

Research and Evaluation Activities in USDA

From the Cooperative State Research, Education, and Extension Service (CSREES)

The Cooperative State Research, Education, and Extension Service reports on 12 research and evaluation activities that will be of interest to family economists and nutritionists.

Welfare Reform Research

A multi-State research project, "Rural Low-Income Families: Tracing Their Well-Being and Functioning in the Context of Welfare Reform," was launched October 1, 1998, with funding by the State Agricultural Experiment Station. The key objectives of the research are to the following:

- Track over time the individual and family circumstances, functioning, and well-being of rural low-income families with children, in the context of welfare reform.
- Track over time the changing welfare policy environment as well as the community factors that enhance family support for rural low-income families with children.
- Identify and analyze the interactions among welfare policy, community infrastructure, and individual and family circumstances, functioning, and well-being that affect the ability of rural low-income families with children to function in a changed environment of policies and programs.

Focus on Family Economics

A Family Economics Research Coordinating Committee (NCR-52), funded by CSREES and State Agricultural Experiment Stations, has set research priorities for the 21st century—welfare reform, retirement income security, community sustainability, and financial literacy for youth. This committee was the foundation for the research project on welfare reform described previously. In November 1998, committee members met key representatives of research think tanks, government agencies, and nonprofit organizations to launch and nurture partnerships to frame relevant research questions; conduct research; and draw implications for education, outreach, and policy.

Understanding Family Businesses

"Family Businesses: Interaction in Work and Family Spheres," a multi-State research project, has been extended through September 1999 for funding by the State Agricultural Experiment Station. The research project has four objectives:

- To study the relationships among business and family activities, work environments, and family functioning in families with family businesses.
- To identify and measure the divergence and complementarity of family and business management behavior in families that own and manage businesses.
- To compare the relationships between the family and the business in family businesses in three major

subpopulations: home-based, women-owned, and minority-owned businesses with family businesses that are not home-based nor women- or minority-owned.

- To develop research-based information that will assist families and professionals who help families assess the feasibility of establishing and continuing a family business.

Financial Literacy for Youth

Now in its seventh year, CSREES-USDA operates under a Memorandum of Understanding with the National Endowment for Financial Education (NEFE), Denver, to revise, deliver, and evaluate the High School Financial Planning Program. More than a million U.S. youth have completed the seven-part curriculum, which emphasizes concepts such as managing credit, saving to achieve financial goals, and owning and protecting assets. CSREES and NEFE, in partnership with educators in the Cooperative Extension System nationwide, train classroom teachers and youth-serving professionals to deliver the program. A program evaluation study, funded by NEFE and conducted during the 1997-98 school year, established the influence of students' financial management behaviors on tracking expenses, comparison shopping, savings and investments, use of a spending plan (budget), use of credit and debt, auto insurance, and self-efficacy in financial decisionmaking. Preliminary analysis of the data documents significant, positive changes in participants' personal financial knowledge, behavior, and confidence. The program evaluation report was available in October 1998.

Individual Savings Behaviors

“Money 2000” is a nationwide campaign of the Cooperative Extension System and its Federal partner CSREES. The campaign encourages individuals and families to increase savings and reduce debt. Enrollees set financial goals, participate in extension education to learn money management skills, and report progress. State extension services are at various stages of implementing “Money 2000.” A July 1998 report, compiled by Rutgers University, totaled responses from 13 States with 6,538 Money 2000 participants. Four States reported data on the effect of the campaign: the amounts for savings and debt reduction were \$1,568,404 and \$1,366,909, respectively. As Y2K nears, we expect these numbers will grow significantly.

Health Maintenance Aspects of Dietary Recommendations Designed to Modify Lipid Metabolism

The Dietary Guidelines urge Americans to consume diets lower in total fat, saturated fat, and cholesterol and higher in complex carbohydrates, a way to reduce the incidence of chronic diseases, particularly cardiovascular diseases and certain cancers. The overall goal of the 5-year project, NC-167, was to examine the effects of diets that are modified to achieve the goals of the Dietary Guidelines of reducing total fat and saturated fatty acid intakes, of limiting cholesterol intakes, and of increasing polyunsaturated fatty acid and dietary fiber intakes. Examples of published findings are described:

- A butter diet produced a small but significant rise in cholesterol. Margarine containing trans fatty acids did not change serum cholesterol; whereas, soft margarine containing no trans fatty acids reduced serum cholesterol. These results

confirm the role that diets high in saturated fats have in increasing serum cholesterol. Further, they suggest that trans unsaturated fatty acids are not equivalent to the natural (cis) form of fatty acids in their ability to lower serum cholesterol.

- Bone growth and change were influenced by the type of fat in the diet, indicating that the type of dietary fat is important in development.
- Compounds in soy (isoflavones) inhibited the development of the early stage of liver cancer.
- Fibers of different viscosities reduce plasma cholesterol in a predictable manner in several animal models and humans, indicating that degree of viscosity of food fibers is important in lowering cholesterol.

Nutrition and Health Research

Two multi-State research projects were renewed for funding for another 5 years by State Agricultural Experiment Stations on October 1, 1997. The overall goal of the project “Role of n-3/n-6 Polyunsaturated Fatty Acids in Health Maintenance” (NC-167) is to determine the quantitative importance of n-3 polyunsaturated fatty acids (PUFA) and the ration of n-3/n-6 PUFA on various nutritional and functional markers associated with optimal health and disease prevention. The specific objective is to evaluate the efficacy of these dietary modifications to reduce the risk of cardiovascular disease and cancer and to promote bone development and perinatal health. The objectives of the project “Nutrient Bioavailability” (W-143) are to determine factors affecting bioavailability of selected nutrients that maximize health and disease prevention and to construct models of metabolism to predict optimal vitamin and mineral intakes.

Food Demand and Consumption Behavior

Scientists from 23 land-grant universities recently completed work on “Food Demand and Consumption Behavior,” a 5-year research project (S-216). An important area of work has been the development and evaluation of widely used databases, such as the creation of a new database from Consumer Expenditure Surveys, to fill a void in price information; the establishment of historical records of supermarket scanner data and advertising databases as alternative information sources; and the development of data sets for studying the away-from-home food market. This project has also led to several breakthroughs in the development and formulation of theoretical and applied models that provide more accurate assessments of changing patterns of food demand and consumer behavior. The findings have significant implications for the agribusiness community, agricultural policies, and assessments of the health and dietary status of the population. Specifically, efforts identified important determinants of changes in food habits and nutritional adequacy, addressed consumers’ concerns about food safety and quality, and studied issues related to food program costs. Use <http://agecon.lib.umn.edu/s216.html> to get more details.

Dietary Fat and Fiber: Knowledge, Perceived Risk, and Dietary Practices

This project (W-182) examined the public’s attitudes, knowledge, and behaviors related to the Dietary Guidelines about fat and fiber. Almost 3,200 surveys were returned from adults in 10 States and the District of Columbia. The public was more likely to link fat rather than fiber or fruits and vegetables to chronic diseases, particularly heart disease. Respondents were also more likely to practice dietary behaviors that

reduced fat than practice behaviors that increased fiber: such as eating more fruits and vegetables. Those who rated "health" as the primary influence on their dietary choices were eating more healthful diets relative to both fat and fiber than those who rated other influences as most important. The general public was also compared to registered dietitians and those with diagnosed chronic diseases. Both of these subgroups, particularly the registered dietitians, had substantially more healthful diets than did the public.

Competitive Grants Program on Improving Human Nutrition for Optimal Health

The Nutrition, Food Quality, and Health area of the National Research Initiative Competitive Research Grants Program supports research that contributes to our understanding of appropriate dietary practices throughout the life cycle and factors that affect these requirements, such as gender, race, and ethnicity. In addition, new insights are needed about factors that affect consumers' attitudes and behavior toward food. We need to improve understanding of the role of foods and their components (e.g., phytochemicals) in promoting health. Data from these studies will be used for updating dietary recommendations, formulating national nutrition policy, and encouraging new developments by the food industry. The following areas of research are emphasized:

- Nutritional requirements including metabolism and utilization for all age groups
- Bioavailability of dietary components
- The interrelationships among dietary components

- Mechanisms underlying the relationship between diet and optimal health, for example, influence of dietary components on the immune, cardiovascular, and central nervous systems
- Cellular and molecular mechanisms influencing nutritional status, such as those mechanisms responsible for the influence of dietary components on gene expression
- Identification of obstacles to consumers' adoption of healthful food habits, with particular emphasis on factors affecting consumer attitudes and behavior
- Development of recommendations for interventions to improve nutritional status

More information can be found at <http://www.reeusda.gov/crgam/nri/programs/progdesc/nutrdiv.htm>.

EFNEP Evaluation/Reporting System

The Evaluation/Reporting System was redesigned to enhance its usefulness in measuring the influence of other nutrition education programs. It has been in use since 1993 and originally was designed to measure the effects of the Expanded Food and Nutrition Education Program (EFNEP). EFNEP Evaluation/Reporting System, version-4 (ERS4), is a Windows-based program that captures demographic data on clients, staff, and volunteers; measures interagency cooperation; and measures clients' behavior changes related to dietary intakes (nutrient and food groups), food resource management, nutrition practices, and food safety. A new module measures perinatal influences, the start and duration of breastfeeding, and infant-feeding practices.

A Master Question Database allows for the selection of up to 15 additional questions for each client subgroup, and it includes measures of money management, parenting, and physical activity, as well as more detailed assessment of the core behaviors measured in the base system. The integrated system provides detailed reports at the local, State, and Federal levels. Copies were distributed in April 1998 throughout the Land-Grant University System and to other government agencies and organizations. A webpage (www.reeusda.gov/ers4/home.htm) provides background information, frequently asked questions, software updates, and announcements.

Nutrition Education Cost-Benefit Study

Researchers at Virginia Polytechnic Institute and State University have been working on the development of a cost-benefit analysis of nutrition education programs, with a focus on EFNEP in Virginia. Data from the EFNEP Evaluation/Reporting System were used to calculate the number of participants who improved their dietary intakes to levels associated with reduced risk of chronic diseases. Once completed, the study protocol will be distributed for use as a model in other States and/or programs to measure program affects.