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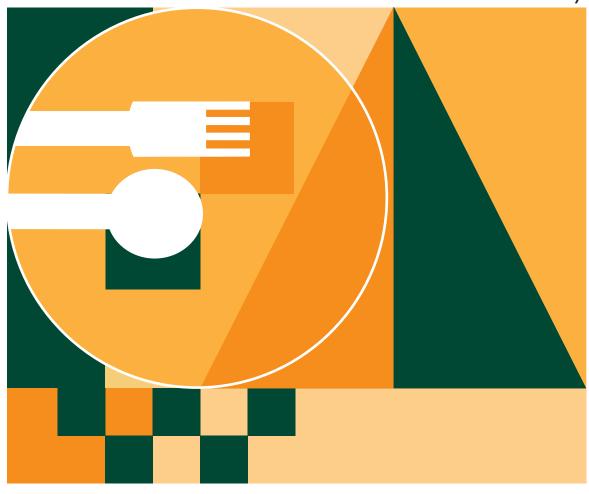




Food Assistance and Nutrition Research Program

Final Report Fiscal 2010 Activities

Economic Research that Informs Food and Nutrition Assistance Policy





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food nutrition assistance

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Introduction

In 1998, USDA's Economic Research Service (ERS) created the Food Assistance and Nutrition Research Program (FANRP) to study and evaluate the Nation's domestic food and nutrition assistance programs, including the Supplemental Nutrition Assistance Program (SNAP)—formerly the Food Stamp Program—the child nutrition programs, and the Special Supplemental Nutrition Program for Woman, Infants, and Children (WIC). Since its establishment, FANRP has become the premier source of economic research on food and nutrition assistance programs in the United States. FANRP has supported research on a wide range of policy-relevant food and nutrition assistance topics, resulting in almost 800 peer-reviewed publications. FANRP has broadened the participation of social science and nutrition science scholars in food assistance and nutrition policy issues. FANRP has also enhanced data available for food assistance research by (1) funding the development and testing of survey instruments, (2) adding food assistance modules to national surveys, and (3) taking advantage of program administrative data for research purposes.

This report provides a summary of FANRP and its activities in fiscal 2010. Chapter 1 provides a general overview of the program. Chapter 2 focuses on FANRP activities conducted in fiscal 2010 (October 1, 2009-September 30, 2010) and includes a description of all projects funded in fiscal 2010, a discussion of the year's key research accomplishments, and a list of all FANRP-sponsored publications released during the year. Appendix A lists all the institutions, universities, and Government agencies that have been awarded FANRP projects since FANRP started in 1998, appendix B lists some of the ongoing FANRP projects funded prior to fiscal 2010, appendix C identifies the peer reviewers for FANRP's fiscal 2010 Competitive Grant and Cooperative Research Program, and appendix D provides a list of the projects awarded in fiscal 2010 through the Research Innovation and Development Grants in Economics (RIDGE) Program.

Chapter 1. The Food Assistance and Nutrition Research Program

Food assistance and nutrition programs receive substantial Federal funding and affect the lives of millions of Americans. In fiscal 2009, monthly participation in SNAP averaged 33.5 million Americans at an annual cost of \$53.6 billion. On a typical school day, some 31.3 million children participated in the National School Lunch Program and 11.1 million children participated in the School Breakfast Program, which together cost \$12.6 billion. On average, WIC served 9.1 million people each month at an annual cost of \$6.5 billion. At some point during the year, one in four Americans were estimated to participate in at least one of USDA's 15 domestic food and nutrition assistance programs. Expenditures for all of the food and nutrition assistance programs totaled almost \$79.2 billion in fiscal 2009, or about two-thirds of USDA's annual budget. Preliminary data indicate that participation in USDA's food assistance programs increased significantly in 2010.

Given the significance of the food and nutrition assistance programs to both program participants and American taxpayers, it is important that FANRP provide objective, scientifically rigorous studies and evaluations to ensure that these programs operate effectively and efficiently.

FANRP Mission and Program Principles

FANRP's mission is to conduct "economic research that informs food and nutrition assistance policy." The program principles behind FANRP ensure the reliability and usefulness of the research.

Program Overview

FANRP has four key components: conducting research on food and nutrition assistance programs, supporting data development, expanding the research base, and disseminating research findings.

Research on Food and Nutrition Assistance Programs

FANRP's research on the food and nutrition assistance programs targets the critical information needs of USDA, Congress, program managers, program participants, the research community, and the public at large. To address the needs of this diverse group, FANRP

employs a multifaceted approach to identify priorities and carry out its research mission.

Intramural and Extramural Research

FANRP integrates an intramural and extramural research program. The intramural program, conducted by researchers from ERS's Food Economics Division, continues ERS's long and distinguished history of conducting rigorous, objective, and policy-relevant economic research. Through the use of contracts, grants, and cooperative agreements, FANRP's extramural program allows ERS to marshal the most innovative. creative, and forward-looking researchers possible and to use the resources of such institutions as the National Academy of Sciences, National Science Foundation. National Bureau of Economic Research, Urban Institute, RAND Corporation, and numerous universities across the country.² The extramural research is bolstered by close involvement with ERS staff. All studies, intramural and extramural, are strengthened by ERS's concentration of research expertise and specialized knowledge of USDA programs and policies.

FANRP Principles

- Research that meets the needs of all stakeholders—program participants, USDA, Congress, and the public.
- Integrated, comprehensive program that conducts research in the broader context of the current and future economic and social environments.
- Broad array of public and private entities directly involved in the research, evaluation, and review efforts.
- Integration of ERS staff expertise in the development, implementation, and accomplishment of research projects.
- Scientifically rigorous studies and evaluations with verifiable and unbiased results.
- Rigorous internal and external review of research results.
- · Public availability of data.
- Wide distribution of research findings.
- Development and maintenance of continuous data sets.

¹Participation and expenditure figures are from USDA's Food and Nutrition Service

²See appendix A for a list of all institutions, universities, and Government agencies that have been awarded FANRP projects since its establishment in 1998.

Research Themes

Using a strong economic framework to guide the research, FANRP has expanded understanding on a wide range of food and nutrition assistance issues. Three core areas of research provide a foundation on which year-to-year priorities are determined:

- Program Outcomes and Economic Well-Being of Participants—USDA's food and nutrition assistance programs share the primary goal of ensuring the health of vulnerable Americans by providing access to a nutritionally adequate diet. Economic factors influence participant's behavior and the degree to which program goals are achieved. Through changes in food expenditures, the programs also influence the economic well-being of participants, food security, the depth and severity of poverty, and income volatility.
- Program Access and Economic Determinants of Participation—USDA seeks to ensure access for all who are eligible to participate in its food and nutrition assistance programs. The extent to which eligible individuals participate in programs and the factors that influence those decisions are key to measuring how well the program is reaching its target population. FANRP provides information on the population served and on the eligible but unserved population to determine if the program is reaching those who are most vulnerable and in need of program resources. Analysis of the economic factors affecting program participation allows policymakers and program analysts to better anticipate and forecast fluctuations in program participation and can influence budgetary decisions for the program.
- Program Dynamics and Efficiency—With increased Federal Government focus on accountability and efficiency, reliable and unbiased information on how the Nation's food and nutrition assistance programs are administered and operated is increasingly important. An essential objective of FANRP is to provide policymakers with research that improves program operations. As such, FANRP has conducted a number of studies mandated by Congress. Because food and nutrition assistance programs interact with various industry sectors and markets, FANRP also conducts research on how the programs impact food prices and farm income.

In developing the annual research priorities, FANRP works closely with USDA's Food and Nutrition Service (FNS), the agency responsible for administering the Department's food assistance and nutrition programs.

FANRP also seeks input from a broad constituency of policy officials, researchers, practitioners, advocates, industry groups, and service providers. In conjunction with these activities, FANRP sponsors an annual round-table discussion, open to the public, to identify crucial research and information needs that would support food assistance and nutrition programs and to ensure the policy and program relevance of the annual research agenda. The most recent roundtable discussion, "Food Assistance and Nutrition Research Conference: Emerging Issues and Recent Findings," was held September 24, 2010, at ERS in Washington DC. The conference agenda can be found at http://www.ers. usda.gov/ConferenceCenter/FANRP/FANRSept2010/agenda.htm

Data Development

FANRP has made data development a major priority because timely access to policy-relevant data sustains research on food assistance programs and the environment in which they operate. Although it is not always possible to anticipate future policy issues, investments in new and ongoing data collections provide a critical foundation for addressing new and emerging food assistance issues. Adding a food assistance dimension to existing surveys has proven to be an especially effective investment in expanding research capital. Since its initiation in 1998, FANRP funding has enhanced food assistance data collection in a number of national surveys, including:

- American Time Use Survey (ATUS)
- Continuing Survey of Food Intake by Individuals (CSFII)
- Current Population Survey (CPS) Food Security Supplement
- Early Childhood Longitudinal Study—Birth Cohort (ECLS-B)
- Early Childhood Longitudinal Study—Kindergarten Class (ECLS-K)
- National Health and Nutrition Examination Survey (NHANES)
- Panel Study of Income Dynamics (PSID)

Brief descriptions of national surveys and data sets useful in food and nutrition assistance research are available at http://www.ers.usda.gov/Briefing/FoodNutritionAssistance/data/

In fiscal 2009, FANRP awarded a contract to design, develop, and carry out ERS's National Household Food Acquisition and Purchase Survey (FoodAPS). This new survey will provide unique and detailed data about household food choices that are not available in any other survey. FoodAPS is a nationally representative survey of household food purchases and acquisitions, including 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 survey will collect information from up to 3,500 low-income and 1,500 higher income households. The survey will examine a number of issues, including:

- How do economic factors (such as prices and income) and demographic characteristics impact household food purchase decisions and the nutritional value of food acquisitions?
- How does participation in food and nutrition assistance programs influence food purchases?
- How do economic dynamics, demographic factors, and food and nutrition assistance programs influence the ability of low-income households to consistently access sufficient food for a healthy lifestyle?

The data collection effort will yield information not previously available to researchers, thereby broadening the scope of economic analyses of food choices and what those choices mean for diet quality. The survey will be designed, field tested, and launched over the next 4 years.

Expanding the Research Base

Before FANRP was established, few academic and other public research institutions were conducting food assistance research. The situation has changed markedly. From its inception in 1998 to the end of FY 2010, FANRP has awarded grants, cooperative agreements, and/or contracts to researchers in 35 research institutions, 65 universities, and 12 Government agencies across the Nation (appendix A). FANRP's extramural research component uses two main mechanisms to promote research from a broad arena—the Competitive Grants and Cooperative Agreements Program and the Research Innovation and Development Grants in Economics Program (RIDGE).

The Competitive Grants and Cooperative Agreements Program

The Competitive Grants and Cooperative Agreements Program encourages new and innovative research and joint projects with ERS researchers. The program awards grants and cooperative agreements between \$100,000 and \$400,000.

- Grants are awarded when the research project supports
 the general public good and does not require substantial
 involvement between ERS staff and the extramural
 researchers during the performance of the award.
- Cooperative agreements, awarded when the research project requires more substantial involvement between ERS and the extramural researchers, enable ERS staff to supplement their own expertise with the knowledge and resources of academic and private institutions.³

The program is announced publicly via the ERS website, ERS e-mail updates, and postings on various listservs (e-mail-based discussion forums). The proposal evaluation process includes peer review panels consisting of experts from academia, Government, and the private sector. In addition to reviewer's comments, FANRP's selection process considers coverage of priority research areas, overlap between proposals and ongoing projects, program needs, potential benefits from research collaborations on particular projects, and availability of funding.

In fiscal 2006, FANRP implemented Grants.gov application procedures to the Competitive Grants and Cooperative Agreements Program. Grants.gov uses electronic technology to enhance the process of tracking Federal grant opportunities. Applicants can both search for and apply for grant funds online through a single access point (i.e., a common website), dramatically streamlining the application, review, and award process.

The Research Innovation and Development Grants in Economics Program (RIDGE)

The Research Innovation and Development Grants in Economics (RIDGE) Program, known as the Small Grants Program during 1998-2006, was created to (1) stimulate new and innovative research on food and nutrition policy issues and (2) broaden the participation of social science scholars in this research area. The program supports both quantitative and qualitative

³FANRP uses two types of cooperative agreements: cooperative research agreements and assistance-type cooperative agreements. In a cooperative research agreement, ERS staff and the extramural researcher(s) are close collaborators and contributors to support the research. In an assistance-type cooperative agreement, the extramural researcher(s) are responsible for conducting the greater part of the work on the project. Cooperative research agreements require both parties to contribute to the funding of the project; assistance-type cooperative agreements do not have this joint funding requirement.

research methods to explore economic, nutrition, and health outcomes of participation in USDA food assistance programs as well as issues surrounding program implementation and delivery. RIDGE grants, most in the range of \$20,000-\$40,000, are designed to last for 15-18 months.

Funded by ERS, the RIDGE program is administered in partnership with two RIDGE Centers:

- The RIDGE Center for National Food and Nutrition Assistance Research at the Institute for Research on Poverty (IRP), University of Wisconsin-Madison; and
- The RIDGE Center for Targeted Food and Nutrition Assistance Research at the Southern Rural Development Center (SRDC), Mississippi State University.

The RIDGE Center at IRP directs research related to food and nutrition assistance issues that affect the entire Nation. An important component of IRP's focus relates to determinants of food assistance program participation and the effects of participation on food security, obesity, and other outcomes. The RIDGE Center at SRDC focuses its research on the food and nutrition challenges of specific populations—for example, racial and ethnic minorities, persistently poor children and adults struggling with obesity, and residents living in areas called "food deserts" because of the lack of affordable and nutritious food available in these locations.

The RIDGE Centers oversee the application, peer review, award, and performance processes of the research grants provided through the RIDGE Program. Each center serves as a hub for mentoring and training researchers interested in food and nutrition assistance

RIDGE Projects and Summaries

A list of all completed RIDGE projects awarded through fiscal 2010 and their summaries, searchable by keyword(s), research institution, investigator, and year awarded, is available at http://www.ers.usda.gov/Briefing/FoodNutritionAssistance/Funding/RIDGEprojects.asp

In addition to projects funded by the current RIDGE Centers, many of the research projects were conducted through previous RIDGE partners at the Irving B. Harris Graduate School of Public Policy Studies, University of Chicago; the American Indian Studies Program, University of Arizona; the Department of Nutrition, University of California; and the Joint Center for Poverty Research, The University of Chicago and Northwestern University.

issues and provides a source of timely and accessible information on new research findings.

FANRP sponsors an annual RIDGE Program Conference in which grant recipients present the results of their work on food assistance programs, food security, and nutrition. A copy of the agenda for the 2009 conference held on October 15-16, 2009, at ERS in Washington, DC, can be found at http://www.ers.usda.gov/ConferenceCenter/FANRP/FANRPOctober09/Agenda.htm

Research Dissemination

In accordance with program principles, FANRP strives to make all of its research readily available and in accessible formats for a variety of technical and nontechnical audiences. To do this, FANRP uses publications and hosts and participates in various conferences. ERS-produced reports are the primary vehicle for documenting and showcasing FANRP research. ERS publishes an array of outputs for a variety of purposes and audiences. Economic Research Reports (ERRs) are a departmental series and are available in both paper and electronic form. These technical or semitechnical reports present original economic analysis, findings, and implications primarily for public decisionmakers and researchers.

Other departmental series include Economic Briefs (EBs) and Economic Information Bulletins (EIBs). These nontechnical publications, intended for a broader audience, provide concise, timely insights from recent ERS research. The Food Assistance Landscape is an EIB that is published annually. It provides an overview of USDA's domestic food assistance programs, including recent program statistics, information on related economic and social indicators, and highlights of recent FANRP research (Oliveira, 2010).

Contractor and Cooperator Reports (CCRs) result from FANRP's extramural research program.⁵ The views expressed in CCRs, unlike reports in the departmental series, are those of the authors and not necessarily those of ERS or USDA (USDA's National Agricultural Library's Digital Repository offers online browsing of all CCRs). In addition to the series of reports, articles on food assistance and nutrition-related topics are often featured in the ERS magazine, *Amber Waves*.

FANRP research targeted to narrower, more technical audiences can be found in a wide range of peer-reviewed

⁴ERRs replaced the Food and Nutrition Research Report (FANRR) series. ⁵CCRs replaced the Food Assistance and Nutrition Research Program's E-FAN series.

professional journals, including the American Journal of Agricultural Economics, Review of Agricultural Economics, Journal of Agricultural and Resource Economics, Applied Economics, Journal of Human Resources, Journal of Nutrition, Journal of the American Dietetic Association, Journal of Policy Analysis and Management, American Journal of Public Health, American Journal of Preventive Medicine, and Food Policy.

Each year, ERS staff also present findings from FANRP research at numerous professional meetings across the country. The meetings are sponsored by such groups as the American Association of SNAP Directors, the National WIC Association, the School Nutrition Association, the American Public Human Services Association, the National Association for Welfare Research and Statistics, the Society for Nutrition Education, the Association for Public Policy Analysis and Management, and the American Agricultural Economics Association.

To encourage interaction among researchers and policy-makers, FANRP organizes and sponsors conferences and workshops. Two are held annually—the RIDGE Program Conference and the Food Assistance Research Conference: Recent Research and Emerging Issues. Other conferences, often co-sponsored with other institutions, are hosted to address timely and policy-relevant topics. In fiscal 2010, FANRP sponsored a special topical conference on Incorporating Behavioral Economics into Federal Food and Nutrition Policy, and

a workshop on the Joint Contributions of SNAP and Unemployment Insurance to the Nation's Social Safety Net. In previous years, FANRP hosted conferences on Income Volatility and Implications for Food Assistance Programs, Food Security Measurement and Research, Rural Dimensions of Welfare Reform, and the Economics of Obesity.

Electronic Database of FANRP-Supported Research

FANRP has compiled a web-accessible database of all peer-reviewed reports and articles based on FANRP-supported research published at ERS and elsewhere. The database is searchable by:

- Title
- · Lead author
- Topic
- · Year of publication
- · Data set analyzed
- Word(s) or phrases contained in the publication's bibliographic citation

For all projects funded through FANRP's Competitive Grants and Cooperative Agreements Program, a link to the project description is provided. For all ERS publications and Contractor and Cooperative Reports, a link to the full report is provided. The database can be accessed at http://www.ers.usda.gov/Briefing/FoodNutritionAssistance/ResearchFindings/

Chapter 2. Fiscal 2010 FANRP Activities

This chapter describes FANRP activities in fiscal 2010. The first section focuses on FANRP's extramural program and includes a description of all FANRP projects funded in fiscal 2010.⁶ The second section summarizes some of the key research accomplishments resulting from FANRP's extramural as well as intramural components. The third section provides citations of all FANRP-sponsored publications published during the year.

Extramural Research Program, Fiscal 2010

Funding for all FANRP extramural activities totaled \$6.4 million in fiscal 2010 including \$2 million provided by the Food and Nutrition Service to support a new research initiative using behavioral economics to improve diets in the child nutrition programs. Extramural funding is examined by type of funding mechanism used and by topic area.

Funding Mechanisms

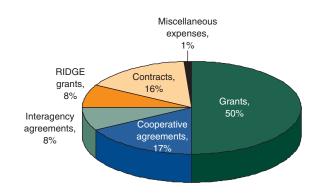
Several different mechanisms were used to fund FANRP's extramural activities. Grants (50 percent) and cooperative agreements (17 percent) accounted for two-thirds of all extramural funding. With the exception of two small targeted cooperative agreements, all of these agreements were awarded through a competitively run process whereby the availability of funds and requests for applications were announced in a series of bulletins (see USDA 2009b, USDA 2010a, USDA 2010b, and USDA 2010c), and competitively awarded based on research priorities, availability of funding, and peer review comments (see appendix C for a list of fiscal 2010 peer reviewers). The acceptance rate for proposals of all cooperative agreements and grants was about 1 in 3, or in dollar terms, roughly \$1 in \$5.

Institutions and Universities New to FANRP

Twelve new institutions/universities were awarded grants and cooperative agreements in fiscal 2010: Brigham Young University, College of William and Mary, Georgia State University, Oklahoma State University, Old Dominion University, Pennsylvania State University, Public Policy Institute of California, Simmons College, University of Connecticut, University of North Texas, Utah State University, and West Virginia University.

Contracts accounted for 16 percent of all extramural funding. Interagency agreements—used to enhance food assistance data development through cost-sharing partnerships and to fund cooperative interagency research on program interactions and policy issues—and RIDGE grants each accounted for 8 percent of extramural funding. Miscellaneous expenses—including expenses for conferences, travel, and honoraria for technical reviewers—accounted for 1 percent of extramural funding.

Share of extramural funding by type of funding mechanism use, fiscal 2010



Topic Areas

FANRP funded projects in a number of different topic areas in fiscal 2010.

Behavioral Economics and Child Nutrition

FANRP, in collaboration with USDA's Food and Nutrition Service (FNS), made a series of awards in fiscal 2010 that form a foundation for USDA's initiative to develop a research program in behavioral economics applied to USDA's child nutrition programs. These awards accounted for almost one-third (31 percent) of total extramural funding. The largest award for \$1 million established a Center for Behavioral Economics in Child Nutrition Programs, which will be the cornerstone of USDA's Behavioral Economics-Child Nutrition Research Initiative. The Center, awarded to Cornell University, will be responsible for three major tasks:

 Facilitating new and innovative research on the application of behavioral economic theory to child nutrition program operations and activities, leading to program improvements that will benefit children's diets and health.

[&]quot;See appendix B for a list of some of the ongoing FANRP projects funded prior to fiscal 2010.

- Broadening the network of social scientists who
 participate in research that applies principles and
 theories of behavioral economics to improving nutrition,
 food security, and health outcomes associated with
 participation in USDA's child nutrition programs.
- Disseminating information obtained through its research program to a diverse stakeholder audience, including other researchers, policy and program officials, and the general public.

Testing behavioral economic concepts in the child nutrition program setting is critical to assessing the feasibility of promising interventions. Three awards were made for studies that will test the effectiveness of selected behavioral economic applications in improving the food choices of children participating in USDA school meal programs.

A final series of 11 developmental awards provided seed money for an expanded program of research that applies behavioral economic theories and methods to improving children's eating habits through USDA's child nutrition programs. Activities supported by these awards include fostering research relationships between researchers and State and local implementing agencies, testing concepts and methods in small-scale pilot projects, developing and testing data collection methodologies, and sponsoring workshops to improve understanding of the application of behavioral economics to child nutrition programs.

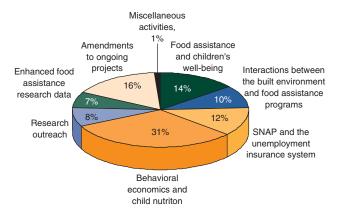
Food Assistance and Children's Well-Being

Most of USDA's food assistance and nutrition programs offer benefits to children, either directly (such as through the school meal programs) or indirectly (such as through SNAP benefits that target the entire household). Five awards to fund research on food assistance and children's well-being accounted for 14 percent of extramural funding.

SNAP and the Unemployment Insurance System

Four awards, accounting for 12 percent of extramural funding, were made to fund research on operational issues of USDA's Supplemental Nutrition Assistance Program (SNAP) and its support for the working poor. In particular, the research addresses: (1) operational issues regarding SNAP participation decisions and the dynamics of program participation among low-income households with workers, and (2) the interactions between receipt of SNAP benefits and State unemployment insurance (UI) benefits. Three of the projects link SNAP and UI program data within seven States—California,

Share of FANRP extramural funding by topic area, fiscal 2010



Florida, Georgia, Illinois, Maryland, Michigan, and Texas—to examine how these programs interact and provide a safety net during a recession.

Interactions Between the Built Environment and Food Assistance Programs

USDA's food assistance and nutrition programs operate within a "built environment" that includes food store outlets, local program offices or clinics, schools and school cafeterias, local school wellness policies, and program policies. Four projects focusing on the interactions between built environment and food assistance programs accounted for 10 percent of extramural funding.

Amendments to Ongoing Projects

Three amendments to ongoing projects accounted for 16 percent of extramural funding. In the previous fiscal year, FANRP contributed over \$4 million toward a contract to design, develop, and carry out the National Household Food Acquisition and Purchase Survey (FoodAPS) with a nationally representative sample of all U.S. households. In FY 2010, ERS funded a contract modification for \$957,355—for a number of tasks including expanding the number of households to be included in the data collection—that comprised the bulk of funding in this category.

Research Outreach

Research outreach in the form of the RIDGE Program—which funds grant competitions through RIDGE partner institutions—accounted for 8 percent of extramural funding. In fiscal 2010, the RIDGE Program was restructured to renew its focus on economic aspects of food and nutrition assistance research and to consolidate the number of RIDGE partner institutions from five to two. The restructuring created two RIDGE Centers with expanded roles and responsibilities and reduced

overall program costs. Grants to administer the RIDGE Program were awarded to:

- The RIDGE Center for National Food and Nutrition Assistance Research at the Institute for Research on Poverty (IRP), University of Wisconsin-Madison; and
- The RIDGE Center for Targeted Food and Nutrition Assistance Research at the Southern Rural Development Center (SRDC), Mississippi State University.

The RIDGE Center for National studies centers focuses on food and nutrition assistance research at the national level, while the RIDGE Center for Targeted Studies targets specific populations. The RIDGE projects awarded in fiscal 2010 are listed in appendix D.

Enhanced Food Assistance Research Data

Funding for the Food Security Supplement to the Current Population Survey (U.S. Census Bureau) and an amendment to a pilot demonstration project with The Centers for Disease Control and Prevention's National Center for Health Statistics, accounted for 7 percent of extramural funding.

Miscellaneous Activities

Miscellaneous activities, consisting primarily of hosting conferences and workshops, accounted for 1 percent of extramural funding. FANRP sponsored five conferences/workshops during the year. These included the fiscal 2009 and 2010 Food Assistance and Nutrition Research Conferences on Emerging Issues and Recent Findings and the fiscal 2009 RIDGE Program Conference. Two special topical conferences/workshops were also held during the year: a conference on Incorporating Behavioral Economics into Federal Food and Nutrition Policy and a workshop on the Joint Contributions of SNAP and Unemployment Insurance to the Nation's Social Safety.

⁷The FY 2009 Food Assistance and Nutrition Research Conference was held in December 2009. The FY 2010 Food Assistance and Nutrition Research Conference was moved up to September 2010 in order to determine research priorities for the FANRP Competitive Grants and Cooperative Agreements Program and allowing the release the announcement of the request for proposals earlier in the year.

FANRP extramural research projects, fiscal 2010

Research projects/awards Objective		Estimated costs
Food Assistance and Children's Well-Being		
Weekday and Weekend Eating: Assessing the Effect of School Meals Cornell University	To assess the effects of the National School Lunch Program and School Breakfast Program on the prevalence of weekend "hunger" (as measured by inadequate caloric intake and compromised diet quality) through an innovative use of National Health and Nutrition Examination Survey (NHANES) data from 2003 to 2008. The project will compare weekday and weekend eating for the same individuals, thereby controlling for unobserved differences across individuals in order to examine the prevalence of weekend "hunger" among school-age children, identify the characteristics of children that are most likely to experience inadequate food quantity on the weekend, and analyze how participation in school meals is associated with weekend hunger.	\$125,000
WIC, Food Insecurity, and Child Health in Massachusetts Simmons College	To examine how the length of time that an individual participates in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) may affect changes in household food security status for different racial/ethnic groups. The project will also examine the consequences of household food insecurity in early life on infancy and child health indicators. The study will use a unique longitudinal Massachusetts WIC dataset that links 8 years of maternal and child WIC data, submitted as part of the Centers for Disease Control and Prevention's Pregnancy and Pediatric Surveillance Systems, for participants who received WIC services between August 2001 and November 2009.	\$200,000
Dynamics of Childhood Obesity Georgia State University	To examine the evolution of child weight from birth through eighth grade, the persistence of overweight, and the role of school meals and the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) in altering the dynamics of obesity. The project will use several data sources, including the Early Childhood Longitudinal Study, Birth Cohort and Kindergarten Class (ECLS-B, ECLS-K); Census 2000 data on income, poverty, unemployment, property values, and education levels; and county-level SNAP data.	\$225,000
Child Well-Being in Families With Job Loss, Divorce, or Separation: The Effects of Food Assistance Programs The University of Michigan	To examine the effects of participation in the two largest food assistance programs—the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) and the National School Lunch Program—on the well-being of children in low-income families that experience adverse economic shocks, such as job loss, divorce, or separation. Food security will be the primary measure of children's well-being to be studied, but children's health status and health care use and household stability and material well-being will also be examined. The project will use data from the 2004 and 2008 panels of the Survey of Income and Program Participation (SIPP). It will be one of the first to use nationally representative panel data gathered during the "Great Recession" to focus on the extent to which food assistance programs buffer the effects of adverse economic shocks on the food security and well-being of children.	\$140,000

FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Children of Immigrants' Food Insecurity and SNAP Receipt Mathematica Policy Research, Inc.	To examine the relationship between the food security of children of immigrants and their participation in the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program). As a result of changes in SNAP eligibility policies, many children of immigrants are eligible for the program even when their parents are not. This study will assess: (1) the effects of changes in SNAP eligibility on SNAP participation and benefits in immigrant households with children, (2) the characteristics of immigrant households that are associated with SNAP participation, and (3) the effects of SNAP participation on food insecurity among children of immigrants. Data will come from the Current Population Survey Food Security Supplement (CPS-FSS) and the CPS Annual Social and Economic Supplement (CPS-ASEC).	
Interactions Between the Built Environment and Food Assistance Programs		
WIC Food Package Revisions: Impact on Food Purchases and Access to Healthy Foods Yale University	To assess the impact of the newly implemented food package revisions in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) on participant purchases of major WIC food categories (fruits and vegetables, whole grains, and lower fat milk). The study will use scanner data from a major supermarket chain operating in New England. The project will also conduct store inventories to assess changes in the food environment (such as availability, variety, and prices of WIC foods) 18-20 months after the revisions, and compare the results to similar assessments conducted prior to implementation of the WIC food package revisions and 1 year after the revisions. The study will also identify store and community characteristics that modify the impact of the WIC food package revisions on access to healthy foods.	\$265,000
Local Economic Conditions, Food Assistance, and Food Insecurity Among Households With Children Old Dominion University	This project will examine how local economic conditions affect participation in food assistance programs and food insecurity among low-income households with children. Data from the Early Childhood Longitudinal Study-Kindergarten Class of 1998-99 (ECLS-K) will be merged with multiple data sources, such as Local Area Unemployment Statistics (LAUS), Regional Economic Accounts (REA), The American Chamber of Commerce Researchers' Association (ACCRA) Cost of Living Data, Fair Market Rents (FMRs), County Business Patterns (CBP), National Congregation Study (NCS), Statistics of Income (SOI) Zip Code Data, and Current Population Survey (CPS).	\$185,000
		Continued_

Table 1 FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Food Security and Access to Retail Food Establishments Among Emergency Food Program Recipients Mathematical Policy Research, Inc.	To examine the locations of emergency food programs in relation to retail food store locations and local population characteristics. The study will also analyze the relationship between household food security and access to both retail food stores and emergency food outlets, while accounting for variation in demographic, economic, and family characteristics (including participation in most of the major Federal food nutrition and assistance programs). The study will use data from the 2009 Hunger in America (HIA) survey—the most recent and largest national survey of emergency food programs and their clients.	\$180,000
Food Stamp Participation and Obesity University of California, Davis	To examine the relationship between participation in the Supplemental Nutrition Assistance Program (SNAP) and obesity for different socioeconomic groups of households. The project will analyze the implications of SNAP for participant health using a simultaneous equations regression framework for SNAP participants and nonparticipants, with a special emphasis on modeling the weight gain mechanism.	\$22,661
SNAP and the Unemployment Insurance System		
Economic Research on the Joint Contributions of the Supplemental Nutrition Assistance Program and Unemployment Insurance to the Nation's Social Safety Net University of Baltimore/ Jacob France Institute	To examine the dynamics of Supplemental Nutrition Assistance Program (SNAP) participation among low-income households with workers and the interactions between receiving SNAP benefits and receiving State unemployment insurance (UI) benefits, especially during the current recession. The project is a consortium of five State-based research institutions that will be analyzing administrative data from Georgia, Illinois, Maryland, Michigan, and Texas.	\$500,000
Joint Participation in Supplemental Nutrition Assistance Program and Unemployment Insurance in Florida University of Missouri	To examine the dynamics of Supplemental Nutrition Assistance Program (SNAP) participation among low-income households with workers in Florida and the interactions between receiving SNAP benefits and receiving State unemployment insurance (UI) benefits, especially during the current recession. Such analyses can provide information that will enable increased program efficiency by identifying factors affecting household decisions to apply for SNAP benefits. The project will use linked administrative data files from the State of Florida to address the two issues.	\$107,254
Joint Contributions of the Supplemental Nutrition Assistance Program, Unemployment Insurance, and Cash Assistance to California's Social Safety Net Public Policy Institute of California	To examine the dynamics of Supplemental Nutrition Assistance Program (SNAP) participation among low-income households with workers and the interactions between receiving SNAP benefits and receiving State unemployment insurance (UI) benefits, especially during the current recession. Such analyses can provide information that will enable increased program efficiency by identifying factors affecting household decisions to apply for SNAP benefits. The project will use linked administrative data files from the State of California to address the two issues.	\$97,961
		Continued—

Table 1 FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Multiprogram Participation in SNAP and Unemployment Insurance: How Tight Are the Strands of the Recessionary Safety Net? College of William and Mary	To examine how effectively Supplemental Nutrition Assistance Program (SNAP) and State unemployment insurance (UI) programs serve as part of the social safety net during recessionary conditions. In order to have a set of resources to meet household needs during recessions, households may participate in multiple Government assistance programs. This study will pay special attention to State unemployment insurance (UI) programs, which provide support to an experienced worker who has lost a job. The project will examine participation patterns and interactions between the two programs and how households participate in one or another of the programs or both programs. The project will also examine how those patterns change when comparing labor market conditions of full employment with conditions during a period of severe recession.	
Using Behavioral Economics in Child Nutrition Programs: Center Award		
Cornell Center for Behavioral Economics in Child Nutrition Programs Cornell University	To establish a center that will facilitate new and innovative research that applies behavioral economic theory to child nutrition program operations and activities. This research could lead to program improvements that will benefit children's diets and health, broaden social scientist participation in such research, and disseminate research findings to key stakeholder groups, including other researchers, policy and program officials, and the general public.	\$1,000,000
Evaluating Behavioral Economic Applications To Improve Children's Food Choices		
Using Nudges From Cafeterias and Parents To Encourage Healthy Food Choices at School Baylor College of Medicine	To evaluate the effectiveness of an intervention based on behavioral economics theory to encourage students to choose healthy foods in the school cafeteria by connecting the cafeteria and the home via "nudges." Participating school cafeterias in Houston, TX, will market targeted healthy foods via messaging and presentations, and foodservice staff will encourage children to select the targeted foods as the children go through the serving line. Coordinated parent communications about the lunch menus and targeted foods will be made available via electronic technology (e.g., website, Facebook, Twitter).	\$175,000
Incentivizing Fruit and Vegetable Consumption in Elementary Schools Utah State University	To evaluate a school-based incentives program that draws on behavioral economics theory and its effectiveness in increasing fruit and vegetable consumption in a sample of Utah elementary school-children. 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.	\$350,000
		Continued—

Table 1 FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Can Default Options and Incentives Improve Food Choices at School? Brigham Young University	To test the effectiveness of behavioral economics-based interventions that employ small, feasible changes in school food choice options to improve children's food choices. Examples include using default options, providing small incentives for consuming fruits and vegetables, increasing the variety of fruit and vegetable options, changing fruit and vegetable location to increase visibility and accessibility, altering the choices available in vending machines or school stores, and allowing children to consume fruits and vegetables earlier in the day. The experimental interventions will take place in several Utah schools.	\$150,000
Using Behavioral Economics in Child Nutrition Programs: Developmental Awards		
Nudging High School Students Toward Better School Lunch Food Choices: Planning for Behavioral Economic Interventions in West Virginia West Virginia University	To identify potential behavioral economic interventions that promote healthy food choices by students in West Virginia high schools. The study will assess the current school lunch environment in a sample of high school cafeterias in three counties across northern West Virginia. Findings will be used to determine acceptable, appropriate interventions that could be implemented in high schools to test how the use of behavioral economic principles could influence students to choose healthier options. A proposal for funding studies of behavioral economic interventions will be developed, as will a planning template that can be used at high schools throughout the State.	\$30,000
Testing a Food Choice Innovation for Middle School Cafeterias University of North Texas	To develop and pilot test an innovative strategy, based on behavioral economics principles, that encourages middle school students to choose more nutritious lunchtime cafeteria options. Researchers will collect data on menus, food choices, consumption, and plate waste in selected Texas middle school cafeterias, and will observe the choice architecture in those cafeterias. Data will be used to identify potential strategies to encourage nutritious choices and decrease waste while maintaining cafeteria revenues and minimally affecting cafeteria operations. The most promising innovative strategy will be selected and pilot tested in two middle school cafeterias.	\$30,000
Drawing Attention to Healthy Choices With Lighting University of Connecticut	To assess how successfully cafeteria lighting can be manipulated to make fruits and vegetables stand out and to change student food choice behavior. This pilot study will be implemented over a 4-month period in two Connecticut middle schools matched for cafeteria layout and similar food offerings using a crossover research design. Cafeteria data on food selection will be used to assess effectiveness.	\$30,000
		Continued—

Table 1 FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Using Positive Deviance Principles To Identify Best Practices of Choice Architecture and To Build Research Capacity With School Food Authorities Oklahoma State University	To identify affordable, acceptable, and sustainable choice-architecture-based strategies to increase fruit and vegetable consumption among middle school students by drawing on behavioral economics theories. The project will gather information on current relevant practices in Oklahoma middle schools, compile an inventory of successful choice-architecture-based methods of improving food choices, and conduct a statewide forum with school foodservice professionals. The forum will introduce school foodservice professionals to the use of choice architecture in school cafeteria settings and establish a network of school foodservice staff interested in testing choice-architecture-based innovations in school cafeterias.	\$30,000
Smarter Choices Through Nutritional Report Cards Cornell University	To examine whether the strategy of nutritional report cards sent home to parents, which is based on the behavioral economics theory of informational nudges and social norm effects, will influence the amount and types of foods selected by elementary schoolchildren. Nutritional report cards will use school cafeteria point-of-sale data to provide information on the food selections of children at school. The study will take place in two elementary schools, with a treatment class receiving a weekly report to parents on items purchased by the child as well as the amount purchased relative to others within the class. The comparison class will not receive the weekly report.	\$30,000
Menu Modification for Lincoln Parish Child Nutrition Program Louisiana Tech University	To test whether strategies based on principles of behavioral economics can increase student acceptance of nutritionally improved school lunch menus. Current school menus will be modified to meet standards based on the USDA School Meals Initiative and the Federal Dietary Guidelines for Americans. Baseline student acceptance of those menus will be determined. A 3-week pilot study will be conducted to assess the effectiveness of selected strategies based on behavioral economics theory in facilitating student acceptance of the nutritionally improved menu.	\$30,000
Developing Research Capacity To Test Behavioral Economic Interventions in Child Nutrition Programs University of Minnesota	To support development of a collaborative team with diverse disciplinary backgrounds to pursue experimental studies in child foodservice settings that apply behavioral economic strategies to improve the healthfulness of children's food choices and diets. The first team activity will be a pilot study of the effect of portion sizes of fruits and vegetables served with school lunch on children's intake. The team will also develop proposals for future projects.	\$30,000
Improving School Lunch Decisions With Fast Lane Meal Deals The Pennsylvania State University	To develop a "fast-service-lane" strategy for school cafeteria service that offers "meal deals" that bundle a healthy lunch choice. The project will investigate the effectiveness of this behavioral economics-based strategy of offering time incentives for healthy lunch choices and assess costs and benefits for school food services.	\$40,000
Children's Food Choices: Understanding Defaults University of South Carolina	To use behavioral economics theories and methods to explore the short- and long-term effects of changing defaults on children's food choices and preferences, compared with interventions that seek to improve knowledge about healthy choices or provide financial incentives.	\$25,000
		Continued—

Table 1 FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective	Estimated costs
Influence of Developmental Differences on Children's Responses to Information on Foods University of Wisconsin	To build on current research on behavioral economics to investigate how the response of schoolchildren to food attributes is influenced by individual differences in cognitive and language ability, executive functioning, dietary knowledge, and age, and the implications for designing policies to improve dietary health.	\$25,000
Is Healthy Eating Viral? Improving Understanding of How Social Networks Can Be Used To Influence School Food Choices Iowa State University	To draw on behavioral economics research to investigate how social networks can be used to influence children's school food choices through imitation of nutritional habits, social learning, and social influence (adopting friends' preferences). The study will develop and pilot test a plan for investigating effects of social networks on school food choices, especially for middle and high school students.	\$25,000
Research Outreach		
RIDGE Program	To stimulate new and innovative research on food assistance programs and to broaden the participation of social science scholars in food assistance research. RIDGE supports both quantitative and qualitative research methods to explore economic, nutrition, and health outcomes of participation in USDA's food and nutrition assistance programs. Two academic institutions partner with ERS to administer the RIDGE Program, each of which focuses on a particular facet of food assistance. The two institutions and areas of focus are:	\$500,000
	• The RIDGE Center for National Food and Nutrition Research at the Institute for Research on Poverty (IRP), University of Wisconsin-Madison funds research related to food and nutrition assistance issues that affect the entire Nation. As a RIDGE Center, an important component of IRP's focus relates to determinants of food assistance program participation and the effects of participation on food security, obesity, and other outcomes. (\$250,000)	
	• The RIDGE Center for Targeted Food and Nutrition Assistance Research at the Southern Rural Development Center (SRDC), Mississippi State University devotes special attention to the food and nutrition challenges of rural America's racial and ethnic minorities, persistently poor children and adults struggling with obesity, and residents living in areas called "food deserts" because of the lack of affordable and nutritious food available in these locations. The RIDGE Center at SRDC also supports targeted studies in areas across the country that experience significant economic, social, and demographic challenges that may impact the food and nutritional health of their residents. (\$250,000)	
Enhanced Food Assistance Research Data		
Current Population Survey (CPS) Food Security Supplement U.S. Census Bureau	To develop annual estimates of the prevalence of food security in the United States and to provide data for analysis of the determinants of and changes in the level of food security.	\$472,500
		Continued—

FANRP extramural research projects, fiscal 2010—Continued

Estimated Research projects/awards **Objective** costs Amendments to Ongoing Projects To design, develop, and carry out a nationally representative survey The National Household Food \$957,355 **Acquisition and Purchase Study** to collect information on the food purchases and acquisition patterns Mathematica Policy Research, Inc. of U.S. households. The survey will (1) describe the food and beverage purchases and acquisition patterns of the population universe and subgroups; (2) characterize the nutritional quality of households' food purchases and acquired food; (3) characterize the nature of food access of the population universe and groups; (4) estimate the influence of income and prices on food purchases, including, to the extent possible, income, own-price and cross-price elasticities for purchased food items (both home and away); (5) assess levels of food security of the population universe and subgroups using the 30-day, adult food security measure; (6) assess levels of knowledge about diet, nutrition, and health; and (7) assess why food purchase and food security outcomes differ for Supplemental Nutrition Assistance Program (SNAP) participants and low-income nonparticipants and identify the factors that account for those differences. Additional funding was provided in fiscal 2010 for the following tasks: (1) an expansion of the survey to include data collection with 1,500 households with incomes greater than 185 percent of the Federal poverty level (FPL); (2) an expansion from 1,500 to 2,000 of the number of lowincome, non-SNAP households to be included in the data collection, together with oversampling of non-SNAP households with incomes below 100 percent FPL; (3) development of a second set of data collection instruments based on an alternative approach for who in the household records family information on food acquisition; (4) cognitive testing of both sets of data collection instruments; and (5) expansion of the size of the field test from 200 to 400 lowincome households, to include tests of the effects on response rates and data quality of both data collection approaches and two levels of household incentives for completing the data collection. **Pilot Demonstration Project Linking** To provide support related to demonstrating proof of the concept \$27,927 Food Assistance Administrative Data and feasibility of linking food assistance administrative data to the with the National Health and Nutrition National Center for Health Statistics (NCHS), National Health and **Examination Survey (NHANES)** Nutrition Examination Survey (NHANES). Additional funding was National Center for Health Statistics, provided to NCHS in fiscal 2010 to create a matched file of data The Centers for Disease Control from NHANES interviews in Texas for the period 2005-08 with and Prevention data from the Food Stamp Program in Texas for the period 2001-10. NCHS will contract with the Ray Marshall Center of the University of Texas to create the matched dataset, which will allow researchers to learn more about the relationships between reported food stamp participation in NHANES and actual participation as documented by

program administrative files.

Continued-

Table 1

FANRP extramural research projects, fiscal 2010—Continued

Research projects/awards	Objective		
Visiting Scholar Program George Washington University	To examine the feasibility of linking food assistance program administrative data to existing national surveys. Underreporting of program participation in national surveys is well documented. Linking administrative data to surveys, such as the Survey of Income and Program Participation, can improve management of food and nutrition assistance programs by increasing understanding of the characteristics of program participants and eligible nonparticipants. Additional funding was provided in fiscal 2010 to extend the analysis to determine the feasibility of linking Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) administrative data to the National Health and Nutrition Examination Survey (NHANES).	\$65,578	

Key Research Accomplishments, Fiscal 2010

Findings from FANRP's intramural and extramural programs were published in over 50 ERS research reports or peer-reviewed scientific journals in fiscal 2010. This section presents highlights from some of these publications in the areas of program outcomes and economic well-being of participants, program access and economic determinants of participation, and program dynamics and efficiency.

Program Outcomes and Economic Well-Being of Participants

• Each year since 1998, ERS has published an annual statistical report on the level of household food insecurity in the United States that informs policy-makers and the public about the extent to which U.S. households consistently have economic access to enough food. The 2008 household food security report indicated that, throughout the year, 85.4 percent of U.S. households were food secure, meaning that they had access at all times to enough food for an active, healthy life for all household members (Nord et al., 2009). The remaining 14.6 percent (17 million households) were food insecure at least some time during the year, meaning that that they had difficulty providing enough food for all their members due to a lack of resources

The prevalence of food insecurity was up from 11.1 percent in 2007 and was the highest observed since nationally representative food security surveys were initiated in 1995. About a third of food-insecure households (6.7 million, or 5.7 percent of all U.S. households) had very low food security. In these households, the food intake of some household members was reduced and their normal eating patterns were disrupted because of the household's food insecurity. Fifty-five percent of all food-insecure households participated in one or more of the three largest Federal food and nutrition assistance programs the Supplemental Nutrition Assistance Program (SNAP), the National School Lunch Program, and WIC—during the month prior to USDA's annual Food Security Survey.

• SNAP is the cornerstone of Federal food assistance programs and serves as the first line of defense against food-related hardship, such as food insecurity. Increasingly, a key policy question is, how effective is SNAP in reducing food insecurity? Understanding the effectiveness of SNAP in meeting its goal

is important for SNAP administrators as they make changes to their programs, as States have done to a large degree in recent years. However, identifying the extent to which SNAP reduces food insecurity is complicated by the systematic differences between households that receive SNAP benefits and those that do not. On the one hand, people in the neediest and most food-insecure households are more likely to be eligible for and to take up SNAP benefits, so simple comparisons of food insecurity between those who do and do not receive SNAP benefits are likely to find better outcomes for people who do not receive SNAP benefits. On the other hand, selection of more needy households into SNAP makes identifying a causal relationship between SNAP participation and food insecurity difficult.

A report by Ratcliffe and McKernan (2010) measured SNAP's effectiveness in reducing food insecurity by using a dummy endogenous variable model with instrumental variables to control for selection bias. The results based on naïve models that do not control for the endogeneity of SNAP receipt show that SNAP receipt is associated with higher food insecurity. However, the results based on instrumental variable models that control for the endogeneity of SNAP receipt suggest that SNAP receipt reduces the likelihood of being food insecure by roughly 30 percent and reduces the likelihood of being very food insecure by 20 percent. These findings provide evidence that SNAP is meeting its key goal of reducing food-related hardship.

Schools are in a unique position to influence the quality of children's diets—no other institution has as much continuous and intensive contact with children. Within schools, the school meal programs—the National School Lunch Program (NSLP) and the School Breakfast Program (SBP)—can be important vehicles for influencing children's diets daily and for contributing to the development of healthful dietary habits and preferences.

A study by Fox et al. (2010) examined the relationship between school meal program participation and diet quality of children over a 24-hour period. Diet quality was assessed using a slightly modified version of the Healthy Eating Index (HEI-2005) that more precisely reflected recommended food intake patterns for school-age children. Overall diet quality, as measured by total modified HEI-2005 scores, showed no significant differences between school meal participants and nonparticipants. However, NSLP participation and SBP participation were both associated with a

significantly higher score on the milk component of the modified HEI-2005. NSLP participants scored significantly lower than nonparticipants on the oils component (this component tracks healthy, recommended oils, so a lower score is a negative outcome).

• The WIC program targets specific foods to specific individuals with specific dietary needs. However, the WIC food benefits that individuals receive could be shared with other family members or may free a portion of the family budget. Little previous work has been done that looks at whether WIC participation has benefits that extend to nonparticipating family members.

A study by Ver Ploeg (2009) examined whether children who are age-ineligible for WIC (ages 5–17) but who live in WIC-participating families have healthier diets than similar children in nonparticipating families. Results show that children in WIC-participating families score higher on the Healthy Eating Index than children in nonparticipating families, suggesting that the benefits of even this highly targeted program may extend to other children in WIC-participating families, translating into healthier diets. Furthermore, this association is stronger for children in families with two or more WIC participants compared with children living with only one or no WIC participants.

This result gives some evidence that a larger "dose" of WIC benefits has a larger impact on the diets of other children in the family. It is not possible to tell, however, whether this effect is due to increased food benefits that are then shared with the nonparticipating children in the family or whether the income offset by the WIC benefits is used to improve the diets of nonparticipating members with other foods.

Program Access and Economic Determinants of Participation

• Rank and Hirschl (2009) analyzed 30 years of longitudinal data to estimate the lifetime risk that an American child will reside in a household receiving food stamps and, as a result, will encounter poverty and a heightened exposure to food insecurity. They estimated that, between the ages of 1 and 20 years, nearly half (49.2 percent) of all American children will, at some point, reside in a household that receives food stamps.

Households in need of the program use it for relatively short periods but are also likely to return to the program at several points during the childhood years. The odds of encountering spells of food stamp use are exceedingly high for children who are in nonmarried households, who are Black, or whose head of household has not graduated from high school.

• SNAP provides low-income households with electronic benefits that can be used to purchase food in grocery stores and supermarkets. People residing on Indian reservations, and households with American Indians and Alaska Natives residing off but near reservations, or in certain areas of Oklahoma, may have a food assistance option besides SNAP—the Food Distribution Program on Indian Reservations (FDPIR), which provides a monthly package of commodities. FDPIR was established partly to address concerns about the distances some reservation residents would have to travel to SNAP offices and grocery stores in order to obtain benefits. Eligibility requirements for FDPIR are similar, but not identical, to those for SNAP. FDPIR households cannot participate in both FDPIR and SNAP in the same month, so those who are eligible for both programs must choose between them.

A study by Finegold et al., (2009) combined site visits to seven reservations that participate in FDPIR with analysis of administrative and survey data to compare the two programs with regard to eligibility, participation, administration, and possible effects on health and nutrition. Results show that FDPIR benefits some American Indian and Alaska Native households that are not eligible for SNAP. Simulation estimates suggest that, in an average month, 13 percent of households eligible for FDPIR would not be eligible for SNAP. Another 41 percent of the households eligible for FDPIR are eligible for SNAP but would receive FDPIR commodities with retail value above the SNAP benefit. The remaining 46 percent of households eligible for FDPIR are eligible for SNAP and would receive more benefits from that program than from FDPIR.

What determines the choice between programs, among people who have a choice? The size of the benefit for which the household would qualify is certainly a factor, but administrators and participants suggest that ease of enrollment, cultural compatibility, choice in food selection, and access to grocery stores also appear to affect participation decisions.

Program Dynamics and Efficiency

- Concerns about child obesity have raised questions about the quality of meals served in the National School Lunch Program (NSLP). Local, State, and Federal policymakers responded to these concerns beginning in the mid-1990s by instituting a range of policies and standards to improve the quality of USDA-subsidized meals. While most of USDA's nutrition standards have been met by schools, total fat and saturated fat as a percentage of calories is an ongoing challenge. An ERS report used school-level data from the School Nutrition Dietary Assessment-III to calculate statistical differences between the fat content of NSLP lunches served by schools with different policies (e.g., menu planning) and characteristics like region and size (Newman et al., 2009). Associations were found between a meal's fat content and the presence of a la carte foods and vending machines, which are thought to indirectly affect the nutrient content of USDA-subsidized meals.
- WIC provides participating infants with free infant formula. Oliveira et al. (2010) estimated that between 57 and 68 percent of all infant formula sold in the United States was purchased by the program, based on 2004-06 data, and that formula costs to the WIC program have increased. Typically, WIC State agencies receive substantial rebates from manufacturers for each can of formula provided through the program. Each WIC State agency, or group of agencies, awards a contract to the manufacturer offering the lowest net wholesale price, defined as the difference between the manufacturer's wholesale price and the State agency's rebate. After adjusting for inflation, net wholesale prices increased by an average 73 percent for 26 fluid ounces of reconstituted formula between States' contracts in effect in December 2008 and the States' previous contracts. As a result of the increase in real net wholesale prices, WIC paid about \$127 million more for infant formula over the course of a year. Seventy-two percent of the increase in real net wholesale price was due to an increase in the real wholesale price of infant formula and the remaining 28 percent of the increase in real net wholesale price was due to a decrease in real rebates

Fiscal 2010 FANRP Publications

This section provides a list of all publications sponsored by FANRP (either directly or through the RIDGE Program) released in fiscal 2010. Two categories of publications are listed: (1) monographs and journal articles, and (2) working/discussion papers. Electronic copies of all ERS publications are available at www. ers.usda.gov/Publications/.

Monographs and Journal Articles

Anderson, S., and R. Whitaker. "Household Routines and Obesity in US Preschool-Aged Children," *Pediatrics*, Vol. 125, No. 3, March 2010.

Andrews, M., and M. Nord. "Food Insecurity Up in Recessionary Times," *Amber Waves*, Vol. 7, Issue 4, USDA, ERS, December 2009.

Boles, R., T. Nelson, L. Chamberlin, J. Valenzuela, S. Sherman, S. Johnson, and S. Powers. "Confirmatory Factor Analysis of the Child Feeding Questionnaire Among Low-Income African American Families of Preschool Children," *Appetite*, Vol. 54, Issue 2, April 2010.

Chang, H-H., D. Just, and B-H. Lin. "Smoking, Drinking, and the Distribution of Adult Body Weight," *The Social Science Journal*, Vol. 47, Issue 2, June 2010.

Chang, H-H, S. Ver Ploeg, and B-H Lin. "Changes in the Propensity of Overweight U.S. Women to Underassess Their Body Weight Status," *Food Policy*, Vol. 35, Issue 4, August 2010.

Coleman-Jensen, A. "U.S. Food Insecurity Status: Toward a Refined Definition," *Social Indicators Research*, Vol. 95, No. 2, January 2010.

Davis, M., and A. Gebremariam. *Economic Long-Term Impacts of Interventions Aimed at Preventing or Reducing Obesity Among Children*, Contractor and Cooperator Report No. 62, USDA, ERS, September 2010.

Davis, G., and W. You. "The Thrifty Food Plan is Not Thrifty When Labor Cost is Considered," *Journal of Nutrition*, Vol. 140, No. 4, April 2010.

Dong, D., and E. Leibtag. *Promoting Fruit and Vegetable Consumption: Are Coupons More Effective than Pure Price Discounts?* Economic Research Report No. 96, USDA, ERS, June 2010.

Duffy, P., C. Zizza, J. Jacoby, and F. Tayie. "Diet Quality is Low Among Female Food Pantry Clients in East Alabama," *Journal of Nutrition Education and Behavior*, Vol. 41, Issue 6, November-December 2009.

- Finegold, K., N. Pindus, D. Levy, T. Tannehill, and W. Hillabrant. *Tribal Food Assistance: A Comparison of the Food Distribution Program on Indian Reservations (FDPIR) and the Supplemental Nutrition Assistance Program (SNAP)*, Contractor and Cooperative Report No. 58, USDA, ERS, December 2009.
- Fox, M., M. Clark, E. Condon, and A. Wilson. *Diet Quality of School-Age Children in the U.S. and Association With Participation in the School Meal Programs*, Contractor and Cooperator Report No. 59, USDA, ERS, February 2010.
- Kavanagh, K., and C. Springer. *Incomes or Attitudes?* What Determines Whether Mothers in the WIC Program Dilute or Concentrate Baby Formula, Southern Rural Development Center, Food Assistance and Nutrition Information Series, November 2009.
- Kimbro, R., and E. Rigby. "Federal Food Policy And Childhood Obesity: A Solution Or Part Of The Problem?" *Health Affairs*, Vol. 29, No. 3., March 2010.
- Laraia, B., A. Siega-Riz, and C. Gundersen. "Household Food Insecurity Is Associated with Self-Reported Pregravid Weight Status, Gestational Weight Gain, and Pregnancy Complications," *Journal of the American Dietetic Association*, Vol. 110, Issue 5, May 2010.
- Newman, C., J. Guthrie, L. Mancino, K. Ralston, and M. Musiker. *Meeting Total Fat Requirements for School Lunches: Influence of School Policies and Characteristics*, Economic Research Report No. 87, USDA, ERS, December 2009.
- Newman, C., and D. Jolliffe. "Income Volatility Is Rising, With Mixed Effects on Nutrition Assistance Participation," *Amber Waves*, Vol. 7, Issue 4, USDA, ERS December 2009.
- Nord, M. Food Spending Declined and Food Insecurity Increased for Middle-Income and Low-Income Households from 2000 to 2007, Economic Information Bulletin No. 61, USDA, ERS, October 2009.
- Nord, M., M. Andrews, and S. Carlson. *Household Food Security in the United States*, 2008, Economic Research Report No. 83, USDA, ERS, November 2009.
- Nord, M., and A. Golla. *Does SNAP Decrease Food Insecurity? Untangling the Self-Selection Effect*, Economic Research Report No. 85, USDA, ERS, October 2009.

- Nord, M., and L. Parker. "How Adequately Are Food Needs of Children in Low-Income Households Being Met?" *Children and Youth Services Review*, Vol. 32, Issue 9, September 2010.
- Oliveira, V. *The Food Assistance Landscape, FY 2009 Annual Report*, Economic Information Bulletin 6-7, USDA, ERS, March 2010.
- Oliveira, V., E, Frazão, and D. Smallwood. *Rising Infant Formula Costs to the WIC Program: Recent Trends in Rebates and Wholesale Prices*, Economic Research Report No. 93, USDA, ERS, February 2010.
- Patil, C., C. Hadley, and P. Nahayo. "Unpacking Dietary Acculturation Among New Americans: Results from Formative Research with African Refugees," *Journal of Immigrant and Minority Health*, Vol. 11, No. 5, October 2009.
- Potamites, E., and A. Gordon. *Children's Food Security and Intakes from School Meals: Final Report*, Contractor and Cooperator Report No. 61, USDA, ERS, May 2010.
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Appendix A. Institutions, Universities, and Government Agencies Awarded **FANRP Projects, Fiscal 1998-2010**

Institutions

Abt Associates Inc.

ACNielsen

Altarum Institute

ATMS

Boston Medical Center Brookings Institution

Cancer Research Center of Hawaii

Channing Laboratory, Brigham and Woman's Hospital

Child Trends

Children's Hospital Medical Center (Cincinnati)

Committee on National Statistics

Health Systems Research Information Resources, Inc.

IO Solutions Lewin Group

Life Sciences Research Organization

Macro International

Manpower Demonstration Research Corporation

Mary Imogene Bassett Hospital Mathematica Policy Research, Inc. National Academy of Sciences

National Bureau of Economic Research

National Science Foundation

ORC Macro, Inc.

Pacific Institute for Research and Evaluation

Public Policy Institute of California

RAND Corporation

Research Triangle Institute, Inc. Resource Network International Rockefeller Institute of Government Society for Nutrition Education

Sphere Institute

United Nations University Centre

Urban Institute

World Health Organization

Universities

Albert Einstein College of Medicine

Auburn University Baylor University Boston University

Brigham Young University

Bryn Mawr College

Carnegie Mellon University College of William and Mary

Cornell University

George Washington University

Georgia State University

Harvard University

Indiana University

Iowa State University

Johns Hopkins University

Louisiana Tech University

Medical College of Georgia Research Institute, Inc.

Middle Tennessee State University

Mississippi State University

North Carolina State University

Northwestern University

Nova Scotia Agricultural College

Ohio State University

Oklahoma State University

Old Dominion University Oregon State University

Pennsylvania State University

Simmons College

South Dakota State University

Syracuse University

Texas A&M University

Tufts University

Tulane University

University of Arizona

University of Baltimore

University of California, Berkeley

University of California, Davis

University of Chicago

University of Connecticut

University of Georgia

University of Houston

University of Illinois

University of Kansas Medical Center

University of Kentucky

University of Massachusetts

University of Michigan

University of Minnesota

University of Missouri

University of Nevada

University of New Mexico

University of North Carolina

University of North Texas

University of Notre Dame

University of Oregon

University of South Carolina

University of Southern Mississippi

University of Tennessee

University of Utah University of West Virginia University of Wisconsin Utah State University Virginia Polytechnic Institute and State University West Virginia University Yale University

Government Agencies

Agricultural Research Service, USDA
Center for Nutrition Policy and Promotion, USDA
Food and Drug Administration
Food and Nutrition Service, USDA
National Agricultural Library, USDA
National Center for Education Statistics,
U.S. Department of Education
South Carolina Social Services
U.S. Census Bureau
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
USDA Graduate School
Virginia Department of Social Services

Appendix B: Selected Ongoing FANRP Projects Funded Prior to Fiscal 2010

Through its annual identification of priority research areas, FANRP responds to immediate as well as long-term research needs. The following is a list of some of the important ongoing research projects funded by FANRP in previous years, sorted by program/topic:

Food Stamps/SNAP

- Assessing Effects of Food Stamps on Child Outcomes When Program Participation Is Misreported
- Effective Tax Rates and Guarantees and Food Stamp Program Participation
- Food Stamp Program Eligibility and Participation: A Comparison of Census Surveys and Administrative Data
- Interactions Between the Food Stamp Program and the Economy
- Long-Term Effects of Food Stamp Receipt During Childhood on Adult Outcomes
- State Trends in Food Stamp Program Eligibility and Participation Among Elderly Individuals

School Meals

- Economic Determinants of School Meal Participation
- Effects of Change From Universal-Free to Eligibility-Based School Breakfast Program
- Effects of Immigration on WIC and National School Lunch Program Caseloads

WIC

- Access to Healthy Foods: The Role of Market Competition, WIC Policy, and Vendor Attitudes
- Effects of Changes in WIC Food Packages on Redemptions

- Impact of Food Stamps and WIC on Health and Longrun Economic Outcomes
- The Effect of WIC on Household Food Expenditures: Assessing Available Data

Food Security

- Childrens' Food Security and Intakes from School Meals
- Employment, Home Meal Production, Food Spending, and Food Security in Food Stamp Households
- Food Sufficiency, the Role of Food Stamp Program Participation, Duration, and Policies

Obesity

- Effects on Childhood Obesity of Participation in Multiple Nutrition Assistance Programs
- The Multiple Contexts of Food Insecurity: Evaluating the Impact on Child Energy Balance
- The Role of Time Use in Promoting Healthy Energy Balance

Behavioral Economics

- Altering Social and Convenience Costs To Improve Students' Lunch Choices
- Identifying Behavioral Economics Factors Affecting Food Consumption

Other

- Food Stamp, NSLP, and WIC Underreporting in Household Surveys: Comparing Aggregates and Assessing the Implications
- Measuring Consumption Response to Prices in a Dynamic Model of Consumer Food Purchase Behavior

Appendix C: Peer Reviewers for the Competitive Grant and Cooperative Research Program, Fiscal 2010

Reviewer Institution

Dawn AldridgeIndependent ConsultantPatricia AndersonDartmouth CollegeSarah AndersonOhio State University

Mary Arends-Kuenning University of Illinois at Urbana-Champaign

Neil Bania University of Oregon Peter Basiotis Independent Consultant

Erik Beecroft Virginia Department of Social Services
Andrea Beller University of Illinois at Urbana-Champaign

Jamie Benedict University of Nevada, Reno David Betson University of Notre Dame

Margaret Bogle USDA, Agricultural Research Service

Kristen Butcher Wellesley College

Hayley Chouinard Washington State University
Karen Cunnyngham Mathematica Policy Research, Inc.

Elizabeth Davis University of Minnesota

Michael DePiro USDA, Food and Nutrition Service Rosemarie Downer USDA, Food and Nutrition Service

James Eales Purdue University
Angela Fertig University of Georgia
Stanley Fletcher University of Georgia
David Frisvold Emory University
Sara Gable University of Missouri
Vivian Gabor Altarum Institute
Diane Gibson Baruch College

Joel Gittelsohn Johns Hopkins University

Phil Gleason Mathematica Policy Research, Inc. Rachel Gordon University of Illinois at Chicago

Brian W. Gould University of Wisconsin Steven Haider Michigan State University

Gail Harrison University of California, Los Angeles

Shida Henneberry Oklahoma State University Hilary Hoynes University of California, Davis

Chung Huang University of Georgia
Pauline Ippolito Federal Trade Commision
Dean Jolliffe The World Bank Group

Ted Joyce Baruch College

David Kendall University of Virginia at Wise

Lori Kowaleski-JonesUniversity of UtahJung Sun LeeUniversity of GeorgiaBruce MeyerUniversity of Chicago

Bradford Mills Virginia Polytechnic Institute and State University

Kevin Mumford Purdue University
Lauren Nicholas University of Michigan

Terry O'Toole Centers for Disease Control and Prevention

Tracy Palmer USDA, Food and Nutrition Service

Jill Reedy National Cancer Institute

Reviewer Institution

David Ribar University of North Carolina, Greensboro

Elizabeth Rigby University of Houston
Brian Roe Ohio State University
Victoria Salin Texas A&M University

Christiane Schroeter California Polytechnic State University

Anna Maria Siega-Riz University of North Carolina Trenton Smith Washington State University

Reuben Snipper U.S. Department of Health and Human Services

Mario TeislUniversity of MaineMike ThomsenUniversity of ArkansasThomas VartanianBryn Mawr CollegeStephen WandnerU.S. Department of Labor

Shannon Whaley Public Health Foundation Enterprises

Diane Whitmore Schanzenbach University of Chicago

Hoke Wilson USDA, Food and Nutrition Service Michael Wiseman George Washington University

April Wu University of Chicago James Ziliak University of Kentucky

Appendix D: RIDGE Center Subawards for FY 2010

Ridge Center for National Studies at the Institute for Research on Poverty

Food Security, Supplemental Nutrition Assistance Program (SNAP), and Food Access Pennsylvania State University

Explaining the Increase in SNAP Caseloads During the Recovery of 2003–2007 University of Chicago

Bridging the Gap: Do Farmers Markets Help Alleviate Impacts of Food Deserts? Washington State University

Estimating the Impact of Food Stamps on the Poverty Rate Using a National Academy of Sciences-Style Poverty Measure for New York City New York City Center for Economic Opportunity

The Supplemental Nutrition Assistance Program and Homeowner Outcomes: Can Food Assistance Prevent Mortgage Delinquency and Foreclosure?

University of Wisconsin

RIDGE Center for Targeted Studies at the Southern Rural Development Center

Food Stamp Program and Food Insecurity Dynamics in the Rural South Virginia Tech University

Direct and Comprehensive Measure of Child Food Security: Reliability, Accuracy, and Concordance with Parental Report University of South Carolina

The Influence of Community Retail Food Environment on Household Food Access, Food Choice, and Dietary Intake of Mexican American Children of Colonias Along the South Texas Border with Mexico Texas A&M Health Science Center

Does Prenatal WIC Affect Birth Outcomes and School Performance? Examining the Consequences of a Dip in WIC Participation University of Florida