

University of Minnesota Extension Service
2000-01 Accomplishments and Results Report
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*University of Minnesota Extension Service
2000-01 Federal (AREERA) Accomplishments and Results Report*

EXECUTIVE SUMMARY

Fiscal year 2001 provided Extension in Minnesota with a number of challenges. With the economic downturn, accelerated by the aftermath of the terrorist attacks in New York City and Washington, DC, another difficult year for many farmers, and job layoffs in the non-farm sector as the issues of the moment, we were forced by our own internal fiscal situation to re-think our future strategic direction. As a result, we developed “Extension 2002-2005 Plan: Plans for Extension’s Future” in order to re-focus Extension to continue to effectively and efficiently address the issues that are foremost for Minnesota citizens. The 14 programmatic issues that we identified nearly a year and a half ago and submitted as our 2001-2004 Plan of Work remain paramount and are being used to provide greater focus for our work as we implement our change plan that was completed December 3, 2001.

The data that we collected on programs during 2000-01 continued to indicate that we are serving a significant number of Minnesota citizens. We provided close to 1.5 million educational services directly to our citizens last year—through participation in workshops, seminars, 4-H activities, and other group events, as well as one-on-one consultations, office and farm visits, and responses to telephone inquiries. In addition, our homepage received 13 million hits, a 66% increase over 2000, and Info-U, our automated telephone/Fax-back answering system logged 525,000 Internet inquires, over 41,000 phone responses, and sent more than 1,200 fax replies.

Our staff estimated direct program costs, e.g., for rental of meeting space, duplication of materials prepared for a program activity or event, etc., at more than \$5.8 million last year, but these costs were partially offset by over \$700,000 in fees charged those participants who could afford to pay for direct costs. Faculty and Extension educators also brought in more than \$10.1 million in grants and contracts last year. Nearly 54,000 volunteers contributed their time to Extension programs and activities, ranging from serving on advisory committees and donating land and inputs for on-farm demonstrations and trials to the more traditional volunteer roles of 4-H leader and Master Gardener. The value of the volunteer time contributed by Master Gardeners (76,812 hours last year) is close to \$1.2 million, based on the average non-agricultural wage rate in Minnesota, plus 20% for fringe benefits.

The University of Minnesota continues to strongly support Extension as a key part of the university’s overall outreach effort. We continue to work across the university, connecting the knowledge base and expertise in 16 colleges, professional schools, and branch campuses to Extension programs, as we have done for the past 10 years. The Board of Regents strongly endorsed our change plan in December 2001 and university administration is working with us to implement the necessary changes. As stated in the change plan, “our commitment to the people, communities, and businesses of Minnesota remains as strong as ever. The 2002-2005 change plan reflects our commitment to connect the research of the state’s land grant university to the people. The intention is to implement a new knowledge model and a new business model to assure that we can meet critical state needs with high quality, relevant, and accountable educational programs.”

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I. PROGRAMS

Goal 1. An agricultural system that is highly competitive in the global economy.

Overview:

In keeping with the instruction this year to report only those programs we could indicate as having an impact, we are reporting on two key themes under Goal 1. They reflect five of the nine major programs that are in our 1999-2004 Plan of Work. Many of the Extension themes could also readily be termed integrated research and Extension because they do draw upon a research base although it may not always be Hatch-funded research. (The connections to Hatch-funded research in the themes are indicated by the CRIS project numbers in a reference section at the end of each narrative.)

We have also indicated URLs with each theme that will connect the reader to relevant web sites or pages. Often these are entries in our Minnesota Impacts! database that includes descriptions of both Minnesota Agricultural Experiment Station research projects and University of Minnesota Extension Service educational programs. Minnesota Impacts! is accessible to the public and policymakers interested in the University's agricultural and environmental research and Extension educational outreach. Access to it has been promoted via business cards and brochures that are available at the Experiment Station's Research and Outreach Centers and county Extension offices.

We believe that the research and Extension efforts represented under Goal 1 are truly attempting to accomplish that goal—developing an agricultural system that will keep Minnesota agriculture competitive in the global economy by reducing production costs, identifying new crops and products, and finding new, value-added uses for Minnesota agricultural products. A major portion of research and Extension funds in Minnesota is expended on the projects and educational programs under Goal 1.

Inputs and Outputs: Extension staff estimated that they reached nearly 51,000 farmers, commercial fruit and vegetable growers, agribusiness people, and green industry employees via Goal 1 programs during 2000-01. They invested more than 30,000 hours of their time (14.8 FTEs) and spent more than \$377,000 to develop and deliver these programs. These direct program costs were offset by nearly \$159,000 in participant fees charged for some programs (primarily those for agricultural professionals and industry employees) and more than \$1.2 million in grant funds from various sources.

Delivery methods varied from program to program, but in general Extension staff reported using a mix of individual consultations and group sessions of different kinds. They also put time into preparing/updating publications and teaching materials and putting information on websites. In addition, they used newspapers and newsletters to advantage to reach large numbers of clientele.

Outcomes: Outcomes varied by program, but all programs indicated some degree of success in terms of changes made by program participants—in acquiring and using new marketing skills, new crop and livestock production and management techniques, diversifying and adding alternative crops and livestock enterprises, adding value to existing crops and livestock products, and using technologies to boost their efficiency and effectiveness. In most cases, Extension staff indicated that from 25 to 75% of their clientele either indicated a willingness to adopt/adapt the information they received or actually did been using new skills and practices, adding new crops or animal enterprises, and improving their profitability.

Impacts: Specific impacts are difficult to measure without evaluative research on specific educational programs. Still, Extension staff reported that many of their clientele did improve their profitability, resulting in new jobs and a positive economic impact on individuals, families, and communities. Precise measurement of impact across the variety of programs represented under Goal 1 is very difficult to determine. Some impacts are cited in the various theme statements.

Accomplishments: We believe we are making significant progress in listening to our stakeholders and re-directing our research projects and educational programs so that they deal most directly with the economic, social, and environmental issues of greatest concern to Minnesotans. Goal 1 research is providing answers and recommendations for specific changes that people who make a living in agriculture and the green industry need to make if they are to operate competitive, profitable, sustainable businesses. Extension continues to communicate that information in a variety of ways and locations to the people who most need it and provide the technical advice and other support that is often needed for those receiving the information to implement changes.

Key Theme: Agricultural Profitability: (JOINT)

AES Plan of Work: Goal 1: Program 2, Agricultural Marketing and Distribution, and Program 5, Animal Production and Management Strategies

Extension Plan of Work: Goal 1: Program 2, Agricultural Processing, Marketing, and Distribution; Goal 4, Animal Production and Management Strategies

a. Description

Farmers in Minnesota, especially smaller-scale farm operations, continue to struggle to earn a profit and stay in business. Dairy is Minnesota's most important livestock enterprise. Research and Extension continue to work to help dairy farmers address production problems and develop strategies to be profitable. The Dairy Initiative Program which developed a more collaborative effort among the various players in the dairy industry to provide intensive on-farm diagnosis and financial analysis for dairy farmers, continues to address sustainability and environmental stewardship, as well as profitability. This program looks at feed quality and nutrition, herd health, housing and ventilation, labor management, and milk quality, as well as analyzing costs and returns for each dairy farm business. Management skills, expansion and transfer of the business to another generation are also addressed in one-on-one consultations and a variety of group sessions—workshops, seminars, Dairy Expos, etc. Some farmers are exploring organic

milk production and grazing alternatives. A number of Minnesota producers participated in the Dairy Options Pilot Program during 2000-01

b. Impact

The Dairy Options Pilot Program is designed to give dairy farmers the opportunity to use puts to secure a floor price for their milk. During 2000-01, nearly 600 puts were placed in Minnesota with premiums totaling nearly \$521,499. Associated broker fees were less than \$18,000. The Risk Management Agency paid 80% of the premiums for participating farmers. Dairy producers that participated were able to earn up to \$14-15 per cwt. for their milk, substantially above the market prices per cwt. at the time. An economist estimates that they earned as much as \$15,000-\$17,000 more for their milk while participating in the program. Access to the risk management data is necessary before a more definitive impact evaluation can be conducted.

References:

AES research project: MIN-14-055

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2002>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2011>

c. Source of Federal Funding: Smith-Lever 3b&c and Hatch

d. Scope of Impact: State Specific

Key Theme: Risk Management (EXTENSION)

Extension Plan of Work: Goal 1: Program 1, Agricultural Production and farm

Business Management; Program 2, Agricultural Processing, Marketing, and Distribution; Program 3, International Agricultural Competitiveness; Program 5, Crop Production and Management Strategies

- a. Farm families face a volatile agricultural economy that's radically different from a few years ago. Changes continue to escalate, resulting in both new opportunities and new challenges. One of the foremost challenges is a risk environment that requires new and improved management knowledge and tools. The University of Minnesota Extension Service began putting greater emphasis on risk management in the Fall of 1999, in conjunction with the Rural Response Initiative that was addressing the declining rural economic and social situation. The effort began with a staff development program that emphasized five areas of risk—human, production, marketing, financial, and legal. These five areas became the basis for the educational programs that staff then planned and offered to farmers.

A website was developed that served as both a source of public information and a place for Extension staff to obtain educational materials and other resources for presentations. This site also provides a calendar where the dates, times, and locations of the risk management training for farmers and other events are indicated. FINBIN, a financial database for risk management, was developed by the Center for Farm Financial Management (CCFM) and made available to the staff and the public via a website. FINBIN is designed to provide financial and production information in relation to different peer groups and enterprises. The National Ag Risk Education Library is another reference for farm families. The library was

Also developed and is maintained by CCFM. Recent additions include several sources on genetically modified (GM) crops.

“Winning the Game,” adapted from a risk management program developed by the University of Nebraska and the Nebraska Soybean Growers, is one of the programs that has been highly successful in getting Minnesota producers to try new marketing strategies. During 2000-01, 712 farmers and 10 agricultural professionals participated in local and regional “Winning the Game” workshops. Participants indicated a high level of satisfaction with what they’d learned in the workshops, especially with being actively involved in the marketing game simulation. A follow-up survey that netted 427 responses was used to estimate economic impact.

b. Impact

Nearly 96% of the 427 survey respondents indicated that they planned to forward price their grain in the future. Over 25 % of them also said they planned to make changes in their crop insurance as a result of what they learned. Farmers said they would increase forward-pricing of corn more than 30%, soybeans 33%, and wheat 32%. On average, the additional income they received from forward pricing was estimated to be 19 cents per bushel of corn, 40 cents per bushel of soybeans, and 13 cents per bushel of wheat. The follow-up survey indicated that the farmers participating in “Winning the Game” earned an additional \$3,494 for their grain, on average, using forward pricing. The total impact for these producers in one year was estimated at more than \$1.4 million.

Websites:

Risk Management Education: <http://www.extension.umn.edu/ruralresponse/rme/index.html>

National Ag Risk Library: <http://www.agrisk.umn.edu>

FINBIN: <http://www.cffm.umn.edu>

References:

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2005>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2003>

c. Source of Federal Funding: Smith-Lever 3b&c

d. Scope of Impact: State Specific

Goal 2. A safe and secure food and fiber system.

Overview:

We are reporting on three themes under Goal 2. We combined the Food Quality and Food Safety themes—although research projects may be designated in such categories, our Extension programs often address both of these topics simultaneously. CSREES designated Food Safety as a joint or integrated research and Extension theme and Food Quality and Food Security as Extension themes.

Much of what we do in terms of Extension programming in food security is actually in nutrition education for low-income individuals and families, i.e., the Expanded Food and Nutrition Education Program (EFNEP) and the Food Stamp Nutrition Education Program (FSNEP). Therefore, this theme reports that work and uses data that was already submitted to the Food and Nutrition Service, USDA.

Inputs and Outputs: Extension staff indicated that they had provided food quality and safety information to over 21,000 persons during 2000-01. Some of these persons were consumers (persons not in the EFNEP/FSNEP programs), some were livestock producers, and some were food and seafood processing entrepreneurs, managers, and employees. Staff indicated that they had invested about 3.0 FTEs of professional time in this effort and spent more than \$75,000 to deliver these programs. Fees were sometimes charged for industry programs and totaled nearly \$27,000. Over \$16,000 was obtained in grants to support this programming.

In addition to answering over 17,600 consumer phone calls and providing a large number of other one-on-one consultations (e.g., testing pressure cooker gauges), educators prepared teaching plans and materials (including youth-oriented materials for elementary and secondary students), taught many group sessions of various kinds, trained food preservation volunteers, wrote newspaper and newsletter articles, distributed newsletters, placed exhibits at fairs, field days, and the like, and placed or updated food quality and safety information on websites.

Outcomes: Food quality and safety outcomes are difficult to assess. Oftentimes, they are events avoided, such as incidents of food poisoning, rather than positive economic, social, or environmental changes. Getting homemakers, students, quantity cooks in nonprofit organizations, and food processing managers and employees to recognize dangerous food handling and processing practices and adopt safer ones is extremely important in terms of preventing possible disasters from happening. Educators often indicated a good deal of success in raising the consciousness levels of the audiences that they worked with. The degree of success depended on the specific audience and their motivation to change—whether desirable in terms of quality and/or safety, or required by law, as in the case of food and seafood processing industry people.

Impacts: These are difficult to determine, especially when the intent of the programs is largely preventive. Given the kinds of potential disruptions—illnesses, lost time from school or work, even deaths—from outbreaks of food poisoning, transmission of disease via contaminated or

improperly processed foods, the potential impacts of food quality and safety programs could be sizeable, but little attempt has been made to precisely measure them.

Accomplishments: A wide variety of research work is dealing with current food quality and safety issues. Extension educational programs are offered to a wide spectrum of audiences. Program participants have indicated that they do gain awareness and understanding of the importance of using food handling and processing methods that will maintain quality yet avoid the danger of contamination with or growth of dangerous substances that threaten their health and perhaps even their lives. Given public concern about the quality and safety of food, these programs are addressing significant issues.

Key Theme: Food Quality (EXTENSION), Food Safety (JOINT)

AES Plan of Work: Goal 2: To ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education.

Extension Plan of Work: Goal 2: A Safe and Secure Food and Fiber System

a. Description

The quality and the safety of the food we eat are of intense concern to people everywhere. Food-borne infections cause 6.5 to 33 million illnesses and thousands of deaths in the U. S. every year. Estimated medical costs and productivity losses from illnesses and deaths range from \$6 to \$34 billion annually. The federal government has mandated increased sanitation training and stricter controls for parts of the food processing industry, creating a training component that Extension addresses. New methods are being originated by Experiment Station researchers for detecting and reducing food-borne pathogens on the products being processed and marketed, fresh produce, dairy and poultry products, or meats.

Researchers in Minnesota are developing a rapid technique to identify all strains in a single diagnosis of Salmonella and *E. Coli*, two of the most common pathogens causing food-borne illnesses, at an early stage in the production of eggs, milk, and meat. Another key project is examining the use of natural disease-fighting phenolic compounds found in edible plants like parsley, citrus fruits, hazelnuts, and grain flours, as well as naturally-occurring anti-microbial bacteria associated with foods. Other research is focused on the effect of freezing unpasteurized fruit juices to improve safety and nutritional quality.

b. Impact

Extension programs deliver research-based information to both food industry and consumer audiences. Industry training programs provide commercial thermal processing and new food entrepreneur education, food safety/HACCP for food processors, and food manager certification in food safety/food handling. The ServSafe program for food handling businesses trained over 600 managers and food handlers during 2000-01. They, in turn, reported training another 455 employees. All of those trained reported adopting one or

more improved practices as a result of the training, e.g., improved temperature control, cooling and reheating, food storage, cleaning and sanitation, and personal hygiene.

Consumer food safety programs were provided for youth, adults, and the elderly. Practices such as hand washing, proper food storage, keeping refrigerators at correct temperatures, and keeping food preparation surfaces clean and sanitary were emphasized. Pre and post tests indicated that nearly all participants increased their knowledge of food safety and adopted one or more food-safe food handling and storage practices in their own homes.

Milk Quality Assurance training resulted in reductions of 300,000 to 400,000 in somatic cell counts on 325 dairy farms. More than 600 livestock producers and nearly 500 youth completed quality assurance training and were certified.

The long-term impact of this research and these educational programs will be reductions in the number of food-borne illnesses and resulting deaths and in medical costs and productivity losses.

References:

[AES Research Projects: MIN-18-39, MIN-18-042, MIN-18-054](http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=385)
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=123>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=256>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=88>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=182>

- c. Source of federal funding: Hatch and Smith-Lever 3b&c.
- d. Scope of Impact: Integrated research and Extension and multi-state Extension. (AR, CA, FL, IA, IN, KS, NC, OH, PA, SD, TX, WA, WI)

Key Theme: Food Security (EXTENSION)

Extension Plan of Work: Goal 2: A Safe and Secure Food and Fiber System

- a. Many low-income families, especially those making the transition from welfare to work, do not have a secure food supply. Paying high rents and the high costs of utilities, transportation to work, child care, etc. all too often mean that there isn't enough money left to buy food, especially a sufficient quantity and variety that provides a balanced, nutritious diet. Helping individuals and families learn to stretch their food dollars so they can afford to eat properly and not run out of food each week or month is critical. Nutritional research has demonstrated over and over that inadequate, unbalanced diets are linked to low productivity and poor health over the long-term. Minnesota has two programs in operation that provide nutrition education to low-income individuals and families—the Food Stamp Nutrition

Education Program (FSNEP) and the Expanded Food and Nutrition Education Program (EFNEP).

During 2000-01, 95,643 households in Minnesota were receiving food stamps. FSNEP made close to 741,000 information contacts with food stamp recipients/people eligible for food stamps (via distribution of informational materials) and nearly 62,000 developmental contacts (via brief teaching episodes). 27,812 persons were taught all or some of the nutritional program (in a group, one-on-one, or via a staffed exhibit). 70% of the program participants (those who were taught) were youth up to age 18, 20% were adults in families, and the remaining 10% were seniors 55+ years old. In terms of racial/ethnic group distribution, participants were 13% African-American, 5% Asian, 65% Caucasian, 12% Hispanic, and 5% American Indian.

EFNEP enrollment in 10 Minnesota counties during 2000-01 totaled close to 11,500—nearly 2,600 families and 8,900 children. These participants were 31.9% African-American, 15.0% Asian, 37.1% Caucasian, 9.0% Hispanic, and 7.0% American Indian.

b. Impact

From 14% to 36% of FSNEP participants during 2000-01 improved their food security (14 % of the youth, 36% of the adults, and 36% of the seniors). In terms of improving diet quality, from 39% to 49% of program participants reported at least one positive change (39% of the adults, 48% of the seniors, and 49% of the youth). From 19% to 39% changed their food shopping behavior (19% of the seniors, 30% of the youth, and 39% of the youth). Between 34% and 50% of the program participants changed one or more food safety behaviors (34% of the seniors, 46% of the adults, and 50% of the youth).

52.2% percent of the EFNEP homemakers completed the program during 2000-01; 39.6% dropped out and 8.2 % were still in the program at the end of the fiscal year.

Although the impact of FSNEP and EFNEP in Minnesota hasn't been precisely measured, it is clear from cost-benefit evaluation studies in other states that the benefits of these programs are far-reaching, both in terms of improved health and well-being of participants and potential cost savings in Medicaid, Medicare, and other health-related public assistance, loss of productivity, etc.

References:

- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=821>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=822>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1378>

c. Source of Federal Funds: Food and Nutrition Service, U. S. Department of Agriculture, through the Minnesota Department of Human Services Food Stamp Program.

d. Scope of Impact: State Specific

Goal 3. A healthy, well-nourished population.

Overview:

We are reporting against one joint or integrated research and Extension theme—human nutrition. However, this theme embraces a wide spectrum of nutrition programs, each targeted to a specific type of audience. The commonality is the attempt to get each audience to better understand nutrition and change their eating habits, in order to better maintain their health.

Inputs and Outputs: Nutritional research and educational programming are closely linked. Consumers are often frustrated by the plethora of information on diet and health—much of it contradictory. However, there is growing public recognition of the connection between a well-balanced diet and maintaining good health/preventing disease, so many consumers are interested in new information. Extension is generally viewed as a reliable source of information—especially when it is linked to university research.

Educators estimated that they'd reached more than 17,000 people with nutrition and health information during 2000-01. In order to do this, they invested about 2.9 FTEs of time and about \$116,000 in program costs. Extension staff also reported receiving nearly \$293,000 in grant funds to support their work. They collaborated with a number of organizations and agencies, e.g., the Childcare Providers Association, tribal colleges (in Minnesota, North Dakota, and Wisconsin), technical colleges, churches, hospitals, human service and public health departments, community education programs, the Minnesota Council on Aging, and numerous others.

Outcomes: Outcomes varied with the specific program. For example, 87% of a group of parents indicated that they planned to change how they feed their children, following completion of a nutrition program. 57% of the 5th graders in nutrition groups taught by Extension educators set goals for choosing nutritious foods and snacks that were met by the end of the program. Educators reported that they'd acquired new nutrition knowledge and skills themselves from variety of sources—professional conferences and seminars, reading professional journals and newsletters, websites, Extension staff development, etc.

Accomplishments: Continuing to provide credible research information and Extension programming in nutrition and health is extremely important. Several Extension staff indicated that they'd been contacted in their localities to conduct programs, sometimes in offices and workplaces during lunch breaks and the like. This indicates that Extension is viewed as a resource for credible, research-based information. Likewise, the connection between campus-based faculty and tribal colleges in Minnesota, North Dakota and Wisconsin has opened the door to providing training for Native Americans in nutrition and health, thus enabling them to better address critical issues, such as the high incidence of diabetes, in the cultural context of the Native American community.

Key Theme: Human Nutrition (JOINT)

AES Plan of Work: Goal 3: Through research and education on nutrition and development of more nutritious foods, enable people to make health promoting choices.

Extension Plan of Work: Goal 3: A healthy, well-nourished population

a. Description

Americans are simultaneously obsessed with physical appearance yet beset with poor eating habits that lead to obesity and/or insufficient nutrition and also likely contribute to human disease. Educating people to make appropriate and nutritious food choices is an important focus of University of Minnesota Extension Service programming. The Minnesota Agricultural Experiment Station provides current information for these educational efforts and funds several areas of research that push the boundaries of our current knowledge base on healthy, life sustaining nutrition.

AES research is investigating the use of nutraceuticals—fiber and antioxidant-enriched foods--in healthy diets. Other investigators are looking at increasing dietary fiber intake in the form of whole grains, fruits and vegetables and examining the dietary patterns and socio-environmental factors influencing dietary patterns in urban, low-income, minority families. And another researcher is exploring the possibility of dietary prevention of hormone-dependent cancers.

b. Impact

Significant Extension effort was made during 2000-01 to promote healthful eating among several significant population segments: Seniors, diabetics, adults, parents, child care providers, Native Americans, young children, pre-teens, low-income families, new immigrants, etc. Significant changes in program participants' behavior were reported, e.g., 87% of a group of 94 parents indicated that they planned to change how they feed their children. Those with infants and young children learned when to start solid foods, what foods to start, how to prepare foods safely for infants and toddlers, and who to do if their child is choking.

Fifth graders in nutrition groups increased the servings of fruits and vegetables eaten and the amount of milk they drank to recommended levels and exercised daily. 57% of them set goals for choosing nutritious foods and snacks that were met by the end of the program.

Seniors living alone or in small households were taught how to plan nutritious meals using more fruits and vegetables. When contacted later, nearly all of them reported that they were using the nutrition information and drinking more water, as well as exercising regularly for greater flexibility.

Over half of the adults that completed a five-week "McFITNESS" program in one county reported afterwards that they were eating the recommended servings of fruits and vegetables, drinking 8 glasses of water daily, and exercising regularly.

Using soy as a source of protein was emphasized in several nutrition education programs. 86% of the participants reported buying and using soy products, trying soy recipes, and using soy milk for cooking and drinking.

Nutrition programs for Native Americans emphasized using traditional foods in a healthful diet and growing their own vegetables which also provides healthful exercise. One program, “Woodlands Wisdom,” is also providing assistance in establishing academic programs in food and nutrition at seven Tribal Colleges in Minnesota, North Dakota, and Wisconsin.

The long-term impact of this research and these Extension programs is improved health, longevity, and productivity and reduced costs of medical care and loss of productivity.

References:

AES Research Projects: MIN-18-023, MIN-54-026, MIN-54-029, MIN-54-034, MIN-54-059, MIN-54-064

<http://www.extension.umn.edu/listing.html?topic=9&subcat=68>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1490>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1523>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1547>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1548>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1549>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1781>

- c. Source of Federal Funding: Hatch and Smith-Lever 3b&c
- d. Scope of Impact: Integrated research and Extension and multi-state Extension (IA, ID, MO, ND, WI)

Goal 4. Greater harmony between agriculture and the environment.

Overview:

We are reporting on three key themes under Goal 4, two Extension themes (Agriculture Waste Management and Pesticide Application) and one joint theme (Water Quality). These themes relate to our Goal 4 programs in Animal Waste Management, Soil Nutrient and Water Management, and Improving Water Quality in the Minnesota River Basin, as well as Crop Production and Management Strategies and Food Crops under Goal 1 and Goal 2. Again, at the end of each theme, we have indicated URLs that connect the reader to relevant Extension program and/or research project entries in the Minnesota Impacts! accountability database.

We believe that the programs reported under Goal 4 are truly aimed at achieving “greater harmony between agriculture and the environment”. We are also pleased with the degree of involvement of the non-farm public, including children in schools and 4-H clubs, in environmental learning and leadership. Our “Pesticide Environmental and Safety Education” program is making a major contribution in terms of developing new curricula and reaching new audiences with technology. And water quality improvement efforts focus not only on reducing contamination of Minnesota’s streams and 15,000+ lakes from crop and livestock production, but from lakeshore residents and suburban/urban dwellers as well. While specific impacts of many programs have yet to be measured, they appear to be accomplishing what they were designed to do, in terms of outcomes and impacts.

Inputs and Outputs: More than 54,000 persons participated in the programs related to the key themes under Goal 4. They included elementary/secondary students and their teachers, 4-H members and their leaders, livestock producers, sustainable farmers, private woodland owners, and representatives of a broad spectrum of organizations and agencies with a stake in the relationship between agriculture and the environment. The total direct costs of delivering the programs related to Goal 4 themes was estimated at over \$497,000, but these costs were offset by participant fees totaling over \$76,000 for some professional development programs and more than \$1 million in grants.

Key Theme: Agricultural Waste Management (JOINT)

AES Plan of Work: Goal 4, Program 6, Animal Waste Management

Extension Plan of Work: Goal 4, Program 3, Animal Waste Management

a. Description

Animal waste management is a critical issue for the livestock industry in Minnesota. Enforcement of a state feedlot ordinance has increased the need for education and the development of manure management plans for livestock operations. Odors and the impact of livestock production on water quality are concerns of neighbors and environmentalists. Recognizing the importance of these issues, researchers and Extension staff have been working to develop new programs and tools to assist livestock producers in complying with state and federal regulations. Tools that faculty developed—a farmstead odor database and Center for Farm Financial Management software for developing manure application plans—are being used, especially to help farmers develop their own compliance plans. Educators consulted with more than 2,000 individual livestock producers and assisted them in developing manure management plans during 2000-01.

b. Impact

Nearly 3,500 livestock producers adopted new animal waste management strategies during 2000-01, over half of those who participated in group sessions or individual consultations. A survey of farmers’ nutrient management practices in one county indicated that the number of

farmers testing manure samples increased from 20% to 35%, the number of farmers who calibrated their manure spreaders increased from 15% to 22%, and the number who began using their cropping history and University of Minnesota recommendations for planning fertilization increased from 80% to 88%. 41% made changes in their manure management system. One farmer saved over \$8,000 in one year by reducing commercial fertilizer use.

In another county, the educator reported that no new complaints about manure application were filed in 2001—down from an average of 25 a year during the past five years. Revised manure planning is now in effect on about 10% of the total agricultural land base. Manure spreader calibrations reduced the amount of nitrogen being applied by more than 5,000 lbs., reducing the amount of N entering the environment. Farmers are saving about \$2,000 annually in input costs by reducing commercial fertilizer use.

References:

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1029>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1663>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1835>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2008>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1779>

c. Source of Federal Funding: Smith-Lever 3b&c and Hatch

d. Scope of Impact: State Specific

Key Theme: Pesticide Application (EXTENSION)

Extension Plan of Work: Goal 1, Program 5, Crop Production and Management Strategies; Program 8, Food Crops. Goal 2, A Safe and Secure Food and Fiber System. Goal 4, Program 4, Soil Nutrient and Water Management; Program 5, Improving Water Quality in the Minnesota River Basin.

a. Description

The “Pesticide Environmental and Safety Education” (PESE) program (formerly known as MN-HELPS and “Pesticide Applicator Training” programs) in the University of Minnesota Extension Service facilitates a wide range of research-based pesticide education efforts that support the public good while also assisting individuals, professionals, businesses, and other organizations involved in pest management. PESE spans rural, suburban, and urban Minnesota because its programs include agriculture, building and home maintenance, turf/nursery/landscape, road/powerline/railroad and other right-of-ways, forestry, mosquito control, food processing, and other industries.

PESE topics include:

- Health and safety of pesticide applicators and others who work with or around pesticides (urban and rural)
- Protection of public health, including food safety, water quality, indoor air quality, and waste management
- Environmental protection, including surface and ground water, air quality and pesticide drift, endangered and threatened species, and non-target organisms
- Integrated Pest Management, Plant Health Care, and other approaches that emphasize practical and least toxic pest management strategies
- Public issues regarding pesticides and pest management

PESE works closely with other public agencies and other state Extension programs, as well as private sector partners--industry organizations, public groups, and individuals.

The largest PESE effort is the Pesticide Safety Education Program for licensed pesticide applicators (formerly known as Pesticide Applicator Training or PAT). This educational program provides research-based information and education for pesticide applicators including cover safety, environmental protection, public health (food, water, air, land), regulatory compliance, and Integrated Pest Management. Other major components of PESE include statewide co-leadership in working with K-12 schools to address safety and security issues of pesticide use, agriculture worker protection, teaching, and program development.

b. Impact

During 2000-01, the PESE program directly reached over 2,000 new learners and more than 12,501 repeat learners (some people may be counted more than once as they participate in multiple parts of the program and numbers vary from year to year due to the cyclic nature of the program). Based on program evaluations, a very large majority of these people changed one or more practices related to safety, public health, environmental protection, regulatory compliance, and Integrated Pest Management.

Special efforts in 2000-01 beyond the regular programming included:

- A new and national recognized producer fumigation certification program and on-line training manual (a large number of state Extension programs have requested the manual).
- New educational materials and outreach addressing chemical security
- New forestry pest management training manual
- New microbial management training manual (building air coolers, building molds, etc.)

- Completion of a 4-state, 3 year, ADEC funded grant project with Extension services in Arizona, Washington State, and Virginia looking at the benefits, barriers, and design considerations of a national internet-facilitated 'backbone' system for delivery of a wide range of educational activities.
- Development of one of the first in the nation, state of the art, and user-friendly on-line certification and testing programs for pesticide applicators (operational in early 2002)
- Expansion of statewide efforts in Integrated Pest Management in K-12 schools via a working group that includes Extension, a number of state agencies, interest groups, and K-12 school staff. More fact sheets developed, more than 90 training sessions designed for use in schools for school employees (to be offered in 2002), interaction with and support of state legislative House/Senate joint working group on children's environmental health.
- Reorganization of the nationally unique, small group Local Pesticide Applicator Training grounded in a cooperative and adult learner research base. The new version (to be offered in 2002) will move towards more customized on-site education developed through the intersection of marketing, business, facilitation, and educational design components with the intent of providing learners with greater value while being entrepreneurial, and financially self-supporting.

References:

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=828>

- c. Source of Funding: Smith-Lever 3d
- d. Scope of Impact: Multi-State Extension (AZ, VA, WA)

Key Theme: Water Quality (JOINT)

AES Plan of Work: Goal 4, Program 5, Water Resource Management

Extension Plan of Work: Goal 4, Program 4, Soil Nutrient and Water Management; Program 5, Improving Water Quality in the Minnesota River Basin

a. Description

Minnesota is gifted with water—approximately 15,000 lakes one acre or larger in size and the “Father of waters”, the Mississippi, as well as other major rivers. But unfortunately Minnesota’s lakes and rivers are increasingly subject to pollution. The Minnesota River is a major carrier of non-point source pollution from southwestern and south central Minnesota that is carried into the Mississippi River. In St. Paul, where the Minnesota River joins the Mississippi, the sediment load has averaged 625,000 tons per year in recent years. A 40% reduction in sediment load is necessary to achieve federally-mandated water quality goals. Researchers are developing tillage and nutrient source strategies to minimize agricultural non-point source pollution from surface and subsurface drainage systems in the Minnesota River Basin. Extension educators inform farmers about the environmental impacts of improperly using agricultural chemicals and manure and encourage them to adopt best management practices (BMPs) to reduce non-point source pollution from agriculture. In addition, a new use of remote sensing data is helping improve the quality of Minnesota’s water resources.

b. Impact

Minnesota feedlot policy development is guided by data researchers gathered from a statewide feedlot inventory. This survey estimated the amount of nitrogen and phosphorus applied to agricultural land and then assessed the amounts in the Minnesota River that came from chemical fertilizer versus the amount from manure applied as a soil nutrient. They found that the major sources of nitrate pollution are chemical fertilizer, followed by manure, atmospheric deposition, and urban point sources such as wastewater treatment facilities. This finding has resulted in more attention being focused on nutrient application and other best management practices. These BMPs allow farmers to reduce input use to levels that will maintain production but also reduce the pollution levels in the Minnesota River.

Another study used simulation modeling to estimate sediment reduction in the Minnesota River Basin related to increased adoption of conservation tillage. Sediment reductions ranged from 15% to 50%. Lower pollution levels upstream will reduce the costs downstream of making Minnesota River water usable for human consumption, recreation, and manufacturing.

The impact of conservation tillage in one county was estimated at \$360,000 annually, resulting from a saving of \$30 in tillage costs per acre on 12,000 acres. The number of acres cultivated with strip-till and other conservation tillage methods in that county has grown substantially in the past three years—now accounting for 5% of the agricultural land in production.

The “River-Friendly Farmer” Program was developed to provide positive reinforcement to farmers who adopt BMPs. This program has been in effect since 1995 and to date, 430 farmers from 37 Minnesota counties have been honored with this recognition.

Researchers have developed a method to determine the extent of pollution in Minnesota’s lakes by analyzing the colors in photos taken by Landsat satellites. Images taken at different times can be compared over time to assess trends in the clarity of the water. Researchers used the procedure to classify 10 years of Landsat data from 500 lakes in the Twin Cities area, then applied it to all lakes wider than 30 meters. This method offers the potential to obtain—relatively cheaply—images from a large region that are easy to process digitally to produce maps and pictures that will enable the monitoring of water clarity over time. This information can then be communicated to decision makers and indicate where greater effort is needed to educate the public and farmers about cleaning up non-point and point source pollution.

References:

[AES Research Projects: MIN-14-089, MIN-25-034, MIN-25-020](#)

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=102>

<http://www.extension.umn.edu/mnimacts/impact.asp?projectID=190>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1995>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2028>

c. Source of Funding: Hatch and Smith-Lever 3b&c

d. Scope of Impact: State Specific

Goal 5. Enhanced economic opportunity and quality of life.

Overview:

We are reporting on seven key themes under Goal 5. Of the seven key themes where we have programs with some impact to report, five are Extension themes and two are joint themes.

Goal 5 themes and programs cover a broad spectrum of activities focused on the broad and nebulous goal of “enhanced economic opportunity and quality of life”. Nevertheless, a number of the programs we’ve reported are indicating outcomes that ultimately will achieve that goal although their major weakness at this point is a lack of defined impact. For example, the agricultural finance management area continues to provide essential assistance and tools for families who are trying to stay viable in the risky business of farming and the professionals who are trying to help them. Likewise, Family Resource Management’s “Dollar Works” Program is making a major effort to assist individuals and families transitioning from welfare to work. Affordable housing is a major issue in Minnesota, especially in rural areas, and both research and Extension are providing leadership in addressing that issue. In sum, Goal 5 encompasses some of our best efforts to truly extend the resources of the University to work with individuals, families, and communities on their most critical issues and to develop new leaders.

Inputs and Outputs: Because Goal 5 is so broad and the programs it encompasses so diverse, these themes account for a lot of inputs and outputs. Over 100 FTEs of professional and paraprofessional time are invested in these programs. Program costs are estimated at over \$1.3 million and partially offset by participant fees which brought in more than \$430,000, plus grants totaling over \$1.7 million. Program participation is estimated to be over 499,000 during 2000-01. Other major outputs are reflected in numbers of educational events and activities, numbers of publications prepared or revised and distributed, number of newsletters prepared and distributed, etc., etc.

Outcomes: Outcomes are also diverse—ranging from critical financial decisions made by farm families (nearly 1,200) provided with FINPACK analyses and consultations to number of businesses retained (188), and number of communities (41) making community-wide intentional plans to provide positive opportunities for their youth.

Impacts: Our weakness is in being able to report specific impacts for many of these programs. Very little impact evaluation has been conducted as yet. We will be putting greater emphasis on this in 2001-2002 and thereafter. Nevertheless, when the figures on the numbers of farm families and businesses assisted are totaled and the economic impact of retaining these existing operations and adding new businesses and jobs is considered, the potential impact is substantial. Assessing the impact of parent education, youth development, and leadership development is more problematic, especially in the short-term, but the direction toward long-term impact is unmistakable from the outcomes that program participants are citing.

Accomplishments: We have made greater effort this year to collect data on inputs, outputs, outcomes, and at least anticipated impacts for all of the programs in our Plan of Work. We will continue this effort in the future and also put greater emphasis on using the logic model to design programs so that we can better evaluate them in the future. Although we aren’t able to report specific impacts for some the programs represented under Goal 5 key themes, the information that we do have is indicating that many of these efforts are building toward accomplishment of major economic and social impact on Minnesota citizens and their communities.

Key Theme: Agricultural Financial Management (EXTENSION)

Extension Plan of Work: Goal 1: Program 1, Agricultural Production and Farm Business Management

a. Description

Farm families in Minnesota continue to grapple with the complexities of managing their operations, as well as the vagaries of weather, commodity markets, plant and animal diseases, international trade, and the various other challenges that make agriculture a highly volatile business to be in. The Center for Farm Financial Management (CCFM), farm management associations, and Extension specialists and educators with competence in farm business analysis, risk management and marketing, and other farm management expertise continue to develop the decision making tools needed and use them in a variety of programs and one-on-one consultations with farm operators. CFFM staff also play a critical role in training other agricultural professionals—e.g., farm management instructors, agricultural lenders, agricultural consultants, and farmers—to use FINPACK and other software to assist farm families with financial decision-making. 82 Extension faculty and staff, farmers and agribusiness employees completed FINPACK training during 2000-01. 23 of them were from other state Extension services and three were from other countries.

In addition, the University of Minnesota Extension Service is charged with the responsibility for administering a state-mandated Farmer-Lender Mediation Program to assist farm families that are facing bankruptcy. This program mediated 359 cases during 2000-01. Fifty-nine of them were resolved with written agreements, another 62 reached agreement without putting it in writing, 25 withdrew from the process, 123 didn't reach agreement, and 90 cases were still pending at the end of the year.

b. Impact

Extension staff reported providing nearly 800 financial management consultations to individual farm families or agribusiness owners during 2000-01. Over 600 of these consultations also involved providing farm families with a FINPACK financial analysis of their business operations. Extension educators estimated that over 600 agribusinesses and farms—more than 76% of those assisted—improved their finances as a result of the assistance provided by Extension. More than 60 businesses were able to re-organize or expand as a result; 44 of them were able to bring family members or partners into the business. An estimated 190 new jobs were created as a result of farm and agribusiness re-organization or expansion.

References:

National Agricultural Risk Library: <http://www.agrisk.umn.edu>
Center for Farm Financial Management/FINBIN: <http://www.cffm.umn.edu>
<http://www.extension.umn.edu/mnimpacts/internal/impact.asp?projectID=171>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=430>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1427>

c. Source of Federal Funding: Smith-Lever 3b&c

d. Scope of Impact: Multi-State Extension (IA, MO, MS, ND, NE, PA, UT, VA, WI)

Key Theme: Family Resource Management (EXTENSION)

Extension Plan of Work: Goal 5: Program 8, Individual and Family Financial Management

a. Description

There are a variety of specific programs offered in the family resource management category that are targeted to specific audiences. For example, "Dollar Works: ABCs of Financial Literacy" was designed to assist families making the transition from welfare to work. The "Home Stretch: Homebuyer Education Program" helps families learn what is needed financially to afford their own home and helps them to clean up their credit records and save toward a down payment and closing costs. The "High School Financial Management Program" is used to teach high school age youth

the basics of personal finance. One facet of the "Parents Forever" program for divorcing parents has a section about parents teaching children about money. Other locally-designed programs provide financial management education for dislocated workers, people on probation, people dealing with debt, and people nearing retirement. Educators who are specialized in family financial management also reported several programs for kids, e.g., "Money Camp" a collaborative effort with elementary school teachers that is teaching their students about handling their money wisely. Financial management educators frequently provide financial counseling one-on-one for individuals and families needing specific assistance in dealing with excessive debt.

b. Impact

During 2000-01, Extension in Minnesota continued to be the primary community resource for family financial management education/consumer financial information. "Dollar Works" is delivered via training staff in a variety of agencies and organizations, as well as directly to low-income clientele, many of them participants in the "Family Assets for Independence in Minnesota" (FAIM) program. Extension educators taught nearly 500 staff members in county Departments of Human Services, Public Health, and Corrections, workforce centers, community action programs, crisis/intervention and women's shelters, Habitat for Humanity, the Salvation Army, and other non-profits to use the "Dollar Works" curriculum content with their clientele last year. In addition, they taught over 2,800 individuals directly. Educators reported that 75-80% of their "Dollar Works" program participants developed strategies to deal with their family finances. More than 40% of Extension program participants positively changed their families' financial situations. "Dollar Works" participants in one county set savings goals for education, home ownership, and their children's activities and were able, as a result, to withdraw matched savings from Blandin Foundation "individual development accounts" for those purposes. An impact evaluation of "Dollar Works" has been designed and will be conducted during 2001-02.

References:

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=838>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1377>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=553>

c. Source of Federal Funding: Smith-Lever 3b&c

d. Scope of Impact: State-Specific (but educators in "border" counties are working with colleagues in ND, SD, and WI)

Key Theme: Impact of Change on Rural Communities (JOINT)

AES Plan of Work: Goal 5, Enhanced Economic Opportunity and Quality of Life for Americans

Extension Plan of Work: Program 7, Personal and Family Health and Well-Being; Program 8, Individual and Family Financial Management

a. Description

The link between economic development, employment, and affordable housing has become a critical issue in many Minnesota communities, rural and urban. The lack of affordable housing can be a tremendous hindrance to attracting the necessary labor force for economic development and growth, especially in rural areas. Researchers have been examining several local housing policies in relation to economic and social issues that enhance rural community development. One of these issues is the difficult housing situation for seasonal, migrant workers. Extension educators have been conducting forums with local citizens and decision makers to explore local housing policies and their impact, as well as teaching tenant education programs and the financial management part of the "Home Stretch" Program that assists low to moderate-income families in getting their finances in order so they can buy a home. "Home Stretch" provides 9 hours of instruction on the home buying process for first-time homebuyers and/or people participating in assisted home buying programs, from assessing

their financial feasibility of home ownership through budgeting, loan application, credit checks/cleaning up their credit, working with realtors, home inspection, closing process, etc. More than 1,500 family members took the "Home Stretch" training in 2000-01.

b. Impact

A study of Minnesota communities with populations of 30,000 or less was conducted, using in-depth interviews and focus group discussions. Local officials were surveyed to determine the extent of local regulations influencing housing development and local government involvement in affordable housing development. Results revealed that nine out of 10 communities had housing concerns and one out of three communities needed additional housing to meet the demands of a growing workforce. Researchers also learned that 38 communities have adopted policies that require open spaces with higher density housing—a policy solution that other planners and policy makers can consider. A migrant workers' housing survey in four Minnesota counties indicated that monthly housing costs ranged from \$90 to \$628 per person and conditions varied widely. Such poor housing conditions are often nearly invisible to the majority of year-round residents, resulting in little community effort to address the situation. This research provides local policy makers with specific information on which to act.

During 2000-01, the "Home Stretch" Program in one 12-county rural area that has experienced a severe shortage of affordable housing taught 68 families the basics about buying and maintaining a home. Nearly 90% of them successful bought a home after taking the course. In addition to adding to/maintaining the local housing pool, the purchase of these existing, new manufactured, or new stick-built homes contributed to the local economy through sales of building materials and employment for construction workers, realtors, financial institution employees, additional real estate taxes, etc.

References:

AES Research Projects: MIN-14-085, MIN-53-073, MIN-53-074

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1972>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1973>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2075>

c. Source of Funding: Hatch and Smith-Lever 3b&c

d. Scope of Impact: State Specific

Key Theme: Leadership Training and Development (EXTENSION)

Extension Plan of Work: Goal 5: Program 2, Leadership Development; Program 9, Supporting Community Diversity Leadership

a. Description

Leadership is a important issue, particularly in many rural communities in Minnesota which have experienced considerable population out-migration, especially of young adults who are the future leaders. Communities all too often are finding that fewer people are available to take community leadership roles, serve on communities addressing community issues, seek elected and appointed public offices, etc. In addition, a good many communities in Minnesota have been receiving sizeable numbers of new immigrants whose cultures and social customs are very different from long-time residents. This sometimes results in strained relationships and even conflict, when newcomers and longer-term residents don't see eye to eye on issues of mutual concern.

Extension offers a variety of leadership development programs for youth and adults, depending in part on local situations and needs. These programs are in addition to the adult and youth volunteer training provided through the 4-H/Youth Development Program. In some instances, other organizations, such as the Minnesota Association of Soil and Water Conservation Districts, have approached Extension for assistance in leadership training and development. A relatively new

leadership development effort trains community facilitators who, based on the Master Gardener model, agree to use their skills in their communities to assist all kinds of volunteer groups and non-profit organizations. Another program trains Master Internet Volunteers who also agree to help others learn to more effectively use the Internet to advance their community work and entrepreneurial efforts.

b. Impact

Extension Volunteer Facilitators help non-profit groups, such as community organizations, special interest and other groups—families, Extension-related (committees and fair boards), government, schools, rural/agriculture, cross-agency, youth, church, and workplace--have more effective meetings. During 2000-01, 575 people completed six or more hours of Volunteer Facilitation Training. And additional 890 people completed 2-6 hours of training in meeting facilitation. Over 77% of the group receiving 6+ hours of training reported that they were providing volunteer services to non-profit groups. The average amount of volunteer time reported was 58 hours and 2.4 groups served. The impact of this volunteer facilitation (25,694 hours in total, or 642 40-hour work weeks), when valued at \$50 an hour, was nearly \$1.3 million during 2000-01.

A survey of Volunteer Facilitators, using a 5-point scale to assess facilitator skills pre and post-training, indicated that all of the 42 respondents increased their "confidence to effectively serve as a facilitator" by 25%. 54% said they increased their skill in facilitating with ethical integrity; 40% were better prepared to maintain neutrality as a facilitator; 35% were better able to handle facilitation logistics; 32% were better able to develop shared vision within a group; 30% better understood the role and purpose of facilitation, 30% could establish group norms and ground rules for interaction, and 30% could recognize power and authority dynamics in a group. In addition, 28% of the volunteer facilitators were able to coach others for effective facilitation; 20% strengthened their skill in managing group dynamics; and another 20% reported being more capable of helping groups reach decisions. Other skills strengthened included clarifying group mission and vision (13%) and better understanding cultural and personal differences (12%).

"Leadership for the 21st Century", a program for Soil and Water Conservation Districts, trained an additional 20 staff and elected leaders last year, to bring the total to 70 trained since 1996. Participants report that they've developed skills in prioritizing issues and being more pro-active, leading with vision, recruiting candidates for elected board roles with special attention to better balancing gender and racial/ethnic diversity, better understanding the context in addressing conflicts, and getting more board members actively involved and energetic. The MASWCD executive director reports that more local and district staff and elected leaders are making stronger commitments to organizational roles, more are involved in public policy education and advocacy for issues, and important statewide issues are being named and plans of action crafted, as a direct result of the leadership program.

References:

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1580>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2017>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1586>

c. Source of Federal Funding: Smith-Lever 3b&c

d. Scope of Impact: State Specific

Key Theme: Parenting (EXTENSION)

Extension Plan of Work: Goal 5: Program 7, Personal and Family Health and Well-Being

a. Description

Parents face formidable challenges today. Families often lack extended family and

community support systems. Most mothers are in the work force, many out of economic necessity because they are separated, divorced, or widowed. The environment for children is often unsafe, especially if affordable, quality daycare is unavailable. As a result, parenting skills are needed now more than they have ever been.

Minnesota is fortunate to have several high-quality Extension parent education programs, e.g., "Parents Forever" (designed for separated or divorcing parents), "Positive Parenting", "Positive Parenting for Teens", "Dads Make a Difference" (for teen males), "Kids: Experts on Divorce", "Teens: Experts on Divorce", "Kids: Handle With Care, " and "Grandparents Raising Grandchildren". More recently a new curriculum was developed, "Helping Youth Succeed: A Parenting Guide for Southeast Asian Families" which is available in six different Asian languages.

"Parents Forever" is having a significant impact on the children of divorcing parents and the parents themselves. The program is improving the lives of the children of divorce by keeping them out of the conflict between the parents as much as possible. Research on children of divorced parents indicates that they are likely than their peers in intact families to experience behavioral, emotional, health, academic, and intimacy difficulties. "Parents Forever" emphasizes four behavioral principles for divorcing parents: (1) Putting the best interests of the child first; (2) providing access to both parents; (3) eliminating parental conflict in front of the child; and (4) keeping the child out of the middle of parental issues.

b. Impact

Court systems in 60 of Minnesota's 87 counties have ordered most of their divorcing parents to participate in the program prior to granting a divorce. One Extension educator reported that judges in her county order approximately 95% of all divorcing parents of minor children to participate because "they see it providing practical, research-based information for families and giving them resources to successfully work through the divorce in ways that benefit their children". Another county educator reported that "Parents Forever" is gaining such a positive reputation that participants are now coming voluntarily—friends told them to get into the program at the beginning so that it would do them and their children the most good.

An "Parents Forever" impact evaluation that recently randomly surveyed 89 program participants revealed that in terms of "putting the best interests of the child first," 62% of the parents reported that the emotional well-being of their children had improved as a result of their participation and 79% reported that their own emotional well-being had improved. Sixty percent also reported improving cooperation with the other parent and 54% indicated that communication had improved with their child or children. The amount of time the non-custodial parent was spending with the child improved in 34% of the cases. About 76% of the parents were successfully avoiding conflict in front of their child or children and 39% reported more effectively managing the conflict with the other parent. In addition, 36% of those surveyed said they were keeping the child or children out of parental conflict, 33% were avoiding putting the other parent down in front of the child, 23% had reduced quizzing their child about the other parent, and 23% were avoiding having the child carrying messages between them and the other parent.

References:

AES Research Projects: MIN-52-054, MIN-52-066
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1553>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1590>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1546>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=928>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1992>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=374>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1349>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1968>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=405>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1961>

c. Source of Federal Funding: Smith-Lever 3b&c and Hatch.

d. Scope of Program: Multi-State Extension (CA, IA, IL, MA, MD, ND, NE, OH, OK, PA, SD, VA, WI, WY)

Key Theme: Promoting Business Programs (JOINT)

AES Plan of Work: Goal 5, Enhanced Economic Opportunity and Quality of Life for Americans

Extension Plan of Work: Goal 5: Program 3, Business Retention and Expansion Strategies Program; Program 4, Tourism Development Program

a. Description

Business and industry, tourism, and forest resources are all major contributors to Minnesota's economy. Therefore, research and educational programs that strengthen these economic sectors play an important role in promoting economic growth and job development.

The Business Retention and Expansion Strategies Program has been underway in Minnesota for more than 10 years. Program staff in the Applied Economics Department train and support BR&E consultants (some are Extension educators; others are private consultants) who, in turn, train and support a cadre of volunteers in communities concerned about what is happening in their local economy. The consultants train the volunteers to conduct surveys of local businesses and industries in order to learn about their challenges and needs. Recommendations for strengthening the local climate for business and industry and improving the community generally are generated from analysis and discussion of the survey results. The end result is usually a number of community economic and structural improvement projects but the long-term results are often even more far-reaching, in terms of leadership development and engagement of volunteers, as well as local economic growth and job creation through retention and expansion of local businesses and industries.

There were nine active BR&E Strategies Programs in operation in Minnesota in 2000-01. Six of them are looking at "mixed" businesses, one is specialized in manufacturing, and two are in agriculture. 40 other agencies and organizations are involved, in addition to University of Minnesota faculty and staff. 289 volunteers were involved in planning these programs and conducting community business and industry surveys. Nearly 600 firms were interviewed.

In addition, 16 new BR&E Strategies Program consultants in 10 states and two Canadian provinces were certified via the on-line BR&E Consultant Certification Course during 2000-01. These consultants are the resource people to the communities and volunteers who carry out BR&E Visitation Programs.

Tourism Center programs support the further development of the tourism industry in Minnesota. A variety of workshops and individual consultations are offered to tourism business owners, managers, and employees or people interested in starting a tourism business. Close to 2,400 managers and employees in hospitality businesses were trained in the Center's acclaimed "Minnesota at Your Service" Program. The Center also continued to offer Festival and Event Management Certification, Community Tourism Development, and Agri-Tourism Programs.

b. Impact

105 community leaders and local officials adopted new business and retention strategies as a result of participating in a BR&E Strategies Program last year. 138 existing businesses were retained, mostly in rural communities. Volunteers in all nine currently active BR&E Strategies Programs had accomplished at least half of the business and community improvement projects they had planned. One community has two new four-plex apartment complexes under construction with bonds issued by the EDA, plus 18 lots developed for new single family and twinhome projects. Another community organized a design team to address blighted areas in the town and obtained an student intern from the University of Minnesota to prepare drawings for projects that ranged in cost from a few thousand dollars to \$100,000. Some projects are now being implemented. Local businesses contributed \$10,000 to a project to a workforce expansion project to recruit local alumni back to the area. Another rural community involved in an Agriculture BR&E organized a "Health Care for Farmers" Project and arranged for more than 50 families to obtain coverage through "Minnesota Care", the statewide health insurance network of last resort. The project team is also pursuing state legislation to further extend Minnesota Care coverage to more farm families.

The Tourism Center's Agri-Tourism effort launched two new multi-farm cooperative agri-tourism marketing projects last year. Seven of the Center's participants in the 2001 Festival and Event Management Course reported that they planned to change one or more features of their event as a result of the training, e.g., change their marketing plan, develop job descriptions for volunteers, change their insurance coverage, etc. They also made new contacts and picked up new ideas to try in their event during the course.

References:

AES Project: MIN-52-073

<http://www3.extension.umn.edu/projects/bre>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1654>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1089>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2022>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2040>

c. Source of Federal Funds: Hatch and Smith-Lever 3b&c

d. Scope of Impact: Integrated Research/Extension and Multi-State Extension (FL, IA, ID, IL, KS, MI, NE, OH, WV)

Key Theme: Youth Development/4-H (EXTENSION)

Extension Plan of Work: Goal 5: 4-H/Youth Development

a. Description

The Minnesota 4-H/Youth Development Program continues to play a key role in the positive development of youth in Minnesota, especially among the growing number of racial/ethnic minority youth. During 2000-01, approximately 287,5000 Minnesota youth participated in 4-H related activities and projects. Based on 2000 Census data, nearly a quarter (22.4%) of all youth in Minnesota between the ages of 5 and 19 were involved in 4-H. Approximately 27,500 youth were members of 4-H clubs that offer intensive, on-going connections with adults and peers throughout the year. About 15.5% of the Minnesota youth participating in 4-H related activities and events were nonwhite or Hispanic or both, reflecting a continuing effort to expand 4-H programming to underrepresented and underserved communities.

The Center for 4-H/Youth Development at the University of Minnesota continues to be a leader nationally in research and evaluation on youth development. During 2000-01, the Center's research and evaluation team established a web-based 4-H participation data site, conducted a statewide 4-H impact survey with a random sample of youth members, and evaluated key programs such as the National 4-H Congress and Conference.

The research team also conducted an impact survey with random sample of MN 4-H'ers. The survey instrument was designed to "test" the MN 4-H program theory that is largely framed by the Keys to Quality Youth Development (revised, 1999). (See the program theory model at <http://www.fourh.umn.edu/evaluation/> under "Minnesota Youth Survey".) The survey addressed whether key youth development opportunities are being provided by 4-H; whether youth are experiencing the eight keys to quality youth development in 4-H; the extent to which these experiences are related to key impact area such as self-worth, self-identity, quality relationships, positive future orientation, etc.

b. Impact

Preliminary analyses (some data is still being entered and cleaned) indicate that MN 4-H is having a positive impact on the youth who participate. In general, a majority of the youth who responded indicated that they are experiencing positive youth development opportunities in 4-H. For example, youth reported that through 4-H participation, they feel a greater sense of belonging (82%), build quality relationships with adults other than their parents (86%), and make meaningful contributions to the community through service (80%). A majority of youth (81%) also indicated that their parents are actively involved in their 4-H experiences. When youth in 4-H were compared to other youth across Minnesota (compared with similar age groups from the 2001 Minnesota Student Survey conducted by the State Department of Children, Families and Learning): Youth in 4-H were more likely to volunteer in the community (53% of 4-Hers vs 32% of all youth statewide) and be involved in other activities such as sports (69% 4-Hers vs 57% statewide), and fine arts (65% of 4-Hers vs 56% statewide). They were also less likely to spend 6 or more hours per week watching TV (15% of 4-Hers vs 44% statewide) or playing computer/video games (15% 4-Hers vs 21% statewide). In addition, youth in 4-H were less likely than youth from a statewide survey to report that during the past year, they have stolen something (14% vs 26%, respectively), damaged property (9% vs 28%), smoked cigarettes (19% vs 26%), drank alcohol (23% vs 37%), or ridden in a car whose driver was drinking (22% vs 43%). More complete results will be available on the website address provided earlier.

References:

- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=368>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=383>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=820>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=410>
- <http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1379>

<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=823>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1030>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=212>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=896>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=366>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1993>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1857>
<http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=1947>

- c. Source of Federal Funding: Smith-Lever 3b&c
- d. Scope of impact: State-Specific

- Stakeholder Input Process

A. *Actions taken to seek stakeholder input that encourages their participation.*

Update to 1999-2000 statement: We continue to seek identification of emerging new issues via a variety of means, e.g., continued relationships with clientele through advisory committees at county, regional, and state levels, engagement with minority groups through our diversity and inclusion specialist, our strengthened connection with county commissioners through our Association of Minnesota Counties Extension Fellow, and the review of Census 2000 and other secondary data, etc. Our State Extension Advisory Committee currently has five members (out of 21) that represent various racial/ethnic minority groups. The Center for 4-H/Youth Development has a staff member dedicated to multicultural youth development. Our Rural Regional Sustainable Agriculture and Natural Resource Partnerships have advisory committees that include racial/ethnic minority persons. Our May 2001 Staff Summit featured a new video focused on diversity and inclusion--"The Changing Face of Minnesota". The keynote speaker was the Honorable Sharon Sayles Belton, an African-American then serving as the Mayor of Minneapolis. We are also supported in our continuing goal of achieving diversity and inclusion in programming by university administration. We have a number of programs supported by research projects that specifically address the needs of racial/ethnic minority groups. For example, we are working in partnership with the 1994 Land Grant Tribal Colleges in Minnesota, North Dakota, and Wisconsin on nutritional issues and the establishment of academic programs to teach nutrition, including the use of traditional Native American foods.

1999-2000 statement: In December 2000, the deans of the Colleges of Agriculture, Biological Sciences, Human Ecology, Natural Resources, Veterinary Medicine, and the University of Minnesota Extension Service conducted "listening sessions" with twenty groups in various locations throughout the state of Minnesota. Over 1,200 invitations were sent to a cross-section of Minnesota residents. In addition, open invitations were placed in local newspapers and announced on local radio stations.

Also in December 2000, the College of Agricultural, Food and Environment Sciences conducted eight listening sessions throughout Minnesota. Approximately 600 people were involved in them.

During Summer 2000, each of the eight Extension Administrative districts conducted a trend analysis process. Extension educators collected and organized existing data on trends in their districts. Data was organized under eight dimensions of a healthy community--Demographics/Diversity, Economic Opportunity, Safety and Security, Life Long Learning, Environmental Stewardship, Recreational and Cultural Opportunities, Infrastructure and Services, and Community Leadership. Stakeholders were engaged in reviewing and discussing the data. Based on those discussions, 5-7 priority trends were identified in each district as having the most influence on the economy, environment, and quality of life over the next three years.

In addition to the preceding recent processes for gathering stakeholder input, identification of research and educational needs comes from the Regional Sustainable Partnerships in Minnesota. These entities were established in 1997 when the Minnesota Legislature dedicated a \$1.2 million recurring appropriation to sustain, through a unique citizen/University partnership, the state's natural resource-based industries. The Regional Sustainable Partnership Program has established boards of directors and program development processes in five regions. These boards make monetary awards that support research (including applied on-farm research) and educational outreach projects in their respective regions.

There are direct ties between the citizen-driven regional partnership structures and the University of Minnesota. Faculty members serve on regional boards of directors and are engaged in projects that use their expertise. Deans in three collegiate units (Agriculture, Food, and Environmental Sciences, Natural Resources, and the Extension Service) provide administrative oversight and increasingly, projects are identified in common.

In sum, the addition of these Regional Sustainable Partnership Boards to the circle of input guiding Extension priorities provides a perspective and a citizen base that is more representative of the interests of citizens than in the past.

Unique stakeholder input processes have been used with other audiences, e.g., Native Americans. The USDA-Superior Service Award-winning Pathways to Educational Partnerships Program that is working with all residents on all of the Indian reservations in Minnesota has used the Planning Circle approach to involving people in determining what should be done in terms of educational programs and overseeing the progress being made. The major focus of PEP has been on food and nutrition and gardening programs to promote health and wellness among reservation residents.

The Planning Circle is a gathering of American Indian community members, Extension educators, and representatives of other agencies with a "stake" in the work to be done. Led by multicultural leaders, Planning Circle members identify wellness goals for the community and the best pathways to achieve those goals, integrating research-based health, nutrition, and food production information, as appropriate, into traditional systems. Trust, understanding, cultural sensitivity, and open communication are the cornerstones of the Planning Circle.

B. *Brief statement of the process used to identify individuals and groups who are stakeholders and to collect input from them.*

For research, a cross-section of citizens from communities around our Research and Outreach Centers (outstate Experiment Stations) were selected, in addition to individuals from special interest and commodity groups. These open meetings were also announced on local radio stations and in local newspapers. Citizens were asked to respond to specific questions about their needs and how the University of Minnesota could best serve them.

For Extension, a worksheet was provided for each district team to encourage diverse stakeholder engagement. Categories included: Internal university linkages: Research and Outreach Centers, coordinate campus, Regional Partnerships, and County Extension Committee members; External Linkages such as school systems, professional groups, justice system; and Residency from various locations in the district. We sought sector balance: Agriculture, business, government agencies, education, organizations/nonprofits, health, and others. We also encouraged sex/gender balance, as well as representation by race/ethnicity, age, disability and social/economic class. In addition to these categories, we asked people to think about diversity in terms of national origin, religion, marital status and sexual orientation.

Each district team determined the process they would use to engage a cross-section of people from the preceding stakeholder categories. Examples included one-one interviews or small group interactions at county fairs, engagement of existing community coalitions and advisory groups, telephone surveys, and focus groups.

C. *Statement of how the collected input was considered.*

For Extension, after stakeholders examined the collected data, they discussed it and rank ordered the trends they thought would be most influential over the next three years in their district.

For research, the six deans mentioned previously, plus the associate deans for research from each of the colleges, spent many hours identifying priority areas for Experiment Station research. These areas include: (1) Enhancing Minnesota's Environment (Water Quality, Land Use Management, Ecosystems, Agriculture Waste Management); (2) Food and Health (Food Safety, Biotechnology and Risk Management, Nutrition, Foods for Prevention and Treatment of Human Diseases); and (3) Building Vital Communities (Human Capital, Value Added Resources, Technology, Entrepreneurship).

The input is also being used in strategic planning processes underway in each of the colleges.

D. *Statement regarding the usefulness of the stakeholder input process in refocusing and reaffirming priorities or in identifying emerging issues.*

Stakeholder input was critical to identifying and reaffirming priority trends in each Extension district. The process grounded and reaffirmed Extension educators' knowledge of priority trends and resulting issues in their districts. District trends were presented in October 2000 at the annual Extension Program Summit to 470-field and campus faculty. At the same time, leaders from the four Extension Capacity Areas--Agriculture Food and Environment, Natural Resources and Environment, Youth and Family Development, and Community Vitality--presented priority trends from a discipline perspective. (Field and campus faculty affiliate with a Capacity Area, which supports Extension work via resources, expertise, and staff and program development.)

Capacity Areas had conducted trend analysis processes similar to those in the Extension districts. They engaged stakeholders by preparing white papers summarizing the trends and related research information for discussion that were shared with stakeholders at the state or regional levels.

At the Program Summit, trends identified in the districts and through the disciplines were compared and contrasted. The process surfaced eleven key trends with five of the eleven showing strong representation in the district and the discipline or Capacity Area. District and Capacity Area Teams proceeded to hone issues resulting from the priority trends in order to identify Extension's niche or work within those issues. Capacity Areas each identified 3-4 priority issues in which to invest their resources over the next several years. District plans of work reflect 5-7 priority issues important to the district over the next several years. Approximately 70% of the district work aligns with Capacity Area priorities; 30 % of the plans represent work unique to a district.

The stakeholder input from the listening sessions will have direct input into the colleges' strategic planning processes. It will directly influence the use of resources and the direction of programs.

- Program Review Process
 - What is our process?
 - Have there been any significant changes in it during 2000-01? No

In 2000, we re-created a system-wide program development process. In the preceding stakeholder input section, we identified the process we used to realign field and campus faculty around critical work needed in the state. We are also developing strategies to identify and evaluate learning within and without the organization. The plan to date includes the following strategies:

- *Each Capacity Area will evaluate at least one of their priority issues on a statewide basis.*
- *Each Capacity Area and District team will update/incorporate census data into their trend analysis summary as it becomes available. Where there are significant changes, stakeholders will be engaged in discussions of the census data and its implications for Extension programs.*
- *Program planning will be adjusted to address any unanticipated changes.*

We are also making plans to evaluate the statewide program development process launched with the trend analysis process spring of 2000. Stakeholders, within and outside of the organization, will be engaged in the review of the system-wide goals, mapping of strategies, evaluation of the strategies, what emerged that wasn't anticipated, what adjustments were made, and what was learned? We will track each system-wide goal using these criteria.

We continue to review county plans of work and programs as we've done in the past. County Extension Committees are required by Minnesota law to review the county plan of work. Program development involving a number of counties is advised in some parts of the state by multi-county advisory committees. Most Extension work is done in partnership with other organizations and agencies served by advisory committees. We also continue to receive programmatic input on a regular basis from commodity groups, farm organizations, and volunteers.

The statewide Extension Citizen's Advisory Committee advised the trend analysis process and provided thoughtful input at developmental stages. The Association of Minnesota Counties (AMC) Extension Committee also plays a significant role in identifying issues and advising us on programs. This committee's role and communication between them and Extension administration has been enhanced since we created the AMC Extension Fellow position three years ago. This position was based on and is similar to the National Association of Counties' Extension Fellow position where an Extension staff member is assigned to work as a liaison between the two organizations.

- *Evaluation of the Success of Multi-State and Joint Activities*

Did the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

We believe that our planned programs do address critical issues in a timely fashion. Every program has a unique group of stakeholders that provide direction and support—some program descriptions under Key Themes mention these external partners. The substantial amount of external financial support received for many programs also indicates that programs are based on critical issues that are identified by external stakeholders and that when they can, they also provide funding, or support the search for external funding.

We are now addressing the 14 major programs that are in our 2001-2004 Plan of Work that we submitted in March 2001. These programs are providing a greater degree of focus on the issues currently of major concern to Minnesotans.

Did the planned programs address the needs of under-served and under-represented populations in Minnesota?

Yes, we think they did. We have a sizeable number of programs that are targeted to minority groups, new immigrants, etc. Some of these programs are mentioned under various Goal 5 key themes, e.g., the individual and family financial management programs under the Family Resource Management theme, the Community Diversity Leadership Program under the Leadership Training and Development theme, and the Helping Youth Succeed: A Parenting Guide for Southeast Asian Families Program mentioned under the Parenting theme. Much of the work in Food Security under Goal 2 and Human Nutrition under Goal 3 is with audiences in the “under-served, under-represented” category. And while not specifically cited, an Immigrant Farmer effort that began nearly 20 years ago to assist Hmong farmers in growing food crops has been expanded to also include Hispanic, Somali, and Sudanese families who want to grow vegetables to feed themselves and perhaps ultimately provide family income as well.

We also track the involvement of under-served/under-represented groups in terms of numbers participating in our programs. These statistics indicate that in terms of the standard classifications of ethnic/racial groups, we are serving slightly more people in these categories than they represent in the total population in Minnesota.

Did the planned programs describe the expected outcomes and impacts?

Yes, they did, but we realize that we need to do a better job of specifying indicators of expected outcomes and measuring them, as well as doing more impact evaluation. We are planning to provide more staff development in program evaluation beginning and we are shifting other resources to provide more funding and support for impact evaluation. Also, some programs simply haven't been in place long enough yet to be able to measure meaningful impacts.

Did the planned programs result in improved program effectiveness and/or efficiency?

Yes, we think they did. We hear a lot of concern from state and county governments in Minnesota and our legislators about “duplication of effort”. Putting greater emphasis on (1) identifying stakeholders and potential collaborators through trend analysis/issue identification and then engaging with them to plan programs, (2) seeking external funding (which often requires “sharpening” program designs by being more specific about expected outcomes and impacts and getting the support of collaborators), and (3) seeking to more fully extend the resources of the whole University helps to “build better programs from the ground up” and therefore to be both more effective and more efficient in terms of using the resources available.

Was research integrated in the Extension activities?

The University of Minnesota Extension Service and the Minnesota Agricultural Experiment Station have long had a close working relationship. All campus-based faculty in academic departments that have Extension appointments also have

research appointments. Subject-matter staff development for Extension educators typically includes updating on research activities. Extension educators have been encouraged to affiliate with academic departments in disciplines appropriate to their academic training and the focus in their educational work.

The MAES branch experiment stations have transitioned into regional Research and Outreach Centers (located at Crookston, Grand Rapids, Lamberton, Morris, and Waseca). The offices of Extension District Directors are located at four of these locations. Each ROC has a cadre of academic faculty with joint Extension and research appointments located there.

The Research and Outreach Centers are intended to serve as “gateways” to the University of Minnesota. They provide venues for addressing community concerns facing rural Minnesotans while continuing their mandate to conduct and disseminate agricultural and natural resources research based on regional-specific results via Extension. Extension and research faculty and Extension educators participate in field days and other ROC activities. Extension educators often use ROC facilities for their meetings and educational events and they call on ROC faculty for specific information on a variety of agricultural, natural resource, economic and social topics that they need to enhance educational programming. The effort to strengthen the MAES and Extension relationships is resulting in nearly “seamless” collaboration at the regional level.

Many ROC-based faculty were involved last year in the trend analysis and issue identification process described in Part II, Stakeholder Input Process. Many of them also participated in the Fall 2000 Extension Program Summit when the trends identified regionally were further refined into programmatic issues and prioritized for each Extension administrative district. These regional issues became the core of new District Plans of Work, which in turn, became the basis for identification of major issues at the state level and the new 2001-2004 University of Minnesota Extension Service Plan of Work.

- *Multi-State Extension Activities (See Form CSREES-REPT 2/00)*

We deliberately set our Multi-State Extension Activities target low because (1) we did not have FY97 data on which to base a target and more importantly (2) we are not sure that what we class as “Multi-State Extension Activities” meet your definition of such. Furthermore, much of what is being done between or among states is collegial in nature, i.e., not documented by formal memoranda of agreement between institutions indicated as necessary proof for an audit.

Many of our campus-based faculty do work in other states or collaborate with their colleagues in other Extension Services. A good many of our Extension educators, especially those in “border” counties adjacent to Wisconsin, Iowa, North and South Dakota, and the Canadian Provinces of Manitoba and Ontario, do work with their colleagues across borders, sharing information about programs, inviting each other

and each other's clientele to programs, etc. But there is still the question of whether such sharing meets the definition and would be so considered in an audit of such activities.

We are now asking our staff to report any multi-state activities and which states were involved, so we do have some data on who is involved and what states are involved. But the problem remains that these arrangements are rarely documented, at least not to the extent that you have indicated is necessary to meet the definition of multi-state activities.

- *Integrated Research and Extension Activities (See Form CSREES REPT 2/00)*

We believe that most of our Extension programs do show evidence of the input of research information. That "evidence" is partially indicated by the CRIS numbers for research projects and the Minnesota Impacts! database citations shown at the end of program descriptions—often those with Extension themes, as well as joint themes. We cannot always show a research-Extension connection because MAES does not conduct research on some of the issues on which we program—research is used where available, but from sources other than Hatch-funded research.

University of Minnesota Extension Service

2000-01 Federal Accomplishments and Results Report

Joint Themes (Integrated Research-Extension Programs) Financial Data

Source of Funding

	<i>Hatch</i>	<i>Smith-Lever 3b&c</i>	<i>State</i>	<i>County</i>	<i>Grant & Contract</i>	<i>Staff FTEs</i>
GOAL 1 Theme Ag. Profit.						
	\$176,876	\$200,536	\$993,334	\$66,845	\$175,500	14.8
Total	\$176,876	\$200,536	\$993,334	\$66,845	\$175,500	14.8
GOAL 2 Theme Food Safety						
	54,806	138,710	251,641	46,237	16,215	6.2
Total	\$54,806	\$138,710	\$251,641	\$46,237	\$16,215	6.2
GOAL 3 Theme Human Nutrition						
	29,664	137,900	54,096	45,967	292,888	6.1
Total	\$29,664	\$137,900	\$54,096	\$45,967	\$292,888	6.1

**GOAL 4
Themes**

**Ag.
Waste
Mgmt.**

19,936 70,838 193,632 66,200 374,219 4.2

**Water
Quality**

68,401 \$32,789 \$179,438 \$10,930 \$197,191 6.4

Total \$88,337 \$103,627 \$373,070 \$77,130 \$571,410 10.6

GOAL 5

**Imp.
Rur.
Commu
n.**

52,590 \$14,181 \$53,979 \$4,727 \$21,425 3.4

Total \$52,590 \$14,181 \$53,979 \$4,727 \$21,425 3.4

**Grand
Total** \$402,273 \$594,954 \$1,726,120 \$240,906 \$1,077,438 41.1

University of Minnesota Extension Service

2000-01 Federal Accomplishments and Results Report Financial Data

Sources of Funding

	<i>Hatch</i>	<i>Smith-Lever 3b&c</i>	<i>State</i>	<i>County</i>	<i>Grant/Contract</i>	<i>Total</i>	<i>Staff FTEs</i>
Goal 1 Themes :							
Ag. Profit (J)	\$176,876	\$200,536	\$993,334	\$66,845	\$175,500	\$1,613,091	14.8
Risk Mgmt. (E)	0	48,881	225,226	16,294	23,622	314,023	4
Total	\$176,876	249,417	\$993,334	\$83,139	\$199,122	\$1,927,114	18.5
Goal 2 Themes :							
Food Qual./Safe. (J/E)	\$54,806	138,710	251,641	46,237	16,215	\$507,609	6.2
Food Security (E)	0	549,266	162,289	183,088	5,874,533	6,769,176	11.8
Total	\$54,806	687,976	413,930	229,325	5,890,748	\$7,276,785	18.0

Goal 3 Theme:							
Human Nut. (J)	\$29,664	\$137,900	\$54,096	\$45,967	\$292,888	\$560,515	6.1
Total	\$29,664	\$137,900	\$54,096	\$45,967	\$292,888	\$560,515	6.1
Goal 4 Themes :							
Ag. Waste Mgmt. (J)	\$19,936	\$70,838	\$193,632	\$23,613	\$66,200	\$374,219	4.2
Pest App. (E)	0	14,046	76,112	4,682	55,405	150,245	1.3
Water Quality (J)	68,401	32,789	179,438	10,930	197,191	488,749	6.4
Total	\$88,337	\$117,673	\$449,182	\$39,225	\$318,796	\$1,013,213	11.9
Goal 5 Themes :							
Ag. Fin. Mgmt. (E)	0	46,746	1,046,803	15,582	175,500	1,284,631	11.5

<i>Fam. Res. Mgmt. (E)</i>	0	133,693	126,387	44,565	181,842	486,487	3.9
<i>Imp. Chg. Rur. Com. (J)</i>	52,590	14,481	53,979	4,727	21,425	147,202	3.4
<i>Leader ship (E)</i>	0	177,635	46,746	59,212	186,568	470,161	3.6
<i>Parenti ng (E)</i>	0	112,190	196,452	37,397	274,050	620,089	4.2
<i>Prom. Bus. Prog. (E)</i>	0	84,143	313,293	28,048	13,500	438,984	4.6
<i>Youth Dev./4- H (E)</i>	0	2,908,640	1,308,888	969,547	665,009	5,852,084	38.0
<i>Total</i>	<i>52590</i>	<i>3,477,528</i>	<i>3,092,548</i>	<i>1,159,078</i>	<i>1,517,894</i>	<i>9,299,638</i>	<i>69.2</i>
<i>Grano Total</i>	<i>\$402,273</i>	<i>\$4,670,494</i>	<i>\$3,710,061</i>	<i>\$1,556,734</i>	<i>\$8,219,448</i>	<i>\$30,391,528</i>	<i>123.7</i>

U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)

Institution University of Minnesota
 State Minnesota

Check one: Multistate Extension Activities
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

Title of Planned Program/Activity	Actual Expenditures				
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Goal 1, Program 5, Crop Production	\$58,500	\$336,571			
Program 8, Food Crops	93,267	--			
Total	\$151,767	\$336,571			

Charles H. Cary Director 2/28/02 Date

3/1/02

Data Summary

2000-01 Federal (AREERA) Accomplishments and Results Report

This data is reported for the Federal Fiscal Year, October 1, 2000, to September 30, 2001. It was gathered in response to the requirements of the Agricultural Research, Extension, and Education Act of 1998 (AREERA). It reflects many but NOT ALL University of Minnesota Extension Service educational programs and activities.

Goal 1: An agricultural system that is highly competitive in the global economy.

No. of direct educational services provided during 1999-2000:	50,855
Professional staff time used:	56.8 FTEs
Support staff time used:	6.7 FTEs
No. of volunteers involved:	6,454
Total direct costs of service delivery:	\$377,795
Income from participant fees:	\$158,962
Income from grants and/or contracts:	\$1,207,925

Goal 2: A safe and secure food and fiber system.

No. of direct educational services provided during 1999-2000:	21,233
Professional staff time used:	6.2 FTEs
Support staff time used:	0.4 FTEs
No. of volunteers involved:	855
Total direct costs of service delivery:	\$75,585
Income from participant fees:	\$26,815
Income from grants and/or contracts:	\$16,215

Goal 3: A healthy, well-nourished population.

No. of direct educational services provided during 1999-2000, (includes Food Stamp Nutrition Education and Expanded Food and Nutrition Education Programs):	859,682
Professional staff time used:	16.2 FTEs
Paraprofessional staff time used:	102.5 FTEs
Support staff time used:	4.2 FTEs
No. of volunteers involved:	985
Total direct costs of service delivery:	\$4,494,576
Income from participant fees:	\$10,513
Income from grants and/or contracts:	\$6,167,421

Goal 4: An agricultural system which protects natural resources and the environment.

No. of direct educational services provided during 1999-2000:	54,532	
Professional staff time used:		26.4 FTEs
Support staff time used:		2.6 FTEs
No. of volunteers involved:	4,373	
Total direct costs of service delivery:		\$497,555
Income from participant fees:		\$76,397
Income from grants and/or contracts:		\$1,030,566

Goal 5: Enhanced economic opportunity and quality of life.

No. of direct educational services provided during 1999-2000 (includes youth served through 4-H/Youth Development Programs):	499,749	
Professional time used:		63.6 FTEs
Paraprofessional time used:		20.8 FTEs
Support staff time used:		14.5 FTEs
No. of volunteers involved:	41,092	
Total direct costs of service delivery:		\$1,338,359
Income from participant fees:		\$430,604
Income from grants and/or contracts:		\$1,705,780

Farmer-Lender Mediation Program:

Mediation Case Results, 2000-01

Agreements not in writing	62	
Written agreements	59	
No agreement reached		123
Withdrawals	25	
Cases still pending	90	
Total	359	

GRAND TOTALS:

No. of educational services provided during 2000-01:	1,486,051	
Professional staff time used:		155.5 FTEs
Paraprofessional staff time used:		123.3 FTEs
Support staff time used:		23.2 FTEs
No. of volunteers involved:	53,759	
Total direct costs of service delivery:		\$5,833,870
(Direct costs averaged \$3.92 per direct educational service provided.)		
Income from participant fees:		\$703,291
Income from grants and/or contracts:		\$10,127,907

Distribution of educational services provided during 1999-2000 by gender and racial/ethnic group:

Total number of educational services provided:	1,486,051	
Services provided to females:	784,158	52.8%
Services provided to males:	701,893	47.2%
Services provided racial/ethnic groups (the 2000 Census racial/ethnic groups are not compatible with the categories used previously):		
White	1,102,512	74.1%
Black	138,002	9.8%
American Indian/Alaskan Native	51,119	3.3%

<i>Hispanic</i>	<i>128,393</i>	<i>8.5%</i>
<i>Asian/Pacific Islander</i>	<i>66,025</i>	<i>4.3%</i>

Overall, the number of persons served in 2000-01 that are members of racial/ethnic minority groups totaled 25.9%. According to the 2000 Census, racial/ethnic minority persons are now 11.8% of the total population in Minnesota.

Notes:

- *"Educational services" includes participation in group educational activities and events, one-on-one consultations in Extension offices and other locations, and individual responses to inquiries in Extension offices or over the telephone. Such direct services do not include indirect contacts via the media or newsletters. The term "educational services" is used rather than "number of participants" because a single program participant may have received more than one "service".*
- *Professional staff time includes time contributed to educational program delivery by Extension educators and campus-based faculty in academic departments and other units.*
- *"Total direct costs of service delivery" includes the actual costs related to providing these educational services, e.g., rental for meeting space, costs of materials prepared specifically for an event, costs for speakers, travel, equipment, and any other expenses that are directly related to the program, activity, or event.*