings can influence students' acceptance of fruits, vegetables, and other healthier foods that will be a larger part of school meals, with new, healthier standards. This research will make use of Federal data collected by FNS, specifically the School Nutrition Dietary Assessment Studies (SNDA) III and IV. Results from this research will be used by FNS and local school food service authorities to improve program and policy decisions related to school meal programs and child nutrition (USDA Strategic Goal 4, Ensure that all of America's children have access to safe, nutritious, and balanced meals).

The Agency completed a strategic planning process in FY 2012 to identify opportunities for increased program efficiency and to identify strategic opportunities for investment in high-priority topics for research, market analysis, and data development. As part of this process, ERS is seeking input from a diverse array of clients and stakeholders to ensure that programs meet customer needs and to solicit ideas to further strengthen the relevance and impact of our products and services.

The funding change is requested for the following items:

- (a) An increase of \$2,500,000 (\$0 available in 2013) for Research Innovations to Improve Policy Effectiveness.

#### **Overview**

ERS proposes an initiative for FY 2014 that will strengthen its ability to conduct 21st-century research that supports improving USDA policy effectiveness in a time of tight federal budgets. The initiative adopts two innovative strategies—the use of behavioral economics and the statistical use of administrative data—to address critical information gaps that hinder policy effectiveness. Through the initiative's support, ERS will expand internal expertise, support collaboration with USDA program agencies, and form partnerships with extramural researchers to: (1) fund experiments that incorporate concepts from behavioral economics, identifying high (and low) performing options without the costs associated with new program implementation; and (2) create and evaluate unique merged administrative data systems by linking multiple sources, assessing statistical properties, and analyzing the merged data for policy-relevant research. Results of the initiative will provide science-based evidence that informs decision making by policy makers and program managers in the Congress, USDA and across Federal and State governments. The initiative supports the priorities, goals and objectives of the Research, Education, and Economics (REE) 2012 Action Plan and the Office of Management and Budget's 2012 memorandum on the use of evidence and evaluation in the 2014 budget.

USDA agencies face the complex policy challenge of developing program options that influence participation choices and improve program effectiveness in the face of declining agency budgets. They also face incomplete information on the effects of program features on participation and performance measures. For example, USDA provides incentives for farmers to adopt conservation practices, yet many farmers do not participate. USDA subsidizes nutritious school meals, yet many children choose less healthy options. Behavioral economics is an exciting new approach to understanding factors influencing individual choices, including perceived risk, the description of options (referred to as framing), the decision or choice environment, and the propensity of people, perhaps especially children, to over-discount the future consequences of current decisions such as the choice of which food items to pick for the lunch tray. The initiative's experiments draw upon insights from behavioral economics.

Another set of policy challenges involves information gaps in the scope and the determinants of participation in USDA programs in four areas—commodity support, nutrition assistance, food safety, and resource conservation—that hinder policy effectiveness and can be addressed at relatively low cost using administrative data. For example, farmers face an assortment of risks. What factors influence farmers’ choice of private actions and/or government programs to manage risk and create a cost-effective safety net? Which low-income Americans receive both USDA food assistance and Unemployment Insurance during a period of economic challenges, and how might food assistance be better provided and targeted? In addition, the development and assessment of food safety policies can be strengthened with research results that estimate how much foodborne illness can be reduced by faster removal of contaminated foods from commerce. By using the largely untapped potential of administrative data for new research applications, including linking and analyzing participation data across multiple USDA or Government programs, the initiative will expand the resources available to ERS and other social scientists to assess the evidence on policy effectiveness and conduct research on policy options. It will also serve as a foundational tool and an example by which ERS and others can gain future evidence to improve policy effectiveness.

**Applying Behavioral Economics to Policy Design.** Insights and analytical tools from behavioral economics are changing the way economists help design programs and regulations and evaluate policy effectiveness. For example, previous ERS-supported research found that creating a “healthy express” lunch line significantly increased sales of these items and decreased sales of unhealthy foods. ERS proposes to apply concepts of behavioral economics to research on critical USDA issues. Two examples illustrate how behavioral economics has broad implications for a wide range of USDA policies and programs.

*Policy design of environmental markets and farmer participation.* The 2008 Farm Bill directs USDA to facilitate the development of environmental markets and ensure the participation of America’s farmers, ranchers and forest landowners. The Act provides billions of dollars to finance conservation programs. Improved understanding of the influence of behavioral responses can provide guidance on more efficient design features of conservation programs and environmental markets and identify designs for low-cost incentives to encourage (or “nudge” in behavioral economics terms) farmers to select more cost effective options. The initiative will support ERS-led research designed in collaboration with program agencies that will investigate the design of environmental markets and the interactions between environmental markets and conservation programs.

*Reducing child obesity through healthier products and more nutritious school meals.* Altering decision or choice environments at schools may have a beneficial role in addressing child obesity. The White House Domestic Policy Council has identified healthier school meals, healthier product formulations, and better nutrition labeling as key policies to address childhood obesity. ERS proposes: (1) Experiments that will test how practical, inexpensive changes in the school environment, such as altering item placement to highlight healthy foods, default choices, and priming via taste tests of healthy options, can encourage students to make healthier food choices; and (2) research that will study interactions among consumer food choices, nutrition regulations, and commercial strategies of product formulation, pricing and marketing.

**Using Administrative Data for Statistical Analysis of USDA Programs.** Administrative data is a highly reliable and relatively low-cost source of data on the amount of benefits provided to each participant and the dynamics of program participation; they are often the *only* source of that information. Even so, the data are underutilized for program and policy evaluation in part because they frequently lack detail on participation in other government programs and on socio-economic characteristics. Linking these data with other administrative or survey data (while protecting confidentiality) and using them for rigorous statistical research would both increase accuracy in analysis and avoid the substantial costs of collecting similar data via statistical surveys. The Initiative develops ERS’ capacity to use, link, and apply administrative data for research and evidence-based program evaluation in several critical areas:

*Cost-effective designs for conservation programs.* Greater insight on conservation practice adoption decisions could help identify circumstances in which conservation incentives are most likely to make a difference, leading to better use of limited resources available for conservation incentives. Bringing together information on field-specific conservation needs, conservation program incentives, and the

characteristics of farms and farmers will help researchers develop a clearer picture of the forces driving conservation practice adoption. This information will feed directly into NRCS and FSA efforts to document and enhance conservation program benefits.

*An Analysis of Farm Safety Net Programs.* Understanding farmer decisions about whether to participate in one or more USDA risk management programs would support designing a cost-effective safety net that aligns with farmers' incentives. The research findings would support reducing costly program overlap. The research would require investment in a data system that links farm program administrative data and farm survey data. In seeking input on possible design changes for farm safety net programs, both FSA and the USDA Office of the Secretary have requested and received ERS analysis of safety net design and program overlap that utilizes this data.

*Using Foodborne Illness Outbreak Investigation Data to Measure the Effectiveness of FSMA Traceability Requirements.* Better food safety and reduced outbreaks of foodborne disease can result from traceability, by which contaminated foods can be identified along the supply chain and removed from commerce before being consumed. The Food Safety Modernization Act (FSMA) contains requirements for improved traceability. ERS proposes to use data from the Food Safety Inspection Service to establish an empirical link between faster removal of contaminated foods from commerce and potential reductions in foodborne illnesses.

*Interactions between SNAP and other safety net programs during recession and recovery.* The initiative links State-level administrative data for the Supplemental Nutrition Assistance Program (SNAP)—the largest of USDA's programs—and other safety net programs, especially Unemployment Insurance, to better understand how families turn to a variety of programs to obtain nutrition and financial support. Results can illuminate options for improved coordination and provision of services at the State and local level, and may allow for better and more efficient targeting of program delivery.

**Relationship to USDA, REE, and ERS Goals and Objectives:**

The initiative contributes to USDA and REE Goals by contributing to informed decision making based on statistical research on issues involving nutrition and childhood obesity, sustainable use of natural resources, local and global food supply, and food safety. ERS stakeholders who would benefit from the initiative include: the Congress; USDA agencies such as the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the Risk Management Agency (RMA), the Food and Nutrition Service (FNS); the Federal statistical system; and the research community. The foundational science supported by the Initiative will also generate results with the potential for informing USDA on issues beyond those examined by the initiative's specific activities. The budget request serves the research component of the REE Mission Area at USDA and is fully consistent with the ERS mission to inform and enhance public and private decision making on economic and policy issues related to agriculture, food and natural resources.

**Benefits for All Americans:**

The Nation's agricultural and food system touches the lives of everyone. The initiative examines: how to improve healthfulness of school meals, benefiting children; how during recession and recovery SNAP supports needy Americans, benefiting low-income families; conservation practices of farmers and the role of related Federal policies, benefiting not only the agricultural sector but also current and future Americans whose food and welfare depends on a healthy environment; the relative effectiveness of providing the farm program support through price-based, yield-based, or revenue-based programs, benefiting farmers; and the effects of enhanced food safety requirements, benefiting all Americans.

(b) An increase of \$448,000 for pay costs.

Included in the budget request is an increase of \$448,000 for pay costs, which includes \$63,000 for annualization of the fiscal year 2013 pay raise and \$385,000 for the anticipated fiscal year 2014 pay raise. This increase will enable ERS to maintain staffing levels, which are critical to conducting research within ERS' highest priority core programs.

(2) A decrease of \$2,641,000 for economic analysis and research, consisting of:

(a) A decrease of \$1,350,000 in the Agricultural Resource Management Survey (ARMS) (\$8,000,000 available in FY 2013).

A decrease in ARMS will come from one-time cost efficiencies by adopting a new strategy for data collection and by reducing the frequency of commodity specific surveys. The cost efficiencies will permit ERS to purchase the same amount of data as in previous years, but at a reduced cost. Receipt of fresh data each year enables ERS to prepare estimates of commodity costs of production based on current data, which will capture the most recent changes by farmers in technology or production practices. Related research will continue to take place on the adoption of new technologies and on the structure of the farm sector for the affected commodities.

(b) A decrease of \$449,000 in Cooperative Agreements and Collaborations (\$3,293,000 available in FY 2013).

ERS will reduce its number and scope of Cooperative Agreements and Collaborations by \$449,000, which will lessen the Agency's ability to obtain researchers from outside the agency who can fill skill gaps or provide research that is value-added to ERS resources on particular research areas.

(c) A decrease of \$400,000 in Interagency Agreements (\$5,559,000 available in FY 2013).

ERS will reduce its number and scope of Interagency Agreements by \$400,000, and focus will be on program areas of highest priority.

(d) A decrease of \$275,000 in the purchase of IT equipment) (\$1,275,000 available in FY 2013).

ERS will focus on its day-to-day operations by reducing purchases of IT equipment by \$275,000.

(e) A decrease of \$167,000 through implementation of reform proposals in the area of Administrative Services efficiencies (\$311,000 available in FY 2013).

Due to efficiencies gained in the areas of administrative services, information management and telecommunications, ERS will sustain a savings of \$167,000 in expenses without impact to customer service or effectiveness.

ECONOMIC RESEARCH SERVICE

Geographic Breakdown of Obligations and Staff Years

(Dollars in thousands)

	2011 Actual		2012 Actual		2013 Estimate		2014 Estimate	
	Amount	Staff Years	Amount	Staff Years	Amount	Staff Years	Amount	Staff Years
Alabama.....	\$10		\$6	-	-	-	-	-
California.....	432	-	21	-	-	-	-	-
Colorado.....	-	-	133	-	-	-	-	-
Connecticut.....	129	-	7	-	-	-	-	-
Delaware.....	124	-	-	-	-	-	-	-
District of Columbia.....	72,135	401	66,064	374	78,199	385	78,506	385
Florida.....	27	-	45	-	-	-	-	-
Georgia.....	-	-	14	-	-	-	-	-
Illinois.....	1,726	-	707	-	-	-	-	-
Indiana.....	283	-	300	-	-	-	-	-
Iowa.....	65	-	143	-	-	-	-	-
Louisiana.....	40	-	48	-	-	-	-	-
Maryland.....	1,056	-	4,348	-	-	-	-	-
Massachusetts.....	290	-	67	-	-	-	-	-
Michigan.....	176	-	-	-	-	-	-	-
Minnesota.....	75	-	175	-	-	-	-	-
Mississippi.....	260	-	560	-	-	-	-	-
Missouri.....	34	-	348	-	-	-	-	-
Montana.....	-	-	6	-	-	-	-	-
Nebraska.....	-	-	3	-	-	-	-	-
New Jersey.....	2,132	-	622	-	-	-	-	-
New Mexico.....	70	-	97	-	-	-	-	-
New York.....	768	-	976	-	-	-	-	-
North Carolina.....	92	-	119	-	-	-	-	-
Ohio.....	10	-	-	-	-	-	-	-
Oklahoma.....	22	-	25	-	-	-	-	-
Oregon.....	149	-	-	-	-	-	-	-
Pennsylvania.....	-	-	55	-	-	-	-	-
Rhode Island.....	-	-	20	-	-	-	-	-
South Carolina.....	105	-	-	-	-	-	-	-
South Dakota.....	-	-	20	-	-	-	-	-
Tennessee.....	-	-	4	-	-	-	-	-
Texas.....	200	-	100	-	-	-	-	-
Utah.....	399	-	120	-	-	-	-	-
Virginia.....	25	-	866	-	-	-	-	-
Vermont.....	-	-	22	-	-	-	-	-
Washington.....	-	-	95	-	-	-	-	-
Wisconsin.....	265	-	500	-	-	-	-	-
Argentina.....	-	-	15	-	-	-	-	-
Australia.....	15	-	4	-	-	-	-	-
British Columbia.....	-	-	13	-	-	-	-	-
China.....	-	-	25	-	-	-	-	-
France.....	-	-	3	-	-	-	-	-
India.....	-	-	281	-	-	-	-	-
Syria.....	-	-	200	-	-	-	-	-
South Africa.....	10	-	-	-	-	-	-	-
Obligations.....	81,126	401	77,176	374	78,199	385	78,506	385
Lapsing Balances...	688	-	547	-	-	-	-	-
Total Available.....	81,814	401	77,723	374	78,199	385	78,506	385

Note: The distribution of 2013 and 2014 funds by State has not been determined at this time.

ECONOMIC RESEARCH SERVICE

Classification by Objects  
(Dollars in thousands)

	2011 <u>Actual</u>	2012 <u>Actual</u>	2013 <u>Estimate</u>	2014 <u>Estimate</u>
<b>Personnel Compensation:</b>				
Washington, D.C.				
11	\$43,619	\$39,396	\$40,079	\$40,436
12	9,273	10,101	10,271	10,362
	<u>52,892</u>	<u>49,497</u>	<u>50,350</u>	<u>50,798</u>
<b>Other Objects:</b>				
21.0	478	319	478	478
22.0	42	5	42	42
23.3	684	630	684	647
24.0	141	54	54	54
25.1	5,559	5,746	5,500	5,950
25.2	1,545	1,687	1,822	1,417
25.4	4,502	3,521	4,000	4,000
25.5	3,800	3,681	3,293	4,494
25.6	9	33	51	51
25.7	8,481	9,791	9,500	8,150
26.0	1,129	897	900	900
31.0	482	245	470	470
41.0	1,382	1,070	1,055	1,055
	<u>28,234</u>	<u>27,679</u>	<u>27,849</u>	<u>27,708</u>
99.9	<u>81,126</u>	<u>77,176</u>	<u>78,199</u>	<u>78,506</u>
<b>Position Data:</b>				
	\$171,323	\$171,323	\$170,984	\$170,984
	\$108,454	\$109,191	\$110,819	\$110,819
	12.4	12.6	12.5	12.5

## ECONOMIC RESEARCH SERVICE

### STATUS OF PROGRAM

#### Economic Research and Analysis Program

**Goal 1: Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.**

#### Current Activities:

ERS research explores how investments in rural people, business, and communities affect the capacity of rural economies to prosper in the new and changing global marketplace. The agency analyzes how demographic trends, employment opportunities and job training, Federal policies, and public investment in infrastructure and technology enhance economic opportunity and quality of life for rural Americans. Equally important is ERS's commitment to help enhance the quality of life for the Nation's small farmers who increasingly depend on these rural economies for employment and economic support.

ERS continues to monitor changing economic and demographic trends in rural America, particularly the implications of these changes for the employment, education, income, and housing patterns of low-income rural populations. The rural development process is complex and sensitive to a wide range of factors that, to a large extent, are unique to each rural community. Nonetheless, ERS assesses general approaches to development to determine when, where, and under what circumstances rural development strategies will be most successful.

ERS research and analysis provides insight into market conditions facing U.S. agriculture, avenues for innovation, and market expansion to help farmers and ranchers manage risk. ERS produces USDA's estimates of farm income. In addition, the ERS program identifies and analyzes market structure and technological developments that affect efficiency and profitability.

#### Selected Examples of Recent Progress:

**ERS research on the farm and rural economy found the following:**

- *The potential impact of changes in immigration policy on U.S. agriculture and the market for hired farm labor.* Large shifts in the supply of foreign-born, hired farm labor resulting from substantial changes in U.S. immigration laws or policies could have significant economic implications. A computable general equilibrium (CGE) model of the U.S. economy is used to evaluate how changes in the supply of foreign-born labor might affect all sectors of the economy, including agriculture. Two scenarios are considered: an increase in the number of temporary nonimmigrant, foreign-born farm workers, such as those admitted under the H-2A Temporary Agricultural Program, and a decrease in the number of unauthorized workers in all sectors of the economy. Long-run economic outcomes for agricultural output and exports, wages and employment levels, and national income accruing to U.S.-born and foreign-born, permanent resident workers in these two scenarios are compared with a base forecast reflecting current immigration laws and policies. Research findings were used in briefings to support decision making on immigration policy.
- *Almost a third of U.S. farm households generate income by engaging in business ventures independent of commodity production, with distinctly different community and household benefits.* In 2007, 686,600 farm households engaged in income-generating activities distinct from commodity production, creating \$26.7 billion in household income. On-farm diversification activities like agri-tourism and off-farm business ventures each accounted for about half of these activities, but off-farm businesses generated about 80 percent of total alternative (i.e., noncommodity) business income earned by farm households and had the largest impact on local economies. Off-farm businesses operated by farm households contributed an estimated \$54.6 billion in value-added income to the gross regional products of their local economies and paid out \$24.5 billion in wages and salaries to 853,100 part-time and full-time employees. This research has been widely cited in the agricultural and rural development media.



- *Innovations in farm organization, business arrangements, and production practices have allowed farmers to produce more with less.* Understanding the past provides insights into the future. A recent report uses agricultural census and the USDA Agricultural Resource Management Survey (ARMS) data to document long-term trends in the economic organization of farming. Fewer labor hours and less land are used today than 30 years ago, and practices such as the use of genetically engineered seeds and no-till have dampened increases in machinery, fuel, and pesticide use. Likely aided by the increased use of risk management tools such as contracts and crop insurance, U.S. agricultural productivity has increased by nearly 50 percent since 1982. Future innovations will be necessary to maintain or boost current productivity gains in order to meet the growing global demands that will be placed upon U.S. agriculture. Findings from this report were a key source of information for the Council of Economic Advisors report, “Strengthening Rural Communities: Lesson from a Growing Farm Economy.”
- *Updated Atlas of Rural and Small Town America.* ERS’s *Atlas of Rural and Small Town America* is a web-based mapping and data access service that brings together over 80 demographic, economic, and agricultural statistics for every county in all fifty States. It includes statistics in four broad categories, on people, jobs, agriculture, and geography that can be mapped or downloaded in an Excel file for later analysis. In FY 2012, county-level economic and demographic data on veterans were added to the Atlas. The veterans’ data came from the Census Bureau’s American Community Survey covering the period 2006-2010. Variables being updated include period served, unemployment, median income, education, gender, and race and ethnicity. Also included in this update were the most recent local area unemployment and employment data for 2011 from the Bureau of Labor Statistics. The Atlas helps State and local decision makers pinpoint the needs of particular areas, recognize their diversity, and develop strategies to build on their assets by using location-based data on population, age structure, race and ethnicity, income, employment, agricultural well-being, and other measures.
- *U.S. agriculture was better positioned than most United States industries entering the recession, was less affected by the recession than most other industries, and is well positioned to continue to do well as the economy recovers.* An ERS report, *the 2008-09 Recession and Recovery Implications for the Growth and Financial Health of U.S. Agriculture*, found that the overall impact on U.S. agriculture was not as severe as on the broader U.S. economy because the record-high agricultural exports, prices, and farm income in 2007 and 2008 placed U.S. farmers on solid financial ground. The report was used in briefings and by several media outlets.

**ERS research and analysis of U.S. agricultural markets found the following:**

- *The 2012 drought impacted American farmers and consumers.* In the summer of 2012, the U.S. experienced one of the most severe and extensive droughts in 25 years. A group of ERS economists and IT professionals rapidly compiled information on the impacts of the ongoing drought on food prices and consumers, farms, and the crop and livestock sectors. The initial version of the web page, “U.S. Drought 2012: Farm and Food Impacts,” was posted within two days of the initial meeting of the development team, and has since been updated to reflect changing conditions. The rapid response enabled the Department to quickly provide information on the economic dimensions of the ongoing drought through links from the main USDA website. Information from the Drought Page supported Departmental decision making on responses to the drought, and was widely cited in news media, providing a wide audience for the latest ERS economic information.
- *Ongoing market analysis and outlook.* ERS, working closely with the World Agricultural Outlook Board, the Foreign Agricultural Service, and other USDA agencies, conducts market analysis and provides short- and long-term projections of U.S. and world agricultural production, consumption, and trade. The market and outlook program has enhanced the quality, transparency, and accessibility of data and analytical information. ERS’ wide dissemination of situation and outlook reports levels the playing field when it comes to business-supporting information by assuring that everyone involved in a commodity’s market has equal access to market information. The information is used widely by farm groups as well as policy makers.

- *Markets place a high value on world agricultural supply and demand information and rapidly incorporate it into futures prices.* The USDA publishes the World Agricultural Supply and Demand Estimates (WASDE) to inform U.S. market participants about current and forecasted market conditions related to trade, consumption, prices, and stocks. While the WASDE is USDA's premier situation and outlook report, the improvement and proliferation of private information services has led some observers to question the value of USDA's information reporting program. Given that the WASDE is an important USDA public good, this research is important for policymakers in understanding of how useful and influential the report is. The findings were presented to various research and practitioner groups. USDA Radio News conducted an interview about this work, and several trade journals published a summary of the findings.
- *If direct payments were eliminated, agricultural producers would be affected through the loss of income and potential declines in land values and rental rates.* Since 2003 direct payments have accounted for a significant portion of farm program payments. An ERS study using Agricultural Resource Management Survey (ARMS) data from 2009 considered the potential contribution of direct payments to farm revenues and land values across farm commodities and regions, and estimated the magnitude of the financial impact on participating farms should direct payments be eliminated? Direct payments are highest relative to crop revenues in parts of the Northern Plains, Southern Plains, Mountain, Delta, and Southeast regions, and the estimated effect of direct payments on cropland values also is relatively high in many of these regions. Overall, our analysis suggests that an abrupt end to the direct payment program could reduce the number of farms with a favorable financial status (profitable farms having relatively low debt burdens) by about 11,000 nationally, or about 2 percent of farms that received direct payments in 2009. The estimated effect varies regionally and is more pronounced in the Delta and Southeast regions, where direct payments per farm tend to be higher, on average, than elsewhere. Research findings were used in briefings, were used to inform the public debate concerning the farm bill, and were cited by the farm news media.
- *Farm program payment limitations have budgetary and program participation impacts.* An ERS study examined the distribution of farm payments across farm types, and also assessed the likely budgetary and program participation impacts of proposals designed to limit payments to higher-income households, and to restrict eligibility for payments among certain households. Results demonstrated that commodity production continues to shift to larger farms. Because commodity program payments tend to mirror production, payments are also shifting to larger farms. Further, because operators of larger farms tend to have higher household incomes, payments are also shifting to higher income households. This study describes the complex channels by which payments flow into household incomes for different stakeholder groups, and estimates the shifts in the distribution of payments over time, for commodity and conservation programs and for crop insurance indemnities. ERS provided briefings on the study, and findings from the report have been used to inform the public debate concerning the next Farm Bill and have been widely cited in news reports.
- *New information on the marketing of local foods.* Local marketing of farm products is a major USDA interest and initiative, as indicated by the USDA-wide Know Your Farmer, Know Your Food Task Force. An ERS report updated previous research on local marketing of foods and expanded the concept to include not only direct marketing (e.g., farm stands, farmers markets) but also indirect marketing through restaurants, regional sellers, and other intermediaries. The analysis provided details about regional differences in the extent of local foods marketing and the types of foods involved as well as rural-urban differences. Research findings help support the Department's Know Your Farmer, Know Your Food initiative and the new Know Your Farmer, Know Your Food Compass. The findings were reported by several major news outlets, and the report garnered over 4,000 visits within eight weeks of publication.
- *Distillers' grains may substitute for corn and soybean meal in the U.S. feed complex.* Corn-based dry-mill ethanol production and its co-products – notably distillers' dried grains with soluble (DDGS) – have surged in recent years. The report estimates the potential substitution of DDGS for corn and soybean meal in livestock feeding and the impact of substitution upon the U.S. feed complex. The findings from this research provided useful information about how the rapid expansion of ethanol production from corn

affects the supply of feed for livestock in the United States. This information now plays an important role in constructing the official USDA supply and use tables for feed grains and oilseeds. ERS provided briefings on these findings.

- *New data on trends in U.S. farmland values and ownership.* Because farm real estate represents much of the value of U.S. farm sector assets, large swings in farmland values can affect the financial well-being of agricultural producers. This report examines both macroeconomic (interest rates, prices of alternative investments) and parcel-specific (soil quality, government payments, proximity to urban areas) factors that affect farmland values. In the last few years, U.S. farmland values have been supported by strong farm earnings, which have helped the farm sector in many regions to withstand the residential housing downturn. Historically low interest rates are likely a significant contributor to farming's current ability to support higher land values. About 40 percent of U.S. farmland has been rented over the last 25 years. Non-operators (landowners who do not themselves farm) owned 29 percent of land in farms in 2007, though that proportion has declined since 1992. Findings from the report formed the basis for responding to information requests.
- *Slaughter and processing options affect markets for locally sourced meat.* A recent ERS report evaluates the availability of slaughter and processing facilities for local meat production and the extent to which these may constrain or support growth in demand for locally sourced meats. majority of livestock in the United States are processed at a relatively small number of large-volume plants. However, these plants, even if conveniently located, are essentially unavailable to local meat processors due to mismatches in scale, services, and business models. The report provided decision makers with information on the challenges and obstacles to meat producers seeking entry to or expansion in local markets.
- *An early corn harvest affects feed and residual use estimates.* An early corn harvest—before the August 31<sup>st</sup> end of the previous marketing year—creates an overlap of supply-and-use data between the old and new marketing years that can alter the patterns of corn use and ending stocks, with implications for official USDA projections and estimates. Findings from the study supported Departmental initiatives to strengthen local food system, including the Know Your Farmer, Know Your Food program.

**Goal 2: Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.**

**Current Activities:**

The ERS climate change research program develops models and other analytical techniques to predict responses of farmers to greenhouse gas mitigation options, analyze the impact of mitigation options on domestic and global agricultural markets and land and water use, and evaluate adaptation by farmers to a new climate regime through use of alternative technologies. The ERS climate change research program builds on extensive expertise on the economics of land use and land management, technology adoption, conservation program design, economics of biofuels, and value and dissemination of public investment in research and development.

In addition, ERS is continuing to contribute to USDA's efforts to improve the science behind Federal environmental, water and air quality regulations and programs. As part of its analysis of environmental regulations and conservation incentive policies, ERS research continues to provide insight into developing policies for controlling nonpoint source pollution. More generally, ERS research analyzes the economic efficiency, environmental effectiveness, and distributional implications of alternative designs of resource, conservation, environmental, and commodity programs and their linkages.

**Selected Examples of Recent Progress:**

**ERS research on climate change found the following:**

- *Farmers have flexibility to adapt to climate change.* A recent ERS report examined potential implications of a suite of climate scenarios through the year 2030 on U.S. crop production. Study findings suggested

that, while impacts are highly sensitive to uncertain climate projections, farmers have considerable flexibility to adapt to changes in local weather, resource conditions, and price signals by adjusting crops, rotations, and production practices. Such adaptation, using existing crop production technologies, can partially mitigate the impacts of climate change on national agricultural markets. The introduction of crop varieties better adapted to new growing conditions could facilitate this transition. Adaptive redistribution of production, however, may have significant implications for both regional land use and environmental quality. Further, increases in pest pressures could increase costs to farmers associated with climate change. ERS findings were cited in the National Climate Assessment and contributed to the inter-Departmental U.S. Global Change Research Program.

- *The Renewable Identification Number System plays a role in achieving U.S. biofuel mandates.* An ERS study provides an overview of how the Renewable Identification Number (RIN) market works to ensure compliance with the Renewable Fuel Standard provision of the Energy Independence and Security Act, as well as how RIN prices are determined and which factors influence their prices. Findings from the report were used in briefings and for evaluating proposed EPA rules implementing the Renewable Fuels Standard.

**ERS research on conservation, water, and environmental issues found the following:**

- *Reducing direct payments to farmers could weaken incentives for conservation.* In recent years, direct payments—a type of farm commodity program payment—have made up a large share of Federal agriculture assistance that could be withheld from farmers who fail to comply with highly erodible land conservation (conservation compliance and sodbuster) or wetland conservation (swampbuster) provisions, known collectively as environmental compliance requirements. A recent ERS study found that compliance incentives would be reduced on many farms, potentially increasing environmental quality problems, if direct payments are sharply reduced or eliminated to help reduce the Federal budget deficit. Some farmers will still be subject to compliance through existing Federal agricultural programs (e.g., conservation or disaster programs) or programs that may succeed direct payments. Making federally subsidized crop insurance subject to compliance could also make up some of the lost incentive to farmers. The report was timely and relevant to the debate on re-linking crop insurance subsidies to environmental compliance, and its findings were used in briefings.
- *Updated agricultural and environmental indicators.* The new ERS report *Agricultural Resources and Environmental Indicators, 2012* describes trends in economic, structural, resource, and environmental indicators in the agriculture sector, focusing on changes since the release of *Agricultural Resources and Environmental Indicators, 2006*. These indicators are useful to assess important changes in U.S. agriculture—the industry’s development; its environmental effects; and the implications for economic, social, and environmental sustainability. This report tracks key resources, including natural, produced, and management resources, that are used in and affected by agricultural production, as well as structural changes in farm production and the economic conditions and policies that influence agricultural resource use and its environmental impacts. The report has been extremely useful as a comprehensive source of information for responding to information requests. Charts from the report were widely disseminated in numerous ERS “Charts of Note” publications.
- *Improvements in irrigation efficiency remain possible.* Based on the findings from several national surveys and current literature, an ERS study assessed water resource use and conservation measures within the U.S. irrigated crop sector. Agriculture accounts for 80-90 percent of the Nation’s consumptive water use (water lost to the environment by evaporation, crop transpiration, or incorporation into products), but expanding water demands to support population and economic growth, environmental flows, and energy-sector growth are putting pressure on the agricultural sector to reduce its water use. In addition, Native American water-right claims and supply/demand shifts expected with climate change will present new challenges for agricultural water use and conservation going forward. Despite technological innovations, at least half of U.S. irrigated cropland acreage is still irrigated with less efficient, traditional irrigation application systems. This research contributed to USDA’s research goals on water availability and quality. Findings were also widely cited in the media and were presented at several policy workshops and roundtables concerned with water resource use and conservation.

- *New data on major uses of land in the United States.* The United States has a total land area of nearly 2.3 billion acres. In 2007, the major land uses were forestland at 671 million acres (30 percent); grassland pasture and rangeland at 614 million (27 percent); cropland at 408 million (18 percent); special uses (primarily parks and wildlife areas) at 313 million acres (14 percent); miscellaneous uses (like tundra or swamps) at 197 million acres (9 percent); and urban land at 61 million acres (3 percent). A 2012 ERS report presents findings from the most recent (2007) inventory of U.S. major land uses, drawing on data from the U.S. Census Bureau, public land management and conservation agencies, and other sources. The data are synthesized by State to estimate the use of several broad classes and subclasses of agricultural and nonagricultural land over time. National and regional trends in land use are compared with earlier major land-use estimates. Within this first month of release, the report was picked up by numerous online outlets and other media. Findings from the report also formed the basis for responding to information requests.

**Goal 3: Help America promote agricultural production and biotechnology exports as America works to increase food security.**

**Current Activities:**

ERS conducts research on technological innovation in agriculture, the economic performance, structure and viability of the farm sector and of different types of farms, and the state of global food security. ERS effectively communicates research findings to policy makers, program managers, and those shaping the public debate. The research program identifies key economic issues and uses sound analytical techniques to understand the immediate and broader economic and social consequences of alternative policies and programs related to the sustainability and use of biotechnology in U.S. agriculture, including policies to promote trade of U.S. products.

ERS has a broad program of work examining the production and marketing characteristics of the U.S. organic sector. Ongoing activities include research on the adoption of certified organic farming systems across the U.S., analysis of consumer demand and prices in specific markets, and several nationwide surveys of organic producers and markets.

The ERS research program includes an ongoing assessment of global food security. ERS provides research, analysis, and information on food security, including factors affecting food production and ability to import food, in Africa, Asia, Latin America and the Caribbean, and the Commonwealth of Independent States to decision makers in the United States and throughout the world. An annual report provides an up-to-date assessment of global food security.

**Selected Examples of Recent Progress:**

**ERS research on technological innovation and investment found the following:**

- *Private and public investments in agricultural research and development were nearly \$20 billion in 2007.* Meeting growing global demand for food, fiber, and biofuel requires robust investment in agricultural research and development (R&D) from both public and private sectors. Two related ERS reports examine global R&D spending by private industry in seven agricultural input sectors, food manufacturing and biofuel, and describe the changing structure of these industries. In 2007 (the latest year for which comprehensive estimates are available), the private sector spent \$19.7 billion on food and agricultural research (56 percent in food manufacturing and 44 percent in agricultural input sectors) and accounted for about half of total public and private spending on food and agricultural R&D in high-income countries. In R&D related to biofuel, annual private-sector investments are estimated to have reached \$1.47 billion worldwide by 2009. Incentives to invest in R&D are influenced by market structure and other factors. Agricultural input industries have undergone significant structural change over the past two decades, with industry concentration on the rise. A relatively small number of large, multinational firms with global R&D and marketing networks account for most R&D in each input industry. Rising market concentration has not generally been associated with increased R&D investment as a percentage of industry sales. This body of work is already proving to be a valuable resource for informing Federal policies toward agricultural science and technology. Findings from the report and the underlying research contribute to the

recent report to the President on agricultural research from the President's Council of Advisors on Science and Technology.

- *There is a clear, long-term trend toward greater private sector funding and performance of agricultural research and development.* An ERS research brief examined the funding and performance of agricultural R&D to assess the evolving roles of the public and private sectors in the U.S. agricultural research system. In 2007, the private sector performed 53 percent of total food and agricultural research in the U.S.; over the long term, privately funded R&D has grown faster than publicly funded R&D. Public sector funders and performers of R&D play a largely complementary role by emphasizing social returns in the selection of research topics and valuing rapid and widespread disclosure of new knowledge. This report was distributed at a G20 meeting of Agricultural Chief Scientists and has been cited in the media.

**ERS research on the organic sector found the following:**

- *Organic food sales in the United States have increased from approximately \$11 billion in 2004 to an estimated \$25 billion in 2011.* Market penetration has also grown steadily; organic food products accounted for more than 3.5 percent of total U.S. food sales in 2011. Although the annual growth rate for organic food sales fell from the double-digit range in 2008 as the U.S. economy slowed, it still far outpaces the annual growth rate in all food sales. ERS research on organic food sales provides support for public and private decision making about organic foods markets.
- *U.S. producers dedicated approximately 4.8 million acres of farmland—2.7 million acres of cropland and 2.1 million acres of rangeland and pasture—to organic production systems in 2008 (latest year for which data are available).* Top States for certified organic cropland include California, Wisconsin, North Dakota, Texas, and Minnesota. Top States for certified organic pasture and rangeland are Wyoming, New Mexico, Texas, California, and South Dakota. Overall the adoption of organic farming systems is low—only about 0.7 percent of all U.S. cropland and 0.5 percent of all U.S. pasture was certified organic in 2008. ERS research on organic food production supports USDA decision making on policies and programs related to food production, especially the National Organic Program.

**ERS research on global agricultural markets and food security found the following:**

- *Global food security is estimated to improve slightly in 2012 as the number of food insecure people in the 76 countries covered in this report declines from 814 million in 2011 to 802 million in 2012.* The share of the population that is food insecure remains at 24 percent. Over the next decade, the share of the population that is food insecure is projected to decline from 24 percent in 2012 to 21 percent in 2022, but the number of food insecure people is projected to increase by 37 million. Regionally, food insecurity is projected to remain most severe in Sub-Saharan Africa. Food insecure people are defined as those consuming less than the nutritional target of roughly 2,100 calories per day per person. These annual reports are used by U.S. policymakers in deciding programming and budgetary allocations among developing countries. ERS provided briefings drawing on the report's conclusions to support decision making on USDA food aid programs.
- *Reciprocal trade agreements benefit the U.S. Economy.* An ERS study examined and quantified the degree to which regional trade agreements (RTAs) have created, as well as diverted trade, in both agricultural commodities and processed food products. Trade creation occurs when members of RTAs augment trade to member countries and reduce costs for consumers located in the importing region. Trade diversion occurs when countries that are members reorient their imports away from low-cost producers in nonmember countries to higher cost producers in member countries, with a resulting loss in trade, world economic efficiency, and welfare. The report finds that 10 of the 11 RTAs examined, including NAFTA, have created more trade than they diverted and therefore have been net welfare-enhancing for the world. The findings show how increased trade benefits the domestic economy. Findings from the report were presented in briefings supporting Departmental decision making on trade policy. Findings have been cited in the public debate on the benefits of free trade agreement.

- *Updated U.S. Sanitary and Phytosanitary (SPS) Regulation Database.* ERS published its annual update of the database, *Phytosanitary Regulation of Fresh Fruits and Vegetables into the United States*. This data identified which countries, under USDA phytosanitary rules, are eligible to export to the United States the fresh fruits and vegetables that are most important in the American diet, using data and information from USDA's Animal and Plant Health Inspection Service (APHIS), the United Nations Food and Agriculture Organization (FAO), and the World Bank. Having access to information on countries that are currently eligible to export these products to the United States lays the foundation for better understanding trade patterns, and can underpin analyses of the market effects of changes in phytosanitary rules. The data product also underpins ongoing research on impacts of different types of phytosanitary measures, such as fumigation, irradiation, or cold treatment, on the level and composition of U.S. imports of fresh fruits and vegetables from countries around the world. In 2011, research findings were used in briefings on the impact of SPS regulations on the fruit and vegetable trade, supporting departmental decision making on plant health policy, and the development of new data sources regarding the relative magnitudes of tariff and non-tariff barriers to trade.
- *Policy reforms changed the growth patterns of Brazilian agriculture.* The Brazilian agricultural sector has been transformed from a traditional system of production with low use of modern technologies to a world agricultural leader. That transformation occurred as the country moved away from import-substitution policies—which nurtured domestic industrial development at the expense of agriculture—toward market-oriented policy reforms. These reforms included openness to foreign trade and foreign investment and the use of new technologies, which led to a new growth pattern. To evaluate that transformation, the authors use agricultural censuses spanning 1985-2006 to characterize Brazilian total factor productivity growth, decomposing that growth into technical and efficiency changes. This report presents the findings of a study that focuses on the effect of Brazil's science and technology investments and other public policies on farm production. The findings indicate that agricultural research benefits have been most rapidly adopted by the most efficient farms, widening the productivity gap between these farms and average farms. That gap, however, has been narrowed through other public policies, such as rural credit and infrastructure investments that favor average producers. This research helps senior policymakers obtain a more detailed understanding of how Brazilian agricultural policies have affected productivity growth among Brazilian producers and of Brazil's agricultural productive potential.
- *Measurement issues affect estimates of the range of food insecure households in India.* An ERS study provided a quantitative assessment of food security using a large household-level expenditure survey conducted by the Government of India during 2004/05. The analysis tested the impact of several key assumptions required to estimate actual calories consumed from the expenditure data. The study found significant differences in the estimates of calories consumed and the number of food insecure people under alternative plausible assumptions for computing the calorie content of nonprocessed foods, processed foods, and meals eaten outside the household. The measurement errors were largest in accounting for calories consumed by the highest and lowest income households. Overall the difference between the highest and lowest estimate of the number of people consuming an average of less than 2,100 calories per day was equivalent to about 17 percent of India's population, or 173 million people in 2004-2005. Given the significant measurement error in estimating calories consumed, it is important to consider not only consumption surveys, but also aggregate food availability studies and survey data on anthropometric measures that accompany undernourishment—such as growth stunting—in assessing food insecurity. These research findings were highlighted in a decennial symposium on food and nutrition security at the Food and Agriculture Organization of the United Nations, and also used to support the analysis of the USDA's own Food Security Assessment.
- *The foreign cotton consumption/production gap has been reduced.* The latest USDA cotton projections for 2011-2012 indicate that the gap between foreign consumption and production is projected to decrease significantly this season and fall below 5 million bales for the first time since 2004-2005.
- *Uncertainties regarding the level of production and consumption of cotton in China mean that the potential remains for unexpected changes in China's cotton import demand that could destabilize world commodity markets despite increased global communication.* USDA has developed a new approach for estimating cotton consumption in China based on textile import and export data, supplementing the traditional

methodology that uses yarn production data from China's National Bureau of Statistics. This analysis suggests USDA's historical estimates of China's cotton consumption are reasonable and USDA's August 2007 forecast may be conservative. These insights into the amount of cotton consumed by China's textile mills, combined with data on China's cotton exports and imports, suggest there may be problems with the official estimates of China's cotton production. These unexpected changes highlight China's impact on world cotton markets and the lack of transparency in China's intervention in its domestic cotton markets and official cotton stock accumulation.

- *China's market for distillers dried grains is growing.* Exports to China have become a significant source of demand for U.S. Distillers Dried Grains with Solubles (DDGS), the primary co-product from corn-based ethanol production. ERS staff provided briefings on the report's findings to support decision making on bioenergy and trade policy.
- *Indonesians are moving toward modern global purchasing and consumption patterns, but more slowly than in some comparable countries.* Indonesia's food market has changed in response to a changing and growing economy. An ERS report examined changes in the food consumption pattern and measures the growth of modern food retail chains, packaged food purchases, and food imports in the world's fourth most populous country. Barriers to foreign and domestic commerce, affecting the development of modern food retail supply chains, are important constraints on food market change in Indonesia. Further change in Indonesia's retail food sector will help determine future growth in imports, including those from the United States. The report was widely mentioned in the press and internet media, and is being reprinted by the Australian Farm Policy Journal.

#### **Goal 4: Ensure that all of America's children have access to safe, nutritious, and balanced meals.**

##### **Current Activities:**

ERS studies the relationship among the many factors that influence food choices and health outcomes. At the household level, research focuses on food price trends, income, and individual characteristics such as age, race and ethnicity, household structure, knowledge of diet and health, and nutrition education. At the industry level, research focuses on the interaction among firms, consumers, and government programs and policies. Children's food access, food security, and child and adult obesity continue to be important foci of the ERS research program. ERS research into adult and child obesity includes approaches taken from the emerging field of behavioral economics to investigate how biases triggered by psychological mechanisms might contribute to poor dietary choices and obesity.

Through its food assistance and nutrition research and by working closely with USDA's Food and Nutrition Service, ERS studies and analyzes the Nation's nutrition assistance programs. These programs receive substantial Federal funding and affect the daily lives of millions of America's children. Long-term research themes include dietary and nutritional outcomes, food program targeting and delivery, and program dynamics and administration. ERS research is designed to meet the critical information needs of USDA, Congress, program managers, policy officials, the research community, and the public at large.

ERS food safety research focuses on enhancing methodologies for valuing societal benefits associated with reducing food safety risks, understanding consumer response to food safety incidents, assessing industry incentives to enhance food safety through new technologies and supply chain linkages, and evaluating regulatory options and change. ERS research also investigates the safety of food imports and the efficacy of international food safety policies and practices.

##### **Selected Examples of Recent Progress:**

#### **ERS research on food choices and health outcomes showed the following:**

- *An estimated 85.1 percent of American households were food secure throughout the entire year in 2011, meaning that they had access at all times to enough food for an active, healthy life for all household members.* The remaining households (14.9 percent) were food insecure at least some time during the year, including 5.7 percent with very low food security—meaning that the food intake of one or more household



members was reduced and their eating patterns were disrupted at times during the year because the household lacked money and other resources for food. ERS provided briefings on the report's findings, and provided summary findings to support decision making on USDA food assistance and nutrition programs.

- *Healthy food can be affordable.* Most Americans consume diets that do not meet Federal dietary recommendations. A common explanation is that healthier foods are more expensive than less healthy foods. To investigate this assumption, an ERS study compared prices of healthy and less healthy foods using three different price metrics: the price of food energy (\$/calorie), the price of edible weight (\$/100 edible grams), and the price of an average portion (\$/average portion). The study also calculated the cost of meeting the recommendations for each food group. For all metrics except the price of food energy, the authors found that healthy foods cost less than less healthy foods (defined for this study as foods that are high in saturated fat, added sugar, and/or sodium, or that contribute little to meeting dietary recommendations). ERS provided briefings on the report's findings to support decision making on USDA food assistance and nutrition programs. Findings from the report have been widely cited, educating the public about the affordability of healthier food choices.
- *Updated ERS Food Environment Atlas.* The updated 2012 Atlas contains 174 indicators of the food environment, measuring factors such as availability of food stores and restaurants, food prices, socioeconomic characteristics, and health outcomes, all of which interact to influence food choices and diet quality. On the website, Atlas users can map each indicator separately. In addition, users can download the full set of county, state and regional-level indicators in an Excel file. Archived data are also available for download. This research tool is used by government, academic, non-profit, and private industry groups to better analyze food environment characteristics.
- *New food choices free of trans fats better align U.S. diets with health recommendations.* Federal agencies that are charged with giving dietary advice to consumers—the USDA and the U.S. Department of Health and Human Services—recommend that consumers keep their intake of trans fatty acids as low as possible. To that end, Federal regulations now require food labels to say how many grams of trans fats are in each serving. An ERS study examined recent changes in the trans fats content of new food products and the use of “no trans fats” package claims. The study, using data from 2005 to 2010, showed a marked decline in the trans fats content of new food products, along with an increase in the use of “no trans fats” claims on product packages. Only a small minority of foods that contain no trans fats make such claims even though the use of a “no trans fats” claim is associated with higher rates of successful market penetration in a majority of product categories. In addition, new products without trans fats generally contain less saturated fat, sodium, and calories, which suggests that the reduction of trans fats was not compensated by increases in these other nutrients. ERS provided briefings on the report's findings to inform policy issues related to health claim labels.
- *Americans' grocery store purchases do not meet the dietary guidelines.* The nutritional quality of Americans' diets has increasingly become a focus of economic research due to its effects on health outcomes. Health care and other costs associated with obesity, overweight, diabetes, and other diet-related ailments continue to swell. An ERS study of consumers' grocery (food-at-home) expenditures measured the extent to which Americans are conforming to Dietary Guidelines for Americans with the foods they purchase at the supermarket. Overall, consumers purchase too few fruits, vegetables and whole grains, and too many refined grains, fats, and sugars/sweets. The average Healthy Eating Index score for food-at-home purchases was only 56.4 for an average consumer, far below the maximum score of 100, which would indicate full adherence to the Dietary Guidelines. The healthfulness of purchases varies somewhat across geographic regions and markets, with consumers in the Northeast and West purchasing more healthful food than consumers in the Midwest or South. Differences across income levels and across race are small, with all subgroups falling well short of the recommendations in the Dietary Guidelines.
- *The demands for foods away from home and foods purchased for consumption at home vary in the responsiveness to price.* Food away from home (FAFH) comprises nearly half of all U.S. consumer food expenditures. Hence policies designed to influence nutritional outcomes would be incomplete if they did not address the role of FAFH. However, because of data limitations, most studies of the response of food demand to policy changes have ignored the role of FAFH, and those studies that have included FAFH have

treated it as a single good. The authors of an ERS study estimate demand for 43 disaggregated FAFH and food at home (FAH) products, using a two-stage budgeting framework. They find that the demands for disaggregated FAFH products differ in price responsiveness and tend to be more sensitive to changes in food spending patterns than FAH products. Second, many foods are found to have statistically significant substitution and complementary relationships within and among food groups. Lastly, predicted changes in quantities based on our estimates that include all goods and services and those estimates that only include a subset of foods differ substantially, implying that evaluations of health and nutrition policy based on elasticities of demand for only a subset of goods may be misleading.

- *ERS food availability data updated.* The ERS food availability (per capita) data system includes three distinct, but related data series. The data serve as popular proxies for actual consumption. The food availability data are now available through 2010 at the national level and most commodities have annual data extending back to 1909. This data series provides estimates, for example, of the pounds of beef available for domestic consumption per capita per year. Also included in the data system are data on nutrient availability in the food supply and data on loss-adjusted food availability. This data series provides estimates, for example, of the calories of beef available for domestic consumption per capita per day. This system provides important statistical indicators that track food and nutrient availability from 1909. The data system makes information available for policymaking and regulatory decisions, such as for farm assistance programs, nutrition education, public health programs, and regulation of vitamin and mineral fortification and food labeling.

#### **ERS research on USDA's food and nutrition assistance programs found the following:**

- *USDA Supplemental Nutrition Assistance Program (SNAP) benefits help alleviate poverty.* An ERS study of the SNAP program benefits to income and calculated how SNAP benefits affected the prevalence, depth, and severity of poverty. The study found an average decline of 4.4 percent in the prevalence of poverty due to SNAP benefits, while the average decline in the depth and severity of poverty was 10.3 and 13.2 percent, respectively. SNAP benefits had a particularly strong effect on child poverty, reducing its depth by an average of 15.5 percent and its severity by an average of 21.3 percent from 2000 to 2009. The report has been widely cited in the news media and in the policy debate over funding for the Supplemental Nutrition Assistance Program (SNAP) in the 2012 Farm Bill. The report's release generated extensive coverage in the media, and ERS provided briefings on the report's findings to support decision making on USDA food assistance and nutrition programs.
- *Economic conditions affect participation in USDA nutrition assistance programs.* A study based on 1976-2010 data examined the relationship between U.S. economic conditions and participation in the U.S. Department of Agriculture's five largest nutrition assistance programs. It also described how changes in program policy and other factors may have influenced this relationship. The five programs are: Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), National School Lunch Program (NSLP), School Breakfast Program (SBP), and Child and Adult Care Food Program (CACFP). Although SNAP's reputation as one of the Nation's primary countercyclical assistance programs—expanding during economic downturns and contracting during periods of economic growth—is well established, there has been little analysis of the effect of the economy on the other programs. The results of this study strongly suggest that, to varying degrees, economic conditions influence participation in all the major nutrition assistance programs, not just in SNAP. ERS provided briefings on the report's findings to support decision making on USDA food assistance and nutrition programs.
- *The 15 domestic food and nutrition programs that provide a nutritional safety net for millions of children and low-income adults.* The programs, which serve one in four Americans at some point during the year, are especially important during economic downturns. Accounting for over two-thirds of USDA's budget, the programs represent a significant Federal investment. The ERS report, *The Food Assistance Landscape, FY 2011*, based on preliminary data from USDA's Food and Nutrition Service (FNS), examined trends in the food and nutrition assistance programs through fiscal year 2011.

**ERS research on the safety of the nation's food supply found the following:**

- *Many food processing plants are audited for safety.* An ERS study documented the extent of food safety audits in U.S. meat and poultry processing plants and examines the association between the use of audits and plant size, firm structure, and food safety technology use. The study showed that more than 90 percent of output in the poultry slaughter, cattle slaughter, and ready-to-eat products (e.g., luncheon meats) industries is from audited plants, and more than 70 percent of output in the hog slaughter, ground beef, and not-ready-to-eat products (e.g., meat cuts) industries is from audited plants. The study also found that larger plants, plants subject to food safety audits, and plants that are part of a multi-plant firm use more food safety technology than other plants, and plants subject to both plant-hired and customer-hired audits had greater technology use than single (plant- or customer-hired) audit plants. ERS provided briefings on the report's findings to support decision making on USDA meat inspection and food safety programs.

## ECONOMIC RESEARCH SERVICE

### Summary of Budget and Performance Statement of Department Goals and Objectives

The Economic Research Service (ERS) was established in 1961 from components of the former Bureau of Agricultural Economics principally under the authority of the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627). The mission of ERS is to inform and enhance public and private decision making on economic and policy issues related to agriculture, food, the environment, and rural development.

ERS has four strategic goals that correspond to each of the four USDA strategic goals. To achieve these goals, ERS provides research, data, and analysis to enhance the understanding of policy makers, regulators, program managers, and those shaping debate on economic and policy issues.

#### Goals and Programs Crosswalk

USDA Strategic Goal	Agency Strategic Goal	Agency Strategic Objectives	Programs that contribute	Key Outcome
<b>USDA Strategic Goal 1:</b> Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.	<b>USDA Strategic Goal 1:</b> Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.	<p><b>Objective 1.1:</b> Enhance Rural Prosperity</p> <p><b>Objective 1.2:</b> Create Thriving Communities</p> <p><b>Objective 1.3:</b> Support a Sustainable and Competitive Agricultural System</p>	Economic Research and Analysis	Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues affecting rural development, rural well-being, farm and household income, and rural communities.
<b>USDA Strategic Goal 2:</b> Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.	<b>USDA Strategic Goal 2:</b> Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.	<p><b>Objective 2.1:</b> Restore and Conserve the Nation’s Forests, Farms, Ranches, and Grasslands</p> <p><b>Objective 2.2:</b> Lead Efforts to Mitigate and Adapt to Climate Change</p> <p><b>Objective 2.3:</b> Protect and Enhance America’s Water Resources</p>	Economic Research and Analysis	Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues related to developing Federal farm, natural resource, and rural policies and programs that respond to the challenges of climate change and the need to protect and maintain the environment while improving agricultural competitiveness and economic growth.

<b>USDA Strategic Goal</b>	<b>Agency Strategic Goal</b>	<b>Agency Strategic Objectives</b>	<b>Programs that contribute</b>	<b>Key Outcome</b>
<b>USDA Strategic Goal 3:</b> Help America promote agricultural production and biotechnology exports, as America works to increase food security.	<b>USDA Strategic Goal 3:</b> Help America promote agricultural production and biotechnology exports, as America works to increase food security.	<p><b>Objective 3.2:</b> Ensure U.S. Agricultural Resources Contribute to Enhanced Global Food Security</p> <p><b>Objective 3.2:</b> Enhance America's Ability to Develop and Trade Agricultural Products Derived from New Technologies</p> <p><b>Objective 3.3:</b> Support Sustainable Agriculture Production in Food-Insecure Nations</p>	Economic Research and Analysis	Enhanced understanding by policy makers, regulators, program managers, and organizations shaping public debate of economic issues related to adoption of economically and environmentally sustainable technologies to support enhanced food security, factors affecting trade of U.S. agricultural products (including products produced using biotechnology), strategies to reduce trade barriers and increase markets for U.S. products(including biotechnical exports)
<b>USDA Strategic Goal 4:</b> Ensure that all of America's children have access to safe, nutritious, and balanced meals.	<b>USDA Strategic Goal 4:</b> Ensure that all of America's children have access to safe, nutritious, and balanced meals.	<p><b>Objective 4.1:</b> Increase Access to Nutritious Food</p> <p><b>Objective 4.2:</b> Promote Healthy Diet</p> <p><b>Objective 4.3:</b> Protect Public Health by Ensuring Food is Safe</p>	Economic Research and Analysis	Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues related to improving the efficiency, efficacy, and equity of public policies and programs relating to domestic and international food prices and availability at home and abroad, consumer food choices, nutrition and health outcomes, nutrition assistance programs, and protecting consumers from unsafe food.

**Selected Accomplishments Expected at the FY 2014 Proposed Resource Level:**

**Key Outcome 1:** Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues affecting rural development, rural well-being, farm and household income, and rural communities.

ERS will identify key economic issues related to rural economic development, farm viability, rural household prosperity and well-being, and competitiveness. ERS will use sound analytical techniques to understand the immediate and broader economic and social consequences of how alternative policies and programs and changing market conditions affect rural and farm economies and households. ERS will effectively communicate research results to policy makers, program managers, and those shaping the public debate on rural economic conditions and performance of all sizes and types of farms. Examples of these activities include the following:

- Developing a comprehensive, integrated base of information on rural economic and social conditions that can be used by Federal policy makers for strategic planning, policy development, and program assessment.

- Analyzing how investment, technology, job training, Federal policies, demographic trends, increased foreign competition in low-wage industries, and growing demand for highly skilled labor affect rural America's capacity to prosper in the global marketplace.
- Conducting research to better understand the role and effectiveness of investments in infrastructure, housing, and business assistance for sustaining rural communities, particularly in areas with rapid population growth or long-term population decline.
- Providing timely, accurate agricultural economic analysis and data on the impacts of decisions in risky situations to help farmers and ranchers make more informed production and marketing decisions.
- Researching and disseminating economic intelligence about the structure of, performance in, information systems of, new technology in, and foreign direct investment in the U.S. food manufacturing, processing, wholesale, retail, and food service industries.

Selected Past Accomplishments toward Achievement of the Key Outcome:

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate needs of policy makers and decision makers. Examples of recent progress are listed in the section on Status of Program. For FY 2014, past accomplishments toward achievement of the key outcome include: an analysis of changes in immigration policy on U.S. agriculture and the market for hired farm labor; an expansion of the scope of the Atlas of Rural and Small Town America; research showing how innovations in farm organization, business arrangements, and production practices have allowed farmers to produce more with less; information on how the 2012 drought impacted American farmers and consumers; analysis of the effect on farmers of the elimination of direct payments, and new data on trends in U.S. farmland values and ownership.

Selected Accomplishments Expected at the FY 2014 Proposed Resource Level:

*ERS will conduct the following research on the farm and rural economy:*

Rural Establishment Innovation Survey. A survey of business establishments, funded through USDA's Rural Development Mission Area, will be conducted over a 6-month period with up to 30,000 respondents to collect information on rural tradable business sectors such as manufacturing and professional services. This information will contribute to a better understanding of how rural businesses and their communities are dealing with the increasing competitive pressures and opportunities associated with the spread of new information technologies through our economy and identify the business and community characteristics most associated with effective response to these pressures and opportunities. This information will inform USDA's Rural Development Mission Area's aim of creating jobs, developing new markets and increasing competitiveness for rural businesses and communities.

Rural Community Survey. To help understand the linkages between rural community assets and growth of the rural health care sector, ERS is sponsoring a survey of health care providers and community leaders in 150 towns located in the southern and central regions of the U.S. The survey will collect information about the community characteristics that attract hospitals, clinics, doctors, and other medical practitioners; efforts of local leaders to recruit and attract these entities; and perceptions of the impact of new or expanded access to medical care on the economic well-being of rural places. The information will increase USDA's understanding of how leadership capacity, as well as other social, human, and natural assets, affects rural communities' ability to be economically competitive.

Rural Wealth Creation. Many different types of wealth are important in determining the opportunities for sustainable rural development, including physical, natural, financial, human, intellectual, social, political and cultural capital. Effective development interventions require taking into account interrelationships among investments in these different types of capital. This project examines the sources of wealth available for promoting growth and change in rural communities, as well as identifying new ways to both create wealth and to measure changes in community wealth. ERS has cosponsored a national conference that brought together nearly 200 researchers, practitioners, and policymakers to discuss how the application of wealth creation concepts can benefit

rural communities, and has published an Economic Research Report on wealth creation concepts and measurement. ERS researchers are currently coediting and contributing to a volume on rural wealth creation to be published by Routledge Press in 2014.

Surviving a Manufacturing Crisis: Characteristics Associated with Rural Manufacturing Resilience. This research project explores factors influencing the resilience of manufacturers. The analysis will use a unique combination of survey and administrative data to test whether plant-level factors and local context affect plant survival and employment levels using. The study focus will be on small, single-unit (entrepreneurial) establishments because prior research indicates that they are particularly influenced by local context, but all plant types, small and large, single-unit and branch plants, will be considered.

Emerging Energy Industries and Rural Growth. This project seeks to quantify the local jobs and income generated by corn-based ethanol (both through rising corn producer income and through ethanol plant facilities), wind turbines, and natural gas extraction in rural America. The study areas include the U.S. Heartland (ethanol), 15 mostly western and central states with significant wind turbine investments, and three western states that have experienced a boom in natural gas production. All studies will compare changes in outcomes of emerging industry counties with similarly situated control counties that provide a credible counterfactual.

Forecast of Farm Income, Assets and Debt. Annually, estimates of farm income, assets and debt (balance sheet) are developed and published for public use through the ERS web site. In addition, three times each year, ERS provides updated income and balance sheet forecasts that reflect the most recent information available on production, prices and quantities of crops, livestock, products, and other outputs and services generated from farms. The Bureau of Economic Analysis' (BEA) National Income Staff use this information in developing their estimates of gross domestic product (GDP) and National Income Accounts and estimates of Personal Income and Outlays, and Corporate profits. Forecast data are also provided to the Council of Economic Advisors, and the estimates are also used by BEA's Regional Economic Measurement Division in developing a system of regional economic indicators that help form the basis for dissemination of Federal Revenue Sharing funds.

*ERS will conduct the following research on U.S. agricultural markets:*

Market Analysis and Outlook. ERS, working closely with the World Agricultural Outlook Board, the Foreign Agricultural Service, and other USDA agencies, conducts market analysis and provides short- and long-term projections of U.S. and world agricultural production, consumption, and trade. The market and outlook program enhances the quality, transparency, and accessibility of data and analytical information.

Futures Markets and Price Behavior. Agricultural commodity futures markets have attracted a vastly increased group of participants since 2004. Trading is now conducted almost around the clock, reflecting the transition to electronic trading platforms on which the majority of trades are conducted today. ERS research is evaluating the impacts of these changes and their effect on volatility and the price discovery process. Of particular interest is how these markets respond to new information in USDA reports that are released when trading is actively underway.

Price Forecasting and Forecast Performance. Global agricultural prices have undergone significant shifts in recent years. ERS researchers will develop new price forecasting models that reflect evolving structure of agricultural markets. It will extend the understanding of the relationships between market fundamentals and prices during a period of significant shifts in market dynamics.

Agricultural Productivity Growth in the United States: Measurement, Drivers, and Impacts. Given likely future increases in global demand for agricultural commodities, continued productivity growth is essential to avoid substantial price increases and environmental stresses. ERS produces annual estimates of agricultural productivity (indexes of inputs, outputs, and total factor productivity (TFP)) for the U.S. and for individual States, and works with allied groups to produce consistent international measures for a panel of countries. Current research will detail the ERS approach to measurement; summarize changes over time in U.S. labor productivity, land productivity, and TFP; investigate the question of whether U.S. TFP growth is slowing; and summarize research on the policy drivers of TFP growth, including investment in public and private sector research and development, infrastructure, and extension. Concurrent research will generate estimates of TFP growth across countries; evaluate relative U.S. performance; and investigate the sources of cross country differences in agricultural productivity growth over time.

The Transformation of U.S. Hog Production. U.S. hog production has undergone a dramatic transformation, to larger and more specialized farms, in fewer locations, that are tightly coordinated through contracts. The transformation featured sharp increases in productivity and reductions in real (inflation-adjusted) costs of production, accomplished largely through the realization of scale economies and the spread of new production technologies. These developments had modest effects on consumer prices but led to improvements in international competitiveness in markets for pork. Consolidation of production also consolidated livestock waste, leading to changes in environmental regulations, which in turn led to changes in manure management practices. Current ERS research documents each of those developments and evaluates future prospects for productivity and competitiveness.

The Changing Structure of U.S. Crop Agriculture. Cropland has been shifting to larger farms. The shifts have been large, centered on a doubling of farm size over 20-25 years, and they have been ubiquitous across States and commodities. But the shifts have also been complex, with an increase in the number of small farms even as production has shifted primarily from mid-size commercial farming operations to larger farms. Larger crop farms still realize better financial returns, on average, and they are able to make more intensive use of their labor and capital resources, indicating that the trends are likely to continue. This ERS research project uses comprehensive farm-level data to detail changes in farm size and other attributes of farm structure, and to evaluate the key driving forces, including technologies, farm organization and business relationships, land attributes, and government policies. It will evaluate the future prospects for farm size and organization, particularly the role of family farms in crop agriculture.

*ERS will conduct the following research on farm and commodity policy:*

U.S. Farm Programs - Duplicative Farm Safety Net Efforts. Current agricultural policies provide for the potential of overlap and duplication in risk management programs. ERS research will examine potential duplication in farm safety net effort through overlapping program benefits, focusing on potential farmer participation in Title 1 commodity support programs that have been proposed for the post-2008 Farm Bill and in federal crop insurance programs. The research will assess the extent of any duplicative benefits, how any overlap or duplication varies across commodities and regions, the associated production impacts, and the potential for integrating program coverage.

U.S. Farm Programs – Federal Crop Insurance. Crop insurance continues to become an ever larger component of the Federal farm safety net. ERS analysis provides a better understanding of how farmers use federal crop insurance to mitigate the risks they face and how the program interacts with other safety net programs. ERS will examine the sensitivity of crop insurance adoption to the level that insurance premium subsidies provide. Proposals have been advanced during the debate over the post-2008 Farm Bill to cover a portion of producers' crop insurance deductibles with "shallow loss" payment programs. ERS will examine how these proposed "shallow loss" programs might affect producers' demand for crop insurance.

Landlords and ACRE Participation. Despite the expected financial and risk management benefits of the Average Crop Revenue Election (ACRE), enrollment in the program has been low. Several factors could explain the low participation rates. ERS analysis will use USDA Farm Service Agency data to examine characteristics of farms enrolled in ACRE and identify those with the greatest effect on the ACRE enrollment decision. The research also will examine the differences in enrollment decisions across program farm units within an operation using a new method that links data for all program farms within a single operation.

Processing Meat and Poultry for Local Markets: From Convenience to Commitment. Consumer demand for local food, including local meat and poultry, has risen in recent years. Livestock producers and others suggest that limited processing infrastructure restricts the supply of local meat and poultry. At the same time, existing small processors often lack the steady, consistent business required for profitability. ERS research will analyze this multi-faceted problem and identify fundamental causes, drawing on a cost analysis of local processing at three scales. Improving coordination, commitment, and communication between processors and their customers – as well as along the entire supply chain – is essential to the persistence and expansion of local meats.

Antibiotics Use in Livestock Agriculture. There is growing concern that widespread antibiotic use has led to the emergence of organisms that are resistant to most or all antibiotics. In response to these concerns, public policy



discussions have focused on limiting antibiotic use for growth promotion in livestock, and food retailers have encouraged suppliers to develop antibiotic-free meat products. ERS will assess how antibiotics are currently used in livestock production; the current drivers of antibiotic use in the U.S.--including production costs, consumer preferences, and retailer strategies -- and the alternative production practices used in place of antibiotics for growth promotion, as well as the impacts of those practices on farm-level costs and productivity. ERS will also develop and apply a model to assess how proposed restrictions might affect market outcomes--market prices for livestock, meat, and feed; meat consumption and production; and meat and livestock imports and exports.

*ERS will conduct the following activities related to homeland security:*

Analysis of Animal Disease Outbreaks: In FY 2014, ERS researchers will collaborate with Federal and academic researchers to examine how economic variables and factors affect animal and crop disease outbreak assessments. This work will examine how economic analysis can help to develop clearer views of critical issues, and to more fully identify what factors are significant in measuring the success of a mitigation or prevention effort. This research focuses on efforts to introduce economic components into epidemiological analysis that will allow analysts and decision makers to include social (e.g., impacts on rural communities) considerations and expand the number of criteria that may be used to determine an effective outbreak response. ERS' planned research in 2014 will also include assessment of the resilience of local livestock producers to animal disease outbreaks, and analysis of domestic and international market reactions to disease outbreaks supported by model development. In addition, ERS is contributing expertise as subject matter experts to the Department of Homeland Security, Science and Technology Directorate, for the Agro-terrorism Risk Assessment.

**Key Outcome 2:** Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues related to developing Federal farm, natural resource, and rural policies and programs that respond to the challenges of climate change and the need to protect and maintain the environment while improving agricultural competitiveness and economic growth.

ERS will identify key economic issues related to interactions among natural resources, environmental quality, and the agriculture production system. ERS also will use sound analytical techniques to understand the immediate and broader economic and social consequences of alternative policies and programs to protect and enhance environmental quality associated with agriculture. ERS research analyzes the economic effects and cost effectiveness of resource, conservation, environmental, and commodity programs and their linkages. Topics include USDA's conservation programs and environmental policies addressing water and air quality and climate change associated with agricultural production. ERS will effectively communicate research results to policy makers, program managers, and those shaping public debate on agricultural resource use and environmental quality.

Examples of these activities include the following:

- Characterizing implications of conservation and environmental policy design. Conservation policy design is generally limited to defining the subset of producers eligible to participate in a program, constructing the incentive structure (how much will be paid for which activities), and selecting program participants from among willing bidders. ERS research examines options for using market forces to improve the economic, environmental and distributional performance of programs. Design features examined include the baseline level of performance necessary to receive payments or participate in markets, options for targeting specific producer types (e.g., socially disadvantaged farmers), regions, or environmental attributes, the use of auctions for soliciting high benefit or lower cost offers, and procedures for selecting participants from among all program applicants.
- Characterizing policy drivers for land management and land use change. Farm and environmental policies, including farm programs, biofuel policies, conservation programs and climate policies, may encourage farmers to modify cropping patterns, to change their crop management practices, to expand cropland and/or to retire cropland. ERS research examines whether and to what extent changes in land management and land use would occur under alternative policy specifications.

### Selected Past Accomplishments toward Achievement of the Key Outcome:

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policy makers and decision makers. Examples of recent progress are listed in the section on Status of Program. For FY 2014, past accomplishments toward achievement of the key outcome include: research showing the potential impacts of climate change on U.S. crop and livestock production; an evaluation of the extent to which incentives for conservation produce environmental benefits that are “additional”; and an evidence-based exploration of options for improving the efficiency of conservation programs.

### Selected Accomplishments Expected at the FY 2014 Proposed Resource Level:

*ERS will conduct the following research on climate change:*

The Role of Agriculture, Forestry, and Land Competition in Global Greenhouse Gas Mitigation Policies. Allocation of land for agriculture and forestry plays a central role in societal challenges such as climate change and mitigation of greenhouse gas emissions. This research project will analyze alternative greenhouse gas mitigation policies, including biofuel production and greenhouse gas offsets, with a focus on global agriculture, forestry, and the competition for land. This analysis will simultaneously model the dynamic response of energy and agricultural systems in terms of cost, scale, and timing, with a time horizon to 2100.

Agricultural Adaptation to a Changing Climate. The range of local weather conditions that has shaped the current structure of domestic and global agricultural production is changing in response to broader changes in general climatic conditions across the country and around the world. The extent to which such changes present a risk to food supplies, farmer livelihoods, and rural communities depends in part on the direction, magnitude, and rate of such changes, but equally importantly on the ability of the agricultural sector to adapt to changing patterns of yield and productivity, production cost, and resource availability. One project will analyze the potential effects of climate change on productivity, costs, and returns of U.S. livestock production operations. A second project will explore potential impacts of climate change on U.S. agricultural production, markets and the environment, focusing on the constraints and opportunities arising from changing patterns of precipitation, projected shifts in water demand, and the implications for irrigated and dryland agricultural production. A third project is examining the extent to which conservation programs, crop insurance and disaster payments reduce or compensate for damage from droughts and, conversely, the extent to which increasingly risky growing conditions might increase the demand for those programs. A fourth project examines climate change adaptation strategies and food security in Sub-Saharan Africa. This research will analyze one specific case in Uganda exploring adoption decisions and food security when smallholders adopt virus and climate resilient seeds to a key cash crop: groundnuts. Groundnuts are an especially important crop for Ugandan smallholders since they are high in protein, resupply nutrients to the soil, and create storable wealth once dried.

*ERS will conduct the following research on conservation, water, and environmental issues:*

Policy Options for Increasing the Provision of Ecosystem Services from Agriculture. ERS has a broad program of research on the design and implications of markets for ecosystem services, such as greenhouse gases and water quality. Research will examine the economic and environmental implications of alternative approaches to designing environmental markets. Specific projects will examine the extent to which environmental gains associated with conservation programs and environmental are “additional” (e.g., they would not have been realized in the absence of external incentives), and the role of program design in increasing benefits. A second set of projects will focus on the potential role of auctions, bidding, and other forms of economic and informational incentives in influencing farmers’ behavioral responses to alternative market designs.

Economics of the Chesapeake Bay Total Maximum Daily Load (TMDL) Limits for Nutrients. EPA established limits for nutrient discharges from point and nonpoint sources to the Chesapeake Bay. Agriculture is the largest single source of nutrient discharges. This study will assess the cost of achieving a better nutrient balance within the watershed with a regional manure transport model. Options considered will include hauling manure outside the watershed, implementation of filtering practices, and alternative uses of manure. Estimates of the cost of implementing nutrient management on cropland through policy instruments such as regulation, financial assistance

for practice adoption, and pay-for-performance will be developed. Potential benefits of interstate point/nonpoint trading will also be evaluated.

Livestock Producer Responses to Environmental Regulations. ERS will study the efficacy of Concentrated Animal Feeding Operation (CAFO) environmental regulations mandated in 2003 by examining how livestock and crop operations responded to the rules. Specifically, the study will investigate, according to the relative degree of regulation: changes in the land base for manure application; changes in manure nutrient application rates on regulated operations; and changes in manure application on nearby non-regulated (crop-only). Since States also have specific environmental regulations, the research will also utilize a compendium of State-level CAFO regulations, previously developed at ERS, to separately identify the separate impacts of Federal and State regulations.

**Key Outcome 3:** Enhanced understanding by policy makers, regulators, program managers, and organizations shaping public debate of economic issues related to adoption of economically and environmentally sustainable technologies and factors affecting trade of U.S. agricultural products (including products produced using biotechnology).

ERS will identify key economic issues related to the competitiveness and sustainability of rural and farm economies, including economic factors guiding the development and adoption of new technologies and production systems to support food security and trade. These activities include the following:

- ERS supports the USDA Biotechnology Coordinating Council and interdepartmental efforts with the Food and Drug Administration and the Environmental Protection Agency through research that addresses impacts for farmer and industry behavior. Research and related data collection efforts are designed to capture the broad effects of this technology.
- ERS provides timely insights and analysis to support improved decision making on issues related to food security and trade in low-income countries. Research examines changes in food aid distribution (by program) to help determine the driving factors behind the allocation decision of donors.
- ERS develops and disseminates research and analysis on the U.S. food and agriculture sector's performance in the context of increasingly globalized markets. Key emphasis areas include the World Trade Organization (WTO), regional free trade agreements, domestic policy reforms, and the structure and performance of agricultural commodity markets. In-depth analysis of agricultural market conditions, and research and analysis aimed at fostering economic growth and understanding foreign market structures, round out the range of emphasis areas that enhance international competitiveness of American agriculture, including biotech crops.

Selected Past Accomplishments toward Achievement of the Key Outcome:

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate needs of policy makers and decision makers. Examples of recent progress are listed in the section on Status of Program. For FY 2014, past accomplishments toward achievement of the key outcome include: research showing the extent and performance of private and public agricultural research and development; research on biotechnology adoption and the economics of seed, pesticides, water and other agricultural production inputs; an analysis that showed how regional trade agreements create trade in agricultural and food products; research showing that global food security improved slightly in 2012; and analyses of trade and agricultural policy issues concerning China, India, and Indonesia.

Selected Accomplishments Expected at the FY 2014 Proposed Resource Level:

*ERS will conduct the following research on the organic sector and production technologies:*

The U.S. Organic Sector: Emerging Issues and Policy Dimensions. The federal organic regulatory program includes a "USDA organic" label that has bolstered consumer assurance and helped drive a rapid expansion in sales. Domestic supply now trails demand for many products. Ongoing ERS research describes changes in the character of the U.S. organic sector in response to this growth, and highlights some emerging issues and concerns, including analysis of recent structural changes in the organic farm sector and examination of organic price premiums for top processed products and fresh foods. One project that is already underway will continue in FY 2014 to examine the

costs, risks and other economic issues involved in maintaining coexistence between organic and genetically-engineered crops in the U.S.

The Economics of Glyphosate Resistance Management. Glyphosate is an environmentally benign herbicide that controls an array of weeds. Glyphosate resistance is currently documented in 14 weed species in the U.S., and the potential exists for significant amounts of acreage to be affected. This study examines economic incentives that might contribute to the evolution of glyphosate resistance in weeds; the impacts of resistance on input use, yield, and profit (revenue minus variable cost); the impacts of the adoption of best management practices (BMPs) on input use, yield, and profit; and the aggregate costs of resistance. This study also examines economically efficient decision rules for managing weeds under resistance evolution and the tradeoffs associated with alternative approaches for promoting adoption and coordinating resistance management efforts across farms.

Pesticide Use in U.S. Agriculture. Pesticides have contributed to substantial increases in crop yields and lower input costs over the course of the past 60 years. However, because pesticides are toxins, pesticide usage often prompts concern about human health and environmental consequences. This project examines national trends in pesticide use (total, by type, crop, and active ingredient) in U.S. agriculture from 1960 to 2008 focusing on 21 major crops. The project also identifies the factors affecting these trends.

*ERS will conduct the following research on global agricultural markets and food security:*

New Partners and New Product Varieties: A Decomposition of the Growth of US and WTO Member Agri-Food Trade. New research is currently underway at ERS to increase understanding about how U.S. and world agricultural trade has evolved over the past decade. ERS will quantify the impacts of various trade agreements on U.S. exports and that of its foreign competitors in commodity and manufactured food markets. Expanding on previous research, this effort will quantify each potential source of trade growth. Changes in trade flows may arise from new partners, new products, or changes in the volume of currently traded goods. The analysis will also ascertain the extent to which the expansion in intra-bloc trade comes at the expense of outsider suppliers. Finally, it will determine whether U.S. exporters or other foreign suppliers are more adversely affected by these agreements.

International Food Security Assessment. Ongoing ERS research analyzes a range of factors that determine the effect of changing production and prices on food security in 76 developing countries, and produces in-depth special articles on key food security issues. The food security situation in 76 developing countries is projected to deteriorate over the next decade. Estimates indicate that the number of food-insecure people in those countries has been increasing. Price hikes for food and fuel, coupled with a slowdown in global economic growth, hinder long-term food security progress. ERS estimates and projects the number of food insecure people globally, regionally, and in each of the 76 developing countries studied.

Global Price Transmission and Food Security. ERS will examine the factors that affect how effectively global prices are transmitted to farmer and consumers in developing countries. Both higher and lower global food prices are often imperfectly transmitted to food insecure developing countries. More attention has been paid to the food security impacts of higher global food prices. However, when global food prices declined from their 2008 and 2010 peaks, prices in many food insecure countries did not drop as much as global prices, leaving poor people less able to meet their basic food needs. Better understanding of these price trends will help support activities to increase agricultural productivity and trade by demonstrating the real economic incentives facing farmers and consumers in food insecure countries.

Price Shocks, Food Security, and Coping Mechanisms: Household Evidence from Developing Countries. Volatile food prices can affect households in different ways. Using household data from key food insecure countries (Afghanistan, Tanzania and Bangladesh) ERS will analyze the impact of high food prices across the distribution of households in order to identify the effect of food price shocks on the most vulnerable populations. Better understanding of household adjustments supports efforts to better target and evaluate food assistance, as well as supports the development of more resilient local food security systems.

Trade Reforms, Productivity Dynamics and Employment in Food Industries. While expanding global trade opportunities may improve average profitability and productivity in the food industry, they also raise the minimum productivity level necessary for a firm's survival. ERS will investigate where low-productivity food processing and

related firms are located, how rapidly they exit in response to declining trade costs, and the resulting resource reallocation toward high-productivity firms. Findings will support the design of effective structural adjustment policies which encourage firms' global market participation.

The Trans-Pacific Partnership and US Agricultural Trade: The proposed Trans-Pacific Partnership (TPP) is a regional free trade agreement that could have major impacts on global agricultural markets. The TPP initiative could consolidate the "noodle bowl" of existing smaller agreements in the region that currently exclude the United States, and achieve progress on regulatory coherence that would reduce impediments to agricultural trade. ERS will analyze and quantify the costs of current trade and domestic policy distortions in the TPP region, and the potential benefits of their elimination or reduction under different reform scenarios for the United States and global agricultural markets.

*ERS will conduct the following activities related to homeland security:*

Analysis of Animal Disease and Risk Assessments: In FY 2014, ERS will be actively working through interagency activities with USDA APHIS and researchers associated with the DHS Science and Technology Directorate's Foreign Animal Disease Working Group. ERS analysts will continue to serve on the DHS Interagency Bioterrorism Risk Assessment Working Group for the National Biodefense Analysis Countermeasures and Biological Threat Characterization Centers, and will continue to serve on review committees for the Bioterrorism Risk Assessments (BTRA). The collaborative efforts of ERS researchers provide BTRA stakeholders with credible and impartial analytic support to inform biodefense investments. These efforts directly support the USDA goal to help America promote agricultural production and biotechnology exports, as America works to increase food security.

**Key Outcome 4:** Enhanced understanding by policy makers, regulators, program managers, and those shaping public debate of economic issues related to improving the efficiency, efficacy, and equity of public policies and programs relating to domestic and global food prices and availability, consumer food choices, nutrition and health outcomes, nutrition assistance programs, and protecting consumers from unsafe food.

ERS will identify key economic issues affecting food prices, food access and availability, food consumption patterns, and food safety. ERS will use sound analytical techniques to understand the immediate and long-term efficiency, efficacy, and equity consequences of alternative policies and programs aimed at ensuring access by children and adults to safe, nutritious, affordable, and adequate meals. ERS ongoing research will also explore factors that can improve the effectiveness and efficiency of USDA and other Federal food aid programs at a time of resource scarcity. ERS will effectively communicate research results to policy makers, program managers, and those shaping efforts to promote abundant, safe, and healthful food at home and abroad. Examples of these activities include the following:

- Providing economic analysis of the food marketing system to understand factors affecting the availability and affordability of food for American consumers.
- Providing annual estimates of the quantity of food available for human consumption, and measures of disappearance and loss in the food system.
- Providing economic analysis of how people make food choices, including demands for more healthful, nutritious, and safer food, and of the determinants of those choices, including prices, income, education, and socio-economic characteristics.
- Conducting analyses of the benefits and costs of policies to change behavior to improve diet and health, including nutrition education, labeling, advertising, and regulation.
- Conducting economic analyses of the impacts of the Nation's domestic nutrition assistance programs, including the Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants, and Children; and the Child Nutrition Programs.
- Evaluating the dietary and nutritional outcomes of USDA's food and nutrition assistance programs.
- Conducting research on food program targeting and delivery to gauge the success of programs aimed at needy and at-risk population groups, and to identify program gaps and overlaps.
- Conducting research on program dynamics and administration, focusing on how program needs change with local labor market conditions, economic growth and recession, and how changing State welfare programs interact with food and nutrition programs.

- Conducting food safety economics research, with the goal of providing a science-based approach to valuing food safety risk reduction, assessing industry costs of food safety practices, and understanding the interrelated roles of government policy and market incentives in enhancing food safety.
- Providing decision makers and the public with food safety information through publications, web materials, and briefings that address the economics of food safety, including consumer knowledge and behavior, industry practices, the relationship between international trade and food safety, and government policies and regulations.
- Working with Federal food safety agency partners to evaluate available food borne illness data related to meat, poultry and egg products, and to develop more accurate measures of the effectiveness of regulatory strategies in reducing preventable food borne illness.
- Building food-price and food-consumption databases to provide a basis for analyzing the impact of food policy.

Selected Past Accomplishments toward Achievement of the Key Outcome:

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policy makers and decision makers. Examples of recent progress are listed in the section on Status of Program. For FY 2014, past accomplishments toward achievement of the key outcome include: research showing that healthy food can be affordable; research showing how USDA Supplemental Nutrition Assistance Program (SNAP) benefits help alleviate poverty; an examination of the relationship between U.S. economic conditions and participation in nutrition assistance programs; and a study that documented the extent of food safety audits in U.S. meat and poultry processing plants

Selected Accomplishments Expected at the FY 2014 Proposed Resource Level:

*ERS will conduct the following research on food choices, food safety, and health outcomes:*

The National Household Food Acquisition and Purchase Survey (FoodAPS). FoodAPS is a nationally representative survey of household food purchases and acquisitions. FoodAPS will provide unique and detailed data about household food choices that are not available from any other current government survey. Detailed information was collected about foods purchased for consumption at home and away from home as well as foods acquired through food and nutrition assistance programs (both public and private). The new data will broaden the scope of economic analyses of food choices and what those choices mean for diet quality. The survey was completed in 2012, initial data for descriptive analysis will be available in the summer of 2013, and a public-use data set along with descriptive reports of key survey measures will be published in FY14.

Food Prices and Health Outcomes. ERS has prioritized research studying the relationship between food prices, food consumption, and health outcomes, such as overweight and obesity. This project broadens the research base by using a dataset of geographically-specific food prices for numerous food groups. The geographical coding of the food prices will enable linkages with data on individual health outcomes. Currently ERS has linked the data to the National Health and Nutrition Examination Survey (NHANES) using the geocoded data available with the Designated Agency Agreement with the Centers for Disease Control and Prevention and the National Health Interview Survey (NHIS).

What is the relationship between food prices and food security? The association between food insecurity and adverse health and educational outcomes of children has been widely documented, as has the relationship between food insecurity and labor market, family, and health outcomes for adults. Although it might be assumed that high or volatile food prices can affect food security, little research supports this assumption. This study investigates the influence of food prices on food insecurity by linking ERS's Quarterly Food At Home Price Database with food security indicators measured in the Current Population Survey.

Estimating Food Attributable Fractions of Foodborne Illness from Time Series Data: Reliable measures of the role of different foods in foodborne illness caused by specific pathogens are critical to government's and industry's ability to target food safety interventions effectively. USDA, FDA and CDC have all identified a need to develop more reliable methods to estimate this relationship. This study will pioneer use of time series data on food

consumption and foodborne illness to estimate the relative contributions of specific foods to illnesses caused by major foodborne pathogens.

Self-control and the Food Environment: Does Living in a Food Desert Weaken the Power of Dietary Intentions?

This study will examine whether people living in food deserts have a harder time following through on their intentions to eat a healthy diet compared with those living in healthier food environments. Information from the 2003-2004 and 2005-2006 National Health and Nutrition Examination Survey on health conditions, dieting status, and dietary intake will be linked to a unique set of data on the location of supermarkets and other local food environment characteristics from the USDA's Food Environment Atlas.

*ERS will conduct the following research on USDA's food and nutrition assistance programs:*

What is the effect of SNAP participation on diet quality and health status? The Supplemental Nutrition Assistance Program (SNAP) aims to help low-income households buy the food they need for good health. This project will examine the impact of the SNAP program on measures of diet quality (Healthy Eating Index), body weight, chronic health conditions and general health status. Evaluating the impact of the program on health is critical to assessing whether the program's goals are met. The effects of SNAP on these outcomes will be studied for both adults and children.

How do SNAP benefit increases affect shopping patterns in food deserts? Shoppers in food deserts are constrained by lack of access to supermarkets and therefore unable to spend SNAP benefits as efficiently as shoppers located in areas of better access. It is expected that higher benefits, lower travel costs, and greater availability of supermarkets and supercenters will increase the share of benefits spent at these stores. This study will measure those effects and seek to determine whether effects differ in counties that encompass more food deserts than in those that do not.

What is the impact of food assistance programs on nutrition and health outcomes and how can these programs be more effective? Current projects in this area focus on understanding market factors that affect the availability and affordability of food for American consumers, especially those with low incomes. ERS will also evaluate the dietary and nutritional outcomes of USDA's food and nutrition assistance programs and the factors that contribute to more nutritious lunches served through USDA's National School Lunch Program, including economic and programmatic constraints.

Using Lessons from Behavioral Economics to Incentivize Fruit and Vegetable Consumption in Elementary Schools. This project will evaluate a school-based incentives program designed using behavioral economics theory and its effectiveness in increasing fruit and vegetable consumption in a sample of Utah elementary schoolchildren. The incentives program conjointly uses role models and rewards to encourage repeated tasting of fruits and vegetables, with escalating goals designed to gradually increase fruit and vegetable consumption and establish new eating habits.

Healthy Meals and Costs in National School Lunch Program, School (NSLP) and School Breakfast Program (SBP). ERS will use the School Lunch & Breakfast Cost Study-II (SLBCS-II) to examine the association between cost and healthfulness of NSLP lunches. The main hypothesis is whether healthier food (according to the Dietary Guidelines of America) is more expensive to serve in school lunches. We will pay special attention to the different food, labor, and capital costs associated with different menu items. We will also compare the costs and healthfulness of different preparation methods, such as fresh, frozen or canned foods. As a possible extension, we will examine the links between healthfulness, cost, and student participation.

ECONOMIC RESEARCH SERVICE

Strategic Goal Funding Matrix  
(Dollars in thousands)

Program/Program Items	2011 Actual	2012 Actual	2013 Estimate	Increase or Decrease	2014 Estimate
<b>Department Strategic Goal: Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.</b>					
Economic Analysis and Research	\$29,428	\$27,953	\$28,291	+\$39	\$28,331
Staff Years	153	144	147	0	147
Homeland Security	246	234	234	0	234
Staff Years	2	2	2	0	2
Total Costs, Strategic Goal.....	29,674	28,187	28,525	+39	28,565
Total Staff Years, Strategic Goal.....	155	146	149	0	149
<b>Department Strategic Goal: Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.</b>					
Economic Analysis and Research	11,048	11,049	11,098	-301	10,797
Staff Years	53	47	50	0	50
Homeland Security	0	0	0	\$0	0
Staff Years	0	0	0	0	0
Total Costs, Strategic Goal.....	11,048	11,049	11,098	-301	10,797
Total Staff Years, Strategic Goal.....	53	47	50	0	50
<b>Department Strategic Goal: Help America promote agricultural production and biotechnology exports as America works to increase food security.</b>					
Economic Analysis and Research	19,445	18,460	18,706	+69	18,775
Staff Years	98	92	94	0	94
Homeland Security	737	700	700	0	700
Staff Years	4	4	4	0	4
Total Costs, Strategic Goal.....	20,182	19,160	19,406	+69	19,475
Total Staff Years, Strategic Goal.....	102	96	98	0	98
<b>Department Strategic Goal: Ensure that all of America's children have access to safe, nutritious, and balanced meals.</b>					
Economic Analysis and Research	20,222	18,780	19,169	+500	19,669
Staff Years	91	85	88	0	88
Homeland Security	0	0	0	0	0
Staff Years	0	0	0	0	0
Total Costs, Strategic Goal.....	20,222	18,780	19,169	+500	19,669
Total Staff Years, Strategic Goal.....	91	85	88	0	88
<b>Lapsing Balances.....</b>	<b>688</b>	<b>547</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Costs, All Strategic Goals.....</b>	<b>81,814</b>	<b>77,723</b>	<b>78,199</b>	<b>+307</b>	<b>78,506</b>
<b>Total Staff Years, All Strategic Goals...</b>	<b>401</b>	<b>374</b>	<b>385</b>	<b>0</b>	<b>385</b>



Summary of Budget and Performance  
Key Performance Outcomes and Measures

**Agency Goal:** The long-term performance goal across USDA and agency goal areas is the successful execution of the ERS program of economic research and analysis to provide policy makers, regulators, program managers, and those shaping the public debate on agricultural economic issues with timely, relevant, and high quality economic research, analysis, and data to enhance their understanding of economic issues affecting food and agriculture. A general discussion of performance measures follows.

**Key Outcome:** The key outcome of the ERS program is to inform and enhance public and private decision making on economic and policy issues related to agriculture, food, the environment, and rural development.

**Application of the Research and Development Investment Criteria at ERS**

ERS research and management practices use many methods to apply the research and development investment criteria. These practices are designed to ensure that the direction of agency research activities reflects current and anticipated needs of ERS stakeholders and customers, that research and analysis produced by the agency adheres to disciplinary standards to ensure the highest possible quality, and that the agency's research products are delivered in a way that is accessible to customers.

***Principal practices to ensure research quality***

ERS staff publishes research and analysis in a variety of outlets, such as research monographs, ERS periodicals, journals, and presentations outside ERS. For all products the overriding objective is high quality economic analysis and communication of findings. Review and clearance is a collaborative process that begins with defining the questions and hypotheses to be investigated and selecting the appropriate methodologies. Official review and clearance guidelines are designed to ensure high quality analysis.

All products must meet disciplinary standards for quality and must receive substantive peer reviews by qualified experts who have the background, perspective, and technical competency to provide a meaningful assessment of the research design and findings. Reviewers are composed of a mix of individuals outside the author's immediate work unit and at least two from outside the agency. In addition, publications that involve other Federal programs must be reviewed by researchers/analysts from the relevant program agency.

***Principal practices to ensure research relevance***

ERS interacts with stakeholders and customers in many ways to ensure that the research agenda focuses on topics relevant to public and private decision makers. One example of such interaction centers on involving stakeholders in discussions of potential research issues relevant to a given area. ERS regularly convenes workshops, stakeholder sessions, or other meetings in which the results of recent agency research are discussed, upcoming policy issues are identified, and questions for future research are explored. In this way, interaction with stakeholders and customers helps sharpen the agency's research focus to better anticipate future needs for public and private decision makers. Another method to ensure relevance of agency research and analysis centers on ERS strategic planning processes. Strategic planning processes at ERS—including the 2012 Agency-wide planning-- involve discussing with stakeholders the retrospective assessment of research accomplishments and agency impact, identifying key policy areas for potential future impact, and establishing research program priorities.

In addition to efforts to ensure the relevance of long-term research, ERS also asks customers to assess the relevance of staff analysis provided to USDA and other government officials. ERS uses a short questionnaire to gather feedback from customers about relevance, usefulness, timeliness, and accessibility of the product delivered. The instrument provides valuable insight into the relevance of information from ERS in informing decisions by key policy makers.

***Principal practices to assess performance: key performance measures***

ERS employs several practices to assess performance of the agency’s research program. These activities are designed to identify how ERS research contributes to discussion of issues in a sector, how effectively agency information is communicated to customers, and how the efficiency of the program can be improved.

Central to effective ERS performance is successful completion of planned research that enhances understanding by policy makers, regulators, program managers, and those shaping the public debate of economic issues related to enhancing economic opportunities for agricultural producers. Effective performance of economic research and analysis can be inferred through an integrated suite of measures designed to provide an indication of aspects of program performance. The key challenge for providing an overall assessment of research program performance is to develop a set of measures that, taken together, can provide a comprehensive view of program performance.

The framework for assessing the performance of the ERS economic research and analysis program centers on adherence to the Research and Development Investment Criteria principles of relevance, quality, and performance. Agency assessment practices provide a broad framework for assessing success in achieving these criteria. The degree of success can be further assessed through application of a quantitative performance assessment tool that considers factors key to successful research, based on relevance, quality, and performance. The tool consists of a three-category performance indicator that reflects the interval of the point score achieved on a quantitative research program assessment tool. A key component of evaluating agency performance in these areas is program evaluation conducted by outside review panels. Panels assess the relevance, quality, and performance of agency programs by using the quantitative assessment tool based on the assessment criteria. These criteria, taken together, will provide an indication of agency performance. In addition, stakeholder conferences are used to help set priorities for ERS extramural funding programs

Data and other information collected for the ERS performance measurement framework are used to monitor, evaluate, and revise program activities and resource allocation to meet changing priorities in support of the ERS mission. ERS management regularly discusses implementation of research activities to ensure continued and improved agency effectiveness. The outcome of program review activities has been used as a basis for resource allocation and strategic planning activities for the food economics program, the market and trade economics program, and the resource and rural economics program. The results of the American Customer Satisfaction Index (ACSI) customer survey indicate a customer priority for improving data accessibility and dissemination. These priorities are reflected in current activities to improve data dissemination via the ERS Web site. The results from the ACSI Web site customer satisfaction survey are used to inform initiatives to improve navigation on the ERS Web site.

ERS’ strategic plan was completed in February 2013. ERS strategic planning included discussions with customers and stakeholders on prospective research projects to meet anticipated needs of policy officials. In FY 2014, ERS program priorities are aimed at responding to interests of ERS customers for continued relevant research, analysis, and data.

<b>Performance Measure</b>	<b>FY 2008 Actual</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Actual</b>	<b>FY 2011 Actual</b>	<b>FY 2012 Actual</b>	<b>FY 2013 Target</b>	<b>FY 2014 Target</b>
ACSI Customer Satisfaction Rating	74	n/a	n/a	n/a	75	n/a	n/a
Percent of requested analysis delivered on time	96	100	100	94	97	100	100
Customer satisfaction with the ERS Web site	70	74	74	73	72	75	75

**ACSI Customer Satisfaction Rating**

This measure is designed to assess the satisfaction of private and other external customers with the relevance, usefulness, and accessibility of ERS research, data, and analysis, as measured by the ACSI. This measure tracks relevance and usefulness of ERS research, analysis, data products, and services, as determined through a survey of agency customers using the ACSI. The survey is typically conducted on a three-year cycle. In 2008, ERS customer satisfaction rated above targeted levels, and above average customer satisfaction with government programs. Another survey was conducted in 2012, and the ERS website in questions #2 and #3 was rated 71 out of a possible E-satisfaction rating of 100. In question #4, the ERS website rating was 75. ERS was identified as one of the top nine E-Gov gainers (quarter over quarter) with a +4 satisfaction improvement. The 75 score placed ERS as the top performer of all USDA news/information sites, and placed ERS in the middle of 49 other Federal News/Information sites in 2012.

**Percent of Requested Analysis Delivered on Time**

For the “Staff Analysis” described in the previous measure, an indicator of agency performance is the timeliness with which responses are provided to the customer. This measure tracks the timeliness of responses by ERS to requests for short-term tailored research, analysis, and data from government policy makers.

**Customer satisfaction with the ERS Web site**

In recent years, ERS recast its information dissemination and communications channels to adopt a Web-centric approach to communicating with customers. As a result, all ERS research, data, and other information disseminated by the agency are available through the ERS Web site. This measure is an indicator of customer satisfaction with the ERS Web site using a survey based on ACSI. The measure tracks satisfaction of Web site users and provides a basis for comparison with similar government and private sector Web sites. The target for this measure is at or above the average rating for government Web sites in the Information/News category.

**Economic Research Service  
Full Cost By Department Strategic Goal**

**Strategic Goal 1: Assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving.**

		Dollars in thousands			
PROGRAM	PROGRAM ITEMS	FY 2011 Actual	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
<b>Economic Research and Analysis</b>					
	Salaries and Benefits	20,426	18,993	19,321	19,321
	Pay Costs	0	0	0	173
	Data Acquisition	3,486	3,861	3,746	3,214
	Extramural Program	1,864	1,836	1,680	2,144
	Contracts	914	715	812	812
	Interagency Agreements	1,270	1,313	1,257	1,360
	Direct Costs	583	637	688	535
	Indirect Costs	1,130	832	1,021	1,007
	<b>Total Costs</b>	<b>29,674</b>	<b>28,187</b>	<b>28,525</b>	<b>28,565</b>
	<b>FTEs</b>	<b>155</b>	<b>146</b>	<b>149</b>	<b>149</b>
Performance					
Measure: Portfolio	Qualitative assessment by external experts of the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues.				
Review Score		Excellent	Excellent	Excellent	Excellent
	Total Costs, Strategic Goal	29,674	28,187	28,525	28,565
	Total FTEs, Strategic Goal	155	146	149	149

**Strategic Goal 2: Ensure our national forests and private working lands are conserved, restored and made more resilient to climate change, while enhancing our water resources.**

		Dollars in thousands			
PROGRAM	PROGRAM ITEMS	FY 2011 Actual	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
<b>Economic Research and Analysis</b>					
	Salaries and Benefits	6,774	6,550	6,663	6,663
	Pay Costs	0	0	0	57
	Data Acquisition	2,961	3,280	3,182	2,731
	Extramural Program	564	555	508	649
	Contracts	10	8	9	9
	Interagency Agreements	129	133	128	138
	Direct Costs	205	223	241	188
	Indirect Costs	406	299	367	361
	<b>Total Costs</b>	<b>11,048</b>	<b>11,049</b>	<b>11,098</b>	<b>10,797</b>
	<b>FTEs</b>	<b>53</b>	<b>47</b>	<b>50</b>	<b>50</b>
Performance					
Measure: Portfolio	Qualitative assessment by external experts of the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues.				
Review Score		Excellent	Excellent	Excellent	Excellent
	Total Costs, Strategic Goal	11,048	11,049	11,098	10,797
	Total FTEs, Strategic Goal	53	47	50	50

**Strategic Goal 3: Help America promote agricultural production and biotechnology exports as America works to increase food security.**

		Dollars in thousands			
PROGRAM	PROGRAM ITEMS	FY 2011 Actual	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
	Salaries and Benefits	13,538	12,619	12,836	12,836
	Pay Costs	0	0	0	115
	Data Acquisition	2,199	2,436	2,364	2,028
	Extramural Program	1,238	1,219	1,116	1,423
	Contracts	905	707	804	804
	Interagency Agreements	1,159	1,198	1,146	1,240
	Direct Costs	391	426	461	358
	Indirect Costs	753	554	680	671
	<b>Total Costs</b>	<b>20,182</b>	<b>19,160</b>	<b>19,406</b>	<b>19,475</b>
	<b>FTEs</b>	<b>102</b>	<b>96</b>	<b>98</b>	<b>98</b>
Performance					
Measure: Portfolio	Qualitative assessment by external experts of				
Review Score	the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues.	Excellent	Excellent	Excellent	Excellent
	Total Costs, Strategic Goal	20,182	19,160	19,406	19,475
	Total FTEs, Strategic Goal	102	96	98	98

**Strategic Goal 4: Ensure that all of America's children have access to safe, nutritious and balanced meals.**

		Dollars in thousands			
PROGRAM	PROGRAM ITEMS	FY 2011 Actual	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
<b>Economic Research and Analysis</b>					
	Salaries and Benefits	12,154	11,334	11,530	11,530
	Pay Costs	0	0	0	103
	Data Acquisition	193	214	208	178
	Extramural Program	1,158	1,141	1,044	1,332
	Contracts	2,673	2,091	2,375	2,375
	Interagency Agreements	3,001	3,102	2,969	3,212
	Direct Costs	367	400	433	336
	Indirect Costs	677	498	611	603
	<b>Total Costs</b>	<b>20,222</b>	<b>18,780</b>	<b>19,169</b>	<b>19,669</b>
	<b>FTEs</b>	<b>91</b>	<b>85</b>	<b>88</b>	<b>88</b>
Performance					
Measure: Improve	USDA policy makers implement new local				
Low Income	foods initiatives as a result of new data and				
Household Access	information on community, local food market,				
to Fresh, Local,	and food assistance program characteristics, and				
Healthy Food	analysis of effective alternatives for improving				
	access to fresh, local foods.	No	No	No	Yes
Performance					
Measure: Portfolio	Qualitative assessment by external experts of				
Review Score	the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues.	Excellent	Excellent	Excellent	Excellent
	Total Costs, Strategic Goal	20,222	18,780	19,169	19,669
	Total FTEs, Strategic Goal	91	85	88	88
	<b>Total Costs, All Strategic Goals</b>	<b>81,126</b>	<b>77,176</b>	<b>78,199</b>	<b>78,506</b>
	<b>Total FTEs, All Strategic Goals</b>	<b>401</b>	<b>374</b>	<b>385</b>	<b>385</b>