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February 28, 2003

Bart Hewitt
Partnerships/POW
Cooperative State Research, Education, and Extension Service
U. S. Department of Agriculture
1400 Independence Avenue, SW, Stop 2214
Washington, DC 20250-2214

Dear Mr. Hewitt:

I am pleased to transmit to you electronically the files for our 2001-02 Accomplishments and Results Report. This document is in Microsoft Word format. We have followed the reporting guidelines and are reporting only those programs where we have evidence of outcomes and impact.

I am authorizing our accountability and reporting specialist, Marilyn Grantham, to transmit our report to you at bhewitt@reeusda.gov. Please acknowledge the receipt of the report files via e-mail to Ms. Grantham (grant005@umn.edu).

I understand that our 2001-02 Accomplishments and Results Report will be reviewed by the same CSREES national programs leaders this year that reviewed our 2000-01 report and that we can expect a response from your office no later than May 31, 2003. I look forward to receiving correspondence from the reviewers regarding our latest accomplishments and results report.

Sincerely,

Charles H. Casey

Charles H. Casey
Dean and Director

University of Minnesota Extension Service

2001-02 Accomplishments and Results Report

March 1, 2003

St. Paul, Minnesota 55108

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2001-02 Federal (AREERA) Accomplishments and Results Report

Preface

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

EXECUTIVE SUMMARY

Fiscal year 2002 continued to provide the University of Minnesota Extension Service with challenges and with a substantial deficit projected in state tax revenue, the outcome of the current fiscal year is uncertain for higher education in general. Nevertheless, we continued to implement our "Extension 2002-2005 Change Plan: Plans for Extension's Future", re-focusing our work and assuring university administrators that we are re-positioning ourselves financially in order to continue to effectively and efficiently carry out our outreach mission. We are also implementing 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. The 14 major programmatic issues that we submitted as our 2001-2004 Plan of Work remain paramount and are being used to provide greater focus for our work as we continue to implement our change plan.

We now have a new president, Dr. Robert Bruininks, formerly our provost, dean of the College of Education and Human Development, and a faculty member with a distinguished career at the University of Minnesota. Dr. Bruininks is very knowledgeable about Extension and has been a strong advocate for the outreach mission of the university. We are fortunate to have a president with the deep understanding of the work that Extension does to bring research-based education to Minnesota citizens and communities across the state to address their critical issues.

The data that we collected on programs during 2001-02 continued to indicate that we are serving a significant number of Minnesota citizens. We provided close to 1.1 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 over 5.2 million visits and Info-U, our automated telephone/Fax-back answering system, logged 600,000 visits to web documents and 34,000 phone inquiries, 1,800 of them information in Spanish.

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 $7.4 million last year, but these costs were partially offset by more than $1.7 million in fees charged those participants who could afford to pay for program participation. Faculty and Extension educators also brought in more than $11 million in grants, gifts, contracts, and in-kind contributions last year. Our Food Stamp Nutrition Education (FSNEP) and Expanded Food and Nutrition (EFNEP) Program contracts totaled more than $5.3 million. Nearly 23,500 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 adult 4-H leader and Master Gardener. The value of the volunteer time contributed by Master Gardeners (88,400 hours last year) in 2002 is more than $1.3 million, based on the average non-agricultural wage rate in Minnesota, plus 20% for fringe benefits. The time donated by adult 4-H volunteers is worth $17 million.

I. PROGRAMS

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

Overview:

In keeping with the instruction to report only those programs where we have outcomes and impacts, we are reporting on five key themes under Goal 1. They reflect fifteen specific programs that our faculty and Extension educators reported last year. Many of the Extension themes could also readily be termed integrated research and Extension efforts 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. The Minnesota Impacts! URL is http://www.extension.umn.edu/mnimpacts.

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 more than 72,000 farmers, commercial fruit and vegetable growers, agribusiness people, and green industry employees via Goal 1 programs during 2001-02. They invested 46.6 FTEs of their time and spent more than $1.3 million to develop and deliver these programs. These direct program costs were offset by over $594,000 in participant fees charged for some programs (primarily those for agricultural professionals and industry employees) and close to $4.6 million in grant funds, contracts, gifts, and in-kind contributions 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 had 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 positive economic, social, and environmental impacts on individuals, families, and communities. Precise measurement of impacts across the variety of programs represented under Goal 1 is very difficult to determine. Some specific 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 by those receiving the information in order to implement changes.

Key Theme: Agricultural Profitability (EXTENSION)

Extension Plan of Work: GOAL 1, Agriculture, Food, and Environment Capacity Area: Dairy Modernization, Dairy Initiative, and Dairy Production and Management Programs

a. Description

Dairy remains an important agricultural enterprise in Minnesota, but small farms struggle to be profitable. Producers who want to stay in business and bring family members into the business are seeking help to determine how to modernize and become more profitable. A new, more highly focused effort, Extension's Dairy Modernization Program, builds on the work done in the Dairy Initiative Program and other dairy production and management efforts, e.g., the Dairy Diagnostic Teams.

Educators worked with more than 6,700 dairy producers in Minnesota during 2002, with program costs supported by nearly $197,000 in grants, gifts, and in-kind contributions. The Center for Farm Financial Management contributed to the overall effort by providing financial analyses and the use of risk management tools to help producers develop strategic plans for expansion. Group sessions also addressed milk pricing trends and factors affecting

milk prices, as well as the topics of livestock housing, lighting, and cow comfort, nutrition, moldy feed, SSC control, selecting forage varieties for quality, and pasture management. Dairy Profitability Teams provided customized assistance to individual farmers to help identify where they most need to make changes that will improve the profitability of their businesses.

b. Impact

Impact varied from producer to producer but nearly all farmers involved in Extension programs in 2002 adopted one or more new management practices, ranging from improving bunker silo management to scouting to control potato leafhopper infestations in alfalfa. Changing the way he managed his bunker silo face enabled one producer to reduce his feed loss by 10%, saving about 240 tons of silage annually. At $40 a ton, this saving is about $9,600 a year. Timely scouting enabled four farmers with 1,200 acres of alfalfa to avoid spraying their second cutting, saving them about $10,800. Three dairy producers in one county signed up for the Dairy Quality Assurance Program, making them eligible for up to $5,000 in cost-share money to bring their farms into compliance with state feedlot management rules.

In another region, producers were introduced to the New Zealand style swing over milking parlor that significantly reduces milking time and labor. Two producers adopted this type of parlor and found that their milking time and labor has been reduced 50%. Using better milking equipment reduced SCC from 200,000 to 100,000 and enhanced the safety and health of milkers.

One producer decided to start a custom forage harvesting business as a sideline. He talked to several other dairy farmers and bought a self-propelled forage harvester. By cooperating and using the services of the farmer with the harvester, they are now all harvesting their forage faster and cheaper than if they all owned their own equipment. The quality of the feed has also improved. A dairy farm worker is investigating the possibility of a dairy relief milking business.

The Dairy Strategic Planning Program coordinated by the Center for Farm Financial Management enabled 42 producers to assess their options for expansion and identify new opportunities for their businesses. All of the participants were able to identify strengths and weaknesses that they need to change. More than 88% of the producers developed written goals, 78% made progress in writing a business plan, and 71% evaluated potential business alternatives using FINLRB—the long-range financial analysis program in FINPACK. 82% said they also planned to develop a management team for their farm. All of the participants thought the program helped them--39% said it was very successful in helping them to strategically plan their future in the dairy industry; the remaining 61% thought that the assistance was helpful.

References:

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2876
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2974

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2977
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2978
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3055
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3080

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

d. Scope of Impact: State-Specific

Key Theme: Managing Change in Agriculture (EXTENSION)

Extension Plan of Work: GOAL 1, Agriculture, Food, and Environment Capacity Area: 2002 Farm Bill Education Program

a. Description

Extension educators have made a major effort to inform farmers about the provisions in the 2002 Farm Bill so that they can make informed decisions about participation in commodity and conservation programs. During 2002, 106 Extension educators and campus-based faculty and staff worked with 131 federal and other agency representatives to ensure that farmers were informed about Farm Bill programs and their options to participate in them. Extension educators reached over 8,500 people directly, some of them agriculture professionals who, in turn, worked directly with farmers. They also provided more than 3,200 individual consultations to farmers. Many more people received information via 168 newspaper articles and radio programs and 43 articles written for newsletters with more than 27,700 copies distributed directly to farm families. In addition, nine new publications were written with more than 5,200 copies distributed, information was placed on 20 Extension websites (state and county), and three software decision-aid programs were developed and distributed to assist farmers in determining their best sign-up options.

b. Impact

One educator estimated that the economic benefit to farmers from familiarizing themselves with the 2002 Farm Bill provisions and using Extension information to make informed decisions ranged from $1,000 to $40,000 each, depending on the crops produced and the options available. Another educator reported that the difference between the lowest and highest option for farmers in his region was $50,000.

An educator's follow-up survey of agricultural professionals and farmers who participated in group meetings in his 14-county region revealed that more than 88% said the information they'd received was helpful in deciding which options would be the most profitable for them or their clients and nearly 85% stated that there was value in using the computerized decision aids to assist in choosing options. A second survey relating to the economic impact of the difference between the lowest income option choice and the highest choice indicated that each producer increased their gross income an average of $2,446 by participating in the

meetings/using the computer decision-aid. This average resulted in an additional nearly $2.2 million in gross farm income in this educator's jurisdiction. This additional income likely will have a direct financial impact locally because Minnesota Adult Farm Management Program data estimates that a typical farmer in southern Minnesota spends, on average, more than $392,000 annually on farm inputs, most of it within 21 miles of where the farm is located.

In terms of conservation program participation, another educator estimated that running the computerized base and yield analysis to choose the best option would likely save each individual farm unit an average of $12,000 during the period the Farm Bill program is in effect.

Website: http://www.extension.umn.edu/farmbill/

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

d. Scope of Impact: State-Specific

Key Theme: Plant Production Efficiency (EXTENSION)

Extension Plan of Work: GOAL 1, Agriculture, Food, and Environment Capacity Area: Crop Production and Management--Agricultural Professional Field School, Agricultural Professional Updates, Corn Production, Crop Pest Management, Soybean Aphid, Soybean Production, and Dry Edible Bean Production Programs

a. Description

Extension faculty and educators address plant production efficiency through best management practices, including crop pest management. These efforts have environmental, as well as economic benefits. An outbreak of soybean aphid infestation was anticipated during the 2002 growing season but did not materialize. Nevertheless, Extension prepared soybean producers and others, e.g., township officers responsible for local weed control, to scout for aphids and to recognize buckthorn that serves as a host and to be ready to take action if the infestation occurred.

In central Minnesota, a team of Extension educators has begun using a "learning group" approach to working with dry edible bean producers to address the problem of declining yields and profitability. Minnesota accounts for 60% of the dark red kidney beans produced in the U. S. and average yields have dropped 900 lbs. per acre in the last 10 years. The more intensive learning group approach is an on-going effort to get producers together on a regular basis and to share information among them, as well as to provide the latest research results on dry edible bean production.

Many crop producers in Minnesota use the services of certified crop advisors to scout their fields and advise them on pest management. Providing quality training for crop advisor

certification and updating to maintain professional proficiency is an important task for Extension. Crop advisors serve an estimated 5,000 growers farming more than 1.7 million acres in Minnesota and bordering states. Their advice helps producers make sound economic and environmentally friendly decisions that enable crop producers to continue to be sustainable.

b. Impact

One educator reported that an evaluation of his program indicated that farmers engaged in intensive corn-soybean production in his region were implementing best management practices for nutrients and pesticides. They were applying nitrogen fertilizer at rates at or below current University of Minnesota recommended rates on 96% of their acreage. None of the nitrogen applications were made in the Fall and 60% of the Spring applications utilized a nitrification inhibitor. Pesticide applications on 100% of the acreage of these producers were at or below recommended levels.

In another region of the state, an educator reported that approximately 50% of the corn producers were using corn rootworm and insecticide controls based on University of Minnesota recommendations. He also observed that scouting for bean leaf beetle and soybean aphid had dramatically increased in his region.

Soybean growers in NW Minnesota were estimated to save an average of $2,000 per farm by implementing recommendations from Extension's Soybean Schools. When asked their opinion of the value of the research information they received in the schools, the average reported was $625 per grower.

Dry edible bean producers learned to identify the prevalence of root rot pathogens in their bean and other crops. They successfully used a biological control organism (*Bacillus subtilis*) to significantly reduce root rot and increase dry bean yields an average of 446 lbs. per acre. The biological control was also far less costly--$1 per acre--than the typical chemical treatment, thereby improving profitability. In addition, evaluation of 129 advanced dry bean breeding lines identified three showing some resistance to one of the root rot pathogens.

During 2002, Extension crop pest management educators trained 275 crop advisors. Professional updating was provided for 392 advisors, most of them certified advisors seeking professional continuing education units to maintain their certification.

References:

MAES Research Projects: MIN-05-024, MIN-13-027, MIN-13-029, MIN-13-052, MIN-13-060, MIN-25-085

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2254
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2570
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2724
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2910
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2940
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2966

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2967
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2968
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3033
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3234

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

d. Scope of Impact: State-Specific

Key Theme: Precision Agriculture (EXTENSION)

Extension Plan of Work: GOAL 1, Agriculture, Food, and Environment Capacity Area: Precision Agriculture Program

a. Description

Precision agriculture focuses on more precisely managing crop inputs and increasing yields and product quality, yet many crop producers do not yet know how to effectively use these managerial techniques. The Precision Agriculture Center (PAC) that is part of the College of Agricultural, Food, and Environmental Science's research and Extension effort was organized for this purpose—to lead in providing the most up-to-date information to farmers and agribusinesses, not only in Minnesota but around the world.

In addition to conducting research and teaching on campus, the Center staff work directly with growers and learn from them. In turn, growers share their experiences to teach others. Four "Grower Learning Groups (GLGs)" have been organized in Minnesota thus far—one each in the central, northwest, south, and west central regions of the state. Each group has no more than 12 members who meet regularly in the winter and summer to share experiences and also provide information to other producers outside their immediate group. PAC works with the GLGs by (1) providing the most recent information about new precision agriculture technologies and practices, (2) helping them use PA progressively and efficiently, (3) developing on-farm trials to help define optimum site-specific techniques, and (4) processing, managing, and efficiently using all of the accumulated PA information. In addition, PAC staff meet individually with producers during the growing season to address site-specific concerns. Growers all over the world can also obtain the latest information from the Center's Precision Agriculture website.

The Center also sponsors an annual Internal Precision Agriculture Conference and distributes several publications. The work is supported by a $3.8 million grant from the U. S. Department of Agriculture.

b. Impact

Using PA can result in considerable increases in returns for crop producers but the economic impact varies according to which PA methods are employed, the type of crop raised, the

degree of change made, etc. Some of the highest net returns gained using PA, up to $140 per acre, come from improved quality in sugar beets and other high-value crops. Corn and soybean returns are much smaller and more highly variable, usually generated by reducing inputs and improving management decisions. Growers typically average between $10 and $20 per acre more in returns per acre for corn and soybeans by changing a single management practice (e.g., tiling wet areas, hybrid selection, or more precisely applying fertilizer).

More precisely applying fertilizer or herbicides can result in substantial savings in input costs for growers. One Minnesota producer was able to reduce his phosphate application 65%, for a net saving (after paying for soil sampling and analysis) of $3,000 in input costs for that year's crop.

Website: http://precision.agri.umn.edu

References:

MAES research project: MIN-12-028
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3072

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

d. Scope of Impact: Multi-State (and International)

Key Theme: Risk Management (JOINT)

MAES Plan of Work: GOAL 1, Agricultural Marketing and Distribution
Extension Plan of Work: GOAL 1, Agriculture, Food, and Environment Capacity Area: Agricultural Financial Risk Management, Agricultural Marketing, Processing, and Distribution—Market Outlook and Marketing Clubs, Post-Harvest Marketing, Pre-Harvest Marketing, and Winning the Game Programs

a. Description

Research: A study analyzing the returns to scale and diversification for local farm supply and grain-marketing cooperatives was completed using data from 377 local supply and grain marketing cooperatives in five Upper Midwestern states. Those achieving the lowest cost were assigned an efficiency of 1.0, while those with higher costs were given an efficiency of less than 1.0. For example, an efficiency of 0.7 indicates the firm had costs 30 percent higher than the most efficient firms. Overall efficiency averaged 0.67 for grain cooperatives, 0.72 for grain/supply cooperatives, 0.70 for supply cooperatives, and 0.67 for petroleum cooperatives. These overall efficiencies indicate that costs averaged 33 percent above the minimum. Analysis showed that inefficiencies in labor and capital use within the business are the major reason costs are above the minimum achieved by some firms. The study also revealed that diversification may be an effective risk management strategy for many cooperatives.

Other research indicated that producer savings accounts are likely to be of limited assistance in risk management for all but the highest income farms.

Producers need up-to-the-minute data on pricing to make the best decisions on forward pricing the commodities they raise. A new decision model takes advantage of the Internet as a powerful medium for providing real-time knowledge in a highly cost effective manner. The real-time decision model relies on continuously changing information, which can only be done using web-based technologies. During the first year of funding of this program a successful portal website was created and nine marketing decision tool modules were created.

To further support producers in risk management, a Marketeer software program has been developed and has been used extensively during the past two years by producers, educators, and market advisors. New components that have been incorporated into the software include a tracking system that allows the producers to enter actual prices received and compare to their marketing plan; expansion beyond grains to include marketing plans for dairy; research data and an educational program that use historical and seasonal comparisons to help producers develop their marketing plans; development of a 'what if' component that allows producers to explore the impact of different marketing strategies; and the incorporation of crop insurance strategies in combination with the marketing plan. There are 510 licensed copies of Marketeer in the hands of 344 agricultural professionals and 166 producers. Professional users, in turn, work with up to 100 producers, expanding the impact of Marketeer to several thousand of producers. Subsequent training programs for producers have used Marketeer software and concepts to help producers develop market plans, include price seasonality more effectively in their plans, better understand how to incorporate crop insurance into their marketing plans, and practice implementing their plans.

Extension: The Center for Farm Financial Management (CFFM) in the Applied Economics Department at the University of Minnesota develops and distributes FINPACK and other agricultural financial software and provides training for agricultural educators and other agricultural professionals in the use of these tools to help farmers efficiently and effectively manage their businesses. They learn how to evaluate their profitability, how to calculate production costs, how to develop sound strategic financial plans, and how to project reliable cash flow plans. An estimated 30,000 producers are assisted with financial planning each year nationally--10,000 of them in Minnesota. In addition, CFFM has been highly instrumental in the development and maintenance of the National Agricultural Risk Library and FINBIN, the financial database that provides essential information for estimating costs and returns for various crops and livestock enterprises.

The purpose of the Post-Harvesting Marketing Program is to teach producers post-harvest marketing techniques and to encourage them to develop and implement a post-harvest marketing plan for their grain. Participants learn about basis, futures prices, storage carry, storage hedging, and developing a marketing exit strategy. They then develop and implement a post-harvest marketing plan for their farm business. A simulation game enables them to see what the financial impact would be on their business if they implement their plan. Participants paid a fee of $75 for this program.

The Winning the Game Program focuses on pre-harvest planning for marketing, including using crop insurance to reduce risk. It also utilizes a simulation game to show producers the financial impact of planning ahead and implementing their marketing plans. The Winning the Game Program has been very successful in involving local banks, grain elevators, and other agribusinesses in co-sponsoring the program--providing financial support and encouraging their customers to participate. The Minnesota Soybean Research and Promotion Council provided a grant of $15,000. Participants paid a fee of $420 for Winning the Game.

b. Impact

Research: The web-based decision modules have been a tremendous benefit to farmers and lenders in making financial planning decisions. The marginal cost of delivering this real time information to a potentially infinite set of users is nearly zero. Marginal cost is the cost of adding one additional user. The value on this scale can be enormous even if the marginal cost is only a few dollars per head for any given producer.

Training sessions for producers using the Marketeer software have been attended by more than 7,000 throughout much of the Midwest and West. Professional users of Marketeer have worked with another 2,000 producers individually to develop and implement marketing plans. Conservative estimates indicate that producers who have implemented their marketing plans add at least $.15 per bushel to the price they receive for grain. For the typical 600-acre southern Minnesota producer, this would add $9,000 to their gross returns each year.

Extension: Forty-one producers in southern Minnesota participated in the Post-Harvest Marketing Program in 2002. All of them developed a marketing plan for their grain. More than 2,300 producers participated in the Winning the Game Program.

Educators estimate that participants in the Post-Harvest Marketing Program earned an additional $2,380, on average, by implementing their marketing plans. The overall economic impact for the 41 participants could be as much as $97,580 for 2002. The direct costs of delivering the program (out of pocket costs, excluding the value of the educators' time) were estimated at $592. Participant fees paid totaled $3,075.

Nearly 15% of the Winning the Game Program participants began using revenue-based crop insurance after learning about this in the program. Adding them to the number of participants that were already using revenue-based crop insurance brought the total number insured in the group to over 87%. Educators estimated that program participants could earn an additional 19 cents a bushel for corn, 33 cents a bushel for soybeans, and 14 cents a bushel for wheat, based on historical average prices, by implementing what they were taught in the program. A follow-up survey indicated that producers earned an additional $3,888, on average, from pre-harvest marketing planning. The total economic impact for program participants is estimated to be over $7.2 million for 2002 crops.

Websites:
National Agricultural Risk Library: http://www.agrisk.umn.edu
FINBIN: http://www.cffm.umn.edu

References:
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=171
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2784
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2835
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2881
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2882
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID-3086
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3132

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

d. Scope of Impact: Multi-State (AL, AR, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, MD, MI, MO, MS, MT, NC, ND, NE, NH, NY, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI)

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

Overview:

We are reporting on one theme under Goal 2 this year—Food Safety (EXTENSION).

Much of our food security effort that includes food safety under Goal 2 is carried out through our Food Stamp Nutrition Education Program (FSNEP) and Expanded Food and Nutrition Education Program (EFNEP) that are reported separately to USDA's Food and Nutrition Service and the Minnesota Department of Human Services.

Inputs and Outputs: Extension staff indicated that they had provided food quality and safety information to over 7,500 persons during 2001-02. Some of these persons were consumers (but 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 3.3 FTEs of professional time in this effort and spent more than $73,400 to deliver these programs. Fees were generally charged for industry programs and totaled more than $73,000. Over $41,000 was obtained in grants, contracts, gifts, and in-kind contributions to support this programming.

In addition to answering nearly 15,000 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 the 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 and transmission of disease via contaminated or improperly processed foods, the potential impacts of food quality and safety programs are likely to 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 and the high proportion of meals eaten away from home, these programs are addressing significant issues.

Key Theme: Food Safety (EXTENSION)

Extension Plan of Work: GOAL 2, Agriculture, Food, and Environment Capacity Area—Food Safety for Food Service: Safe and Secure Food and Fiber: Answering Consumer Food Preservation and Safety Questions, Commercial Food Processing, Consumer Food Preservation (Groups), Consumer Food Safety Education (Groups), Occasional Quantity Cooks, Pressure Canner Dial Gauge Testing, and Quality Assurance/Livestock Production; Safe and Secure Food Supply—Emerging Trends; Wildlife Sports Food Safety; and Extension Showcase

a. Description

Extension educators and campus-based faculty in the Food Science and Nutrition Department provide a variety of educational programs and assistance to individuals and the food industry, ranging from commercial food processing HACCP/sanitation training to providing hands-on workshops and answering consumer calls and testing pressure canner gauges. These programs and consultations directly reached over 7,500 people in 2002, but 515 of the participants, e.g., Master Food Preserver volunteers and Nutrition Education Assistants, were trained to, in turn, reach untold additional numbers of other learners. Educators obtained more than $41,000 in grants and in-kind contributions to support food safety work. Commercial food processors and food establishment managers and employees more than paid for the direct costs of the training they received.

b. Impact

Minnesotans average eating 40% of their meals in restaurants and other commercial food establishments. One-fourth of our citizens have a chronic or acute health condition that puts them at greater risk for contracting a food borne illness. Food borne illnesses result in 5,000 reported hospitalizations in Minnesota each year. Preventing just one food borne illness incident can save as much as $75,000 in health costs and productivity losses. Half of all eating establishments closed due to food safety violations and food borne illness incidents never re-open—resulting in an additional significant economic impact. Food poisoning can also be fatal and many consumers are putting themselves at risk by using home preservation methods that are unsafe and/or equipment that is unsafe, in addition to failing to practice proper sanitation.

The Minnesota Department of Health has found that the Food Safety for Food Service courses that Extension food science faculty and staff teach for commercial food managers are effective in reducing the incidence of food safety violations in commercial food establishments. Their analysis of 1,109 inspection reports for 2001 revealed that establishments with a Certified Food Manager (CFM) graduate on staff had 18.5% fewer critical violations reported, compared with those who didn't have a CFM graduate on staff. Critical violations measured in the analysis included lack of hand washing, cross-contamination between foods, and improper cooling and reheating, date marking, and incorrect holding temperatures for hot and cold foods. There was also a reduction in the percentage of violations in each category measured for establishments with a CFM graduate.

Preservation of food at home also puts many people at risk of food borne illness. Food science educators receive a large volume of calls each year about food safety and food preservation. One educator in a suburban county estimated that this type of inquiry accounts for nearly a fourth of all of her phone calls and e-mail messages. She calculates that the economic impact of her calls and messages ranges from $2 to $1,000 and averages $35 per call, totaling more than $12,000 worth of valuable advice in 2002. More than 41% of the callers were first-time Extension users, many of them referred from another agency or organization.

Participants in a food safety program for childcare providers, "Don't Give Kids a Tummy ache: Food Safety for Daycare Providers", reported a subsequent 10% drop in children's absences and a 15% drop in staff illnesses, in a follow-up two months after the training had occurred.

Consumers appreciate the opportunity to have their pressure canner gauges checked and learn how to safely process food at home. Over 60% of those who enquired during 2002 did so because they had food spoilage and/or equipment failures. Most were using equipment that had been handed down in the family or they bought at yard sales so they lacked an operating manual, as well as proper information on canning. None were using the most current research recommendations on canning methods and processing times but they were canning 90 quarts of produce, on average, with a range of 30 to 310 quarts. A follow-up indicated that 100% of those assisted had successfully remedied their problems and were safely operating their equipment.

A good many Minnesotans are hunters and the incidence of chronic wasting disease, Lyme disease, and fear about the possibility of Anthrax, as well as the risks of contamination from Staph, Salmonella, and other zoonotic diseases due to improper field-dressing of game made Extension's "It's No Game" workshops on Wildlife Sports Food Safety more popular than ever in 2002. 268 hunters participated at 11 different locations, ranging in age from 11 to 73, and 86% responded to a follow-up evaluation. Two-thirds said they'd learned food-safe field-dressing methods and safe disposal of field-dressing waste and more than 60% said they'd practiced all six behaviors they'd been taught about handling and preserving wild game to reduce their risk of food borne illness.

References:

MAES Research Project: MIN-18-039
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=385
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2815

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

d. Scope of Impact: State-Specific

Goal 3. A healthy, well-nourished population.

Overview:

We are reporting against two themes this year—one joint or integrated research and Extension theme (Human Health) and one Extension theme (Human Nutrition). However, the latter 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—in large part because it is linked to university research.

Educators estimated that they'd reached more than 24,600 people with nutrition and health information during 2001-02. In order to do this, they invested about 10.8 FTEs of time and more than $527,000 in program costs. Extension staff also reported receiving more than $2.6 million in grant, contract, gift, and in-kind funds to support their work—not including the nearly $5.4 million in contracts for the Food Stamp Nutrition Education Program (FSNEP) and the Expanded Food and Nutrition Education Program (EFNEP). 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 but consistently indicated success in getting substantial numbers of people to change their health and nutrition behaviors. For example, more than 1,100 family members in one county took the "No Smoking in Our Home" pledge, thus removing the risk to family members of second-hand tobacco smoke. An estimated 100,000 households in the seven Twin Cities metro counties were reached with information about the dangers of environmental health hazards in their homes. Programs on feeding infants, toddlers, and children with 55% of the participants indicating they'd changed the way they feed their children. Nutrition and food safety programs for youth resulted in significant increases in consumption of fruits, vegetables, milk and water and in more frequent washing of hands before eating.

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 via the Woodlands

Wisdom Program has opened the door to providing courses and degree programs 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 Health (JOINT)

MAES Plan of Work: GOAL 3, A Healthy, Well-Nourished Population
Extension Plan of Work: GOAL 3, Natural Resources and Environment Capacity Area: Housing Technology, Energy, and Air Quality

a. Description

Research: Recent studies have linked greater soy intake with lower breast cancer risk for women. One interpretation has attributed this link to higher production of cancer-preventative substances when a woman consumes more soy. University of Minnesota research is taking a different approach. A nutrition researcher suspects that it is not merely soy intake, but rather the individual profile of bacteria in the colon that determines production of these substances, and therefore cancer risk. His studies have found that differences in phytoestrogen metabolism influence plasma hormone levels. Only 30 to 40 percent of the female population excretes equol, a metabolite of soy. Research showed that women who excrete equol have hormone profiles consistent with low risk of breast cancer. This data suggests that women who get breast cancer may metabolize phytoestrogens differently from healthy women, regardless of soy intake. Another study has confirmed the cancer fighting benefits of flax. Adding merely five grams of ground flax to the diet resulted in an increase in protective estrogen levels.

Colon cancer is one of the most common cancers in the U.S. While research has helped to lower the chance of death and improve the quality of life for people with this disease, nearly 48,000 Americans still die from colon cancer every year. University of Minnesota research seeks to better understand the relationship between colon cancer and dietary intake of beef protein and tallow.

In recent decades, a great deal of health-related research has focused on identifying dietary chemicals that could decrease the risk of cancer. While most such chemicals originate in plants, conjugated linoleic acid (CLA) is one compound found in diary and ruminant meat products that is considered to be very promising. Researchers have been investigating the anti-carcinogenic effect of CLA found in butterfat in protecting against colon cancer.

Other research looks as social-environmental influences in nutritional choices. A primary task of this research has been to identify specific behaviors that enable adequate consumption of fruits and vegetables for 9-12 year-old children. Researchers estimated total fruit and vegetable intake based on 24-hour food records that were kept by a group of Twin Cities' students. They found that behaviors associated with higher intake included starting the day with juice or fruit, asking parents to buy fruits and vegetables for meals and snacks, and eating extra servings of fruits and vegetables for meals and snacks. Other research with low-

income mothers identified behaviors that were predictive of intake and stage of change, including starting the day with juice or fruit, eating vegetables at the evening meal, or eating three meals a day.

Extension: A "Healthy Indoor Air" campaign was conducted in the seven-county Twin Cities metro area as part of an initiative to address the health risks to children of second-hand smoking. "Does Your Home Get a Healthy Bill of Health" trained 194 community leaders at seven metro locations to deliver information to parents and others on second-hand smoke, radon, mold, dust, and other environmental hazards especially dangerous to children. These leaders, in turn, taught the information to more than 2,800 local residents during the three months following the Train the Trainer workshop. The focus was on identifying sources, health effects, and controls for common indoor air pollutants, understanding the general aspects of home building science and residential indoor air quality, and recognizing appropriate roles for pollutant testing and current action research projects. Civic presentations, health fair displays, educational workshops, and newspaper and newsletter articles featuring this "Just in Time" research response reached an estimated 100,000 households. "Aging in Place" and "Universal Housing Design for Home Buyers, Remodelers, and Apartment Dwellers" educational programs offered 10 workshops to 300 participants and self-study information to another 400 participants.

b. Impact

Research: Basic research into the effects of diet on hormones paves the way for applied research into possible dietary supplements and dietary recommendations to prevent hormone-dependent cancer. Flax oil—the edible version developed at the U of M—provides one of the Omega-3 acids proven to prevent cancer.

Research has shown that tallow does not increase colon cancer risk. Indeed, it may be slightly protective. Findings could lead to the introduction of new value-added products, such as functional foods or neutraceutical foods that may reduce risk of colon cancer.

One promising aspect of CLA is that it is anti-carcinogenic at far lower dosages than many other anti-carcinogens that occur naturally. Some estimates suggest that normal human intake of CLA from diary products already provides as much as one-third of the degree that is necessary for cancer protection. The ultimate impact of this basic research is to improve human dietary patterns that could in turn reduce the risk of disease.

Nutrition research results are helping to develop intervention strategies to increase consumption of fruits and vegetables for target populations.

Website: http://www.fscn.che.umn.edu

Extension:

- More than 300 Dakota County families (representing a total of more than 1,100 family members) took the EPA "No Smoking in Our Home" pledge as a result of the "Healthy Indoor Air" campaign.

- A pre-post evaluation of the 194 trainers in the "Does Your Home Get a Healthy Bill of Health?" workshop got an 84% return rate (171 responses). Following the training,
  - ✓ 88 (51%) were able to list options for making indoor air quality decisions—only 32 said they could prior to the workshop.
  - ✓ 68 (40%) were able to evaluate indoor air quality decisions after training—only 37 were able to do so previously.
  - ✓ 78 participants (46%) stated that they could take control of personal goals and future indoor air safety and 75 (44%) had reflected on the impact of earlier remodeling or building decisions.
  - ✓ 54 (32%) left the workshop ready to make air quality presentations in their communities; 12 felt they needed additional time to prepare themselves for their training assignment.
- An independent audit of the impact of in-home consultations on mold clean-up and moisture remediation and actions taken by homeowners during 2000-02 was conducted to determine if Dakota County citizens wanted their tax dollars spent on this type of effort. 46 of 106 families that were referred to Extension by FEMA and received consultation on flood clean up, insurance, family stress, health implications, and community resources during flooding in 2000 were contacted.
  - ✓ 100% said it was appropriate for Extension to provide information on repairs and recovery.
  - ✓ 100% said it was a good use of tax dollars.
  - ✓ 90% said that Extension was responsive, effective, and efficient in its delivery and had taken advantage of the evening and weekend hours provided during the disaster.
  - ✓ 95% said the information they received was timely and beneficial.
  - ✓ 65% had changed their clean-up or repair timeline to follow Extension guidelines.
  - ✓ 90% followed Extension advice and as a result, did not need to re-do repairs because of further mold damage.
  - ✓ 85% would and have recommended Extension to friends, family members, or co-workers as a result of their experience.
  - ✓ Only 49% had been aware of Extension's services prior to their flood experience.

Reference:

MAES Research Projects: MIN-18-023, MIN-18-084, MIN-54-034, MIN-54-060, MIN-54-069

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2726
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http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3019
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3020

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

d. Scope of Impact: State-Specific

Key Theme: Human Nutrition (EXTENSION)

Extension Plan of Work: GOAL 3, Agriculture, Food, and Environment Capacity Area: Health, Nutrition, and Wellness Programs

a. Description

Health, nutrition, and wellness continue to be major concerns of nutritionists and many other Minnesotans who are aware of the importance of the link between them. Extension Health, Nutrition, and Wellness Programs reach a variety of audiences—nutrition educators, Nutrition Education Assistants, and other nutrition professionals; children ranging from infants to teenagers; and adults, including elders. Many of the ultimate audiences reached by Extension Health, Nutrition, and Wellness Programs in Minnesota are among the "under-served, under-represented" in society—the poor, new immigrants, and racial/ethnic minorities, as well as senior citizens.

In delivering Health, Nutrition, and Wellness Programs, educators collaborated with local Chambers of Commerce, Early Childhood Family Education (ECFE) and English as a Second Language (ESL) Programs, county human services departments, technical colleges, and community health plans. Contracts from the Minnesota Department of Public Health, gifts, and a variety of in-kind contributions totaling $176,436 provided financial support for these programs. A total of 5,382 persons participated but many were parents with young children so the actual number of people impacted is much higher. In addition, 328 professionals, including Extension educators and Nutrition Education Assistants, received health, nutrition, and wellness education to better equip them to teach others.

b. Impact

Some specific examples of Extension programs reported included the following:

- In the Twin Cities metro area, workshops were given on topics such as "If It's Healthy, They Won't Eat It: Feeding Infants, Toddlers, and Children," "Eating for a Productive Workday", "Children and Environmental Health", and "Brain Development: Implications for Nutrition, Learning, Aging, and Parenting". Sixty percent of workshop participants indicated that they intended to change health and lifestyle patterns; 6 months later 55% reported that they had accomplished their goals. More than 550 limited resource family members on medical assistance participated in Community Car Seat Clinics, Child Safety workshops, and in-home safety checks. Over 200 families received free car seats for infants, toddlers, and preschoolers and booster seats for young children. An additional 400 families received car and booster seats at reduced cost, based on ability to pay. Follow-up with these families disclosed that two were subsequently involved in car crashes involving a total of nine children. Fatalities were prevented and

hospitalization reduced a total of 123 days because the children were properly seated and buckled in.

- In Southeast Minnesota, pre and post testing of nutrition program participants documented that youth had learned to wash their hands before preparing food and eating and that they also increased their consumption of fruits, vegetables, milk, and water. Adult participants also reported that they were being more careful about hand washing before handling food and that they had increased their frequency of eating breakfast and more wholegrain foods, as well as reading the Nutrition Facts on food labels. A Regional Food Day "The Diet Disease Connection" ITV event attracted 115 participants at South Central Technical College in Mankato and 180 participants at 19 other sites throughout Minnesota. Participants, in turn, reached an estimated 500 co-workers, clients, secondary and post-secondary students, and study group members. All of the Regional Food Day participants reported that they had acquired a better understanding of the role that good nutrition can play in disease prevention. Collaborators in this effort included the Mayo Health System, American Heart Association, International Diabetes Center, Minnesota Department of Health, Be Active Minnesota, Minnesota Dietetics Association, the Minnesota State University system, the Minnesota Soybean and Research Council, the University of Minnesota Department of Food Science and Nutrition, and numerous businesses in the area. A Regional Food Day website was developed to publicize the event and register participants.

References:

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2761
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2767
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http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3065

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

d. Scope of Impact: Multi-State (AL, CO, DC, IA, IL, IN, KS, MI, MO, ND, NE, NJ, NV, NY, OH, SD, WI)

Goal 4. Greater harmony between agriculture and the environment.

Overview:

We are reporting on one joint theme this year under Goal 4--Forest Resource Management. This theme reflects a number of our MAES research projects and Natural Resource and Environment Extension programs, e.g., Agro forestry, Environmental Learning and Leadership—Natural Resources in Your Backyard, Productivity and Environmental Quality for Private Lands and Businesses, Sustainable Natural Resource Management and Stewardship—Sustainable Forest Management, and Woodland Advisor Volunteers. At the end of the theme, we have indicated URLs that connect the reader to relevant Extension program and/or research project entries in the Minnesota Impacts! accountability database.

Inputs and Outputs: More than 42,450 persons participated in the Extension programs related to the key theme under Goal 4 this past year. 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, forestry, and the environment. The total direct costs of delivering the Extension programs related to Goal 4 themes was estimated at over $367,000, but these costs were offset by participant fees totaling over $214,000 for some professional development programs and more than $432,000 in grants, contracts, gifts, and in-kind contributions. Faculty and Extension educators invested 17.6 FTEs of time to developing and delivering programs focused on natural resources and the environment.

Outcomes and Impacts: Tourism has long been a very significant industry in Minnesota and one that depends largely on the maintenance of our forest resources. Agro forestry is a newer effort—but one that has a great deal of economic promise for the future. Therefore, significant research and Extension program outcomes in these two areas mean a great deal to Minnesotans in terms of economic impact and quality of life. Private woodland owners are eager to learn about new opportunities and new aspen and poplar hybrids and other fast-growing species that they can plant for use in the growing wood fiber industry. The number of Extension educators knowledgeable about forestry and the number of Woodland Advisor volunteers available to provide assistance is increasing. These are indicators that we will have and be able to report an even greater economic and environmental impact on the forest industry in the future.

Accomplishments: We believe that the programs reported under Goal 4 are truly aimed at achieving greater harmony between agriculture, natural resources, and the environment. We are pleased with the degree of involvement of the non-farm public, including children in schools and 4-H clubs, in environmental learning and leadership and the growing number of natural resource and environment-related volunteers. Our water quality improvement and lakeshore preservation efforts focus on reducing contamination of Minnesota's streams and 15,000+ lakes from lakeshore residents and suburban/urban dwellers, as well as from crop and livestock producers. While specific impacts of many research projects and Extension programs have yet to be formally measured, they appear to be accomplishing what they were designed to do, in terms of outcomes and impacts.

Key Theme: Forest Resource Management (JOINT)

MAES Plan of Work: GOAL 4, Maintaining Forest and Natural Resources
Extension Plan of Work: GOAL 4, Natural Resources and Environment Capacity Area:
Agro forestry, Environmental Learning and Leadership--Natural Resources in Your Backyard,
Productivity and Environmental Quality for Private Lands and Business, Sustainable Natural Resource Management and Stewardship—Sustainable Forest Management, and Woodland Advisor Programs

a. Description

Research: The effects of logging on ecosystem sustainability are controversial. Surprisingly, existing data is inadequate to allow a comprehensive evaluation of logging effects on biodiversity, composition and productivity, since appropriate comparisons of stands of similar ages and differing disturbance histories are rare. University of Minnesota researchers have studied 2,000 plots on 80 forest stands in northern Minnesota. They compared naturally regenerated aspen, jack pine and black spruce stands established after either logging or wildfire, with stands that are 24-40 and 70-100 years old to determine whether logging has resulted in greater or lesser plant diversity. Researchers found that the younger stands established after logging had higher diversity of trees, herbs and grasses than post-wildfire stands. Otherwise, they found no evidence of differing species diversity, composition, productivity or nitrogen cycling in forest stands of comparable age and forest type between the two. Although there is evidence that logging has increased the proportional landscape dominance by aspen, this research refutes the idea that disturbance by logging has diminished stand-scale productivity or plant diversity in comparison to the common natural disturbance, wildfire.

A 12-month visitor profile survey in six communities across the state, including four in forested regions, was completed. Results are helping community leaders understand why people visited, what it would take to attract more to stay longer, and what an individual business can do to increase its market share even if the size of the market does not expand. Business and leisure travelers were identified for each community.

Timber and pulpwood consumption for the Lake States and the U.S. has steadily increased since the mid-1980s and is expected to double by the year 2040. However, available timberland has already declined by 3 million acres in the Lake States during the past 20 years. University of Minnesota researchers seek to help facilitate a large-scale planting program with genetically improved larch species. Supplementing the overall wood supply stream with larch would significantly increase the softwood fiber supply in the Lake States and northeastern U.S. The ultimate goal is to establish a sustainable, economically viable process for balancing supply and demand for timber in the coming century.

The Cloquet Forestry center supports multiple research projects. One example of recent research at the Center is work to help develop new methods for regenerating and growing eastern white pine. Once nearly written off as a viable commercial species in Minnesota

because of severe deer browse, white pine weevil and white pine blister rust, a comprehensive research program is yielding solutions for many of the problems.

The Sustainable Forests Education Cooperative held 17 workshops on various subjects including timber harvesting, landowner cooperatives, management of small woodlots, non-timber forest products, agro forestry systems, and non-timber forest products.

Extension: Minnesota has a great deal of potential for expansion of agro forestry due to the nature of its land base and current and potential markets for agro forestry products. Agro forestry also provides many environmental and economic benefits to Minnesota citizens. Extension educators provided a variety of workshops and trained "Woodland Advisor" volunteers to assist private landowners in learning about agro forestry and its potential economic and environmental benefits. These programs reached over 2,800 people and involved 45 Woodland Advisor volunteers last year. Seventeen new Woodland Advisors received 45 hours of training in forestry information and skills, to enable them to reach out to other private woodland owners and persons interested in the environment. Private woodland owners learned about growing hybrid aspen and cottonwood—essential species for wood fiber production in NE Minnesota. Other programs taught woodland owners the phytosanitary standards for the pallet industry and information from the Sustainable Forestry Incentives Act. Conservation programs focused on encouraging landowners to consider Living Snow Fences, Continuous CRP, Shelterbelts, and EQIP to reduce soil erosion and water contamination. Participants in other workshops learned about other specialty forest products that they might harvest, e.g., maple syrup, baskets, and Christmas trees, wreaths and Balsam fir boughs. These programs together garnered more than $126,000 in federal and state grants and the value of in-kind contributions from industry and non-profits organizations. In addition, participants paid over $4700 in fees to participate.

b. Impact

Research: Logging study findings have been used in policy and management among industry groups and management agencies, such as the U.S. Forest Service.

Community tourism development organizations are using the research results to refine marketing plans. Research impacts suggest increased visitation to the forested natural areas of Minnesota mean increased economic activity for rural communities, helping to link the state's $9.7 billion tourism industry to the forested rural areas to diversify struggling and shifting economies.

Researchers expect to achieve a significant increase in growth rate with every new generation of larch created. Within the first generation alone, there could be an 8-12 percent increase in volume growth of the larch population over the initial group of planted larch. At the same time, the quality of larch could be improved so that larch could be used at the mills for pulp/fiber or paneling within the next 15 years. This would be a cheaper alternative than current sources because larch grows faster in the field than other species.

An aggressive program for selecting, breeding and testing species at the Cloquet Forestry Center is yielding positive results in the search for trees genetically resistant to blister rust. As a result, in the future Minnesotans should once again witness white pine as a major component of northern forests.

Extension: Agro forestry programming is still developing so detailed evidence of impacts is not yet available. Still, these programs are already indicating that there are economic and environmental benefits from diversifying beyond traditional agronomic crops and producing specialty forest products, especially in regions of the state where production of agronomic crops is more marginal.

- Producers are planting hybrid aspen and poplar and cottonwood that will provide raw material for the growing wood fiber industry.
- Agro forestry workshop participants are eager to learn and one educator reported that 100% of his 120 private woodland owners adopted at least one new practice to improve land management, reduce risks, and improve profitability.
- Programs in the Arrowhead Region have resulted in tax incentives, formation of local cooperatives, alternative agro forestry crop production, and improved business practices and profits on private woodlands adjacent to federal and state-owned public forestland.
- More than 30 new Living Snow Fences have been planted in south central Minnesota in the last two years.
- Woodland Advisor volunteers increased their knowledge of forestry information 25%, measured by pre and post assessment of training.
- Fourteen Regional Extension educators also were trained in forestry knowledge and skills, developing a core team for additional program expansion.

References:

MAES Projects: MIN-14-077, MIN-40-015, MIN-42-020, MIN-42-36, MIN-42-040, MIN-42-042, MIN-42-045, MIN-42-049, MIN-42-070, and MIN-42-089

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http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3177

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

d. Scope of Impact: Multi-State (AK, ND, NY, WI)

Goal 5. Enhanced economic opportunity and quality of life.

Overview:

We are reporting on nine key themes under Goal 5. Of the nine key themes where we have programs with some impact to report, seven 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, some of the leadership training and development programs are only beginning to show some signs of outcomes and impact; likewise, many of the multicultural and diversity efforts. Programs like farm safety programs are difficult to assess because they are preventive in nature. In sum, although the impacts are preliminary, 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 57 FTEs of professional and 35.6 FTEs of paraprofessional time were invested in these programs. Program costs are estimated at over $5.1 million and partially offset by participant fees that brought in more than $842,000, plus grants, gifts, and in-kind contributions totaling over $3.3 million. Program participation was reported at over 499,000 during 2001-02. 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 safety decisions made by farm workers and members of farm families to communities making improvements that will help to retain and expand local businesses to the new roles being taken by community leaders with new knowledge and skills to practice.

Impacts: Our weakness is in being unable 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 2002-03 and thereafter. Nevertheless, when the figures on the numbers of 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 programs on aging, child care, infant mortality/birth weight, multicultural and diversity issues, 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 and educators are citing.

Accomplishments: We have made greater effort this year to collect data on inputs, outputs, outcomes, and at least anticipated impacts for most 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: Aging (EXTENSION)

Extension Plan of Work: GOAL 5, Family Development Capacity Area--Personal and Family Health and Well-Being: Adult Children, Aging Parents—Critical Conversations and Critical Conversations About Later Life Financial Security Programs

a. Description

During 2002, the "Savvy Caregiver" satellite conference provided training for a variety of professionals so they can better understand and respond to the needs of older people that are coping with loss and making critical end-of-life decisions. Professionals such as nurses, social workers, and funeral directors also had the opportunity to earn CEUs (Continuing Education Units) needed to maintain licensure. The emphasis is on what communities can do to support caregivers in keeping elders or severely handicapped adults and children in their homes and in providing home hospice care for the dying.

"Money Under the Mattress" and "Long-Term Care Decision Making" Programs were taught to learning circle leaders and caregivers of residents in nursing homes.

b. Impact

In Dakota County, on the southern edge of the Twin Cities metro area, 38 people were given "Savvy Caregiver" training. They, in turn, taught the information to 1,200 additional people in community faith centers and family service organizations. DARTS (Dakota Area Resource and Transportation Services) took over the educational effort and have added it to their staff and volunteer training for support groups. They reached an additional 3,000 county residents.

Participants in the "Money Under the Mattress" and "Long-Term Care Decision Making" Programs re-examined their finances and needs for the number of years they are likely to continue to live in relation and considered their need to finance long-term care. They also developed new action plans to reach their goals and communicate them to family members.

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

d. Scope of Impact: State-Specific

Key Theme: Child Care (EXTENSION)

Extension Plan of Work: GOAL 5, Youth Development Capacity Area--Better Kid Care, Childcare and Self care, and Kids in Self-care Programs

a. Description

The "Better Kid Care" satellite program series from the Penn State Cooperative Extension Service was enhanced at downlink sites in Minnesota by Extension educators, in collaboration with local childcare and foster care agencies, e.g., county human services departments. Childcare and foster care providers are the intended audience. Participation in the program enables childcare providers to obtain professional development credit hours that they need to maintain their licenses. During 2002, 101 rural childcare providers participated in the program.

More than 600 babysitters—youth and adults--participated in "Childcare and Self care" training during 2002. These programs taught participants how to more safely care for children.

Some parents lack childcare options and leave their children to care for themselves while they work. The "Kids in Self Care" program teaches parents how to make wise choices about leaving their children to care for themselves and what information they should provide for children who are home alone and may have to deal with emergency situations.

b. Impact

One educator reported that over 50% of the providers participating in "Better Kid Care" in her county said they'd used the information received to make at least one change in their daycare businesses (e.g., scheduling of activities, kinds of educational activities offered, food offered, food handling practices). More than 50% said they'd shared the information that they received with the parents/families they are serving. Over 50% also said they'd kept the printed information provided available for future reference.

Another educator serving a five-county region said daycare providers in her area were reconsidering their outdoor play equipment, the material under it, and their supervision of the children while playing, as a result of information received on play equipment safety in "Better Kid Care". After viewing sessions on dealing with mixed age groups and the stages of development of children, providers said they would use naptime for the younger children to provide more stimulating activities for the older children. Sessions on computers and children encouraged the providers to use the Internet to obtain educational materials that they could use as resources for themselves and the children in their care. Part of the impact of the training was getting the providers together in one place where they could share ideas and discuss what worked for them and what didn't.

All of the "Childcare and Self care" participants learned new ideas to use in caring for children. Youth, especially, learned what to do in case of emergencies and how to prevent accidents that would likely result in injuries.

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

d. Scope of Impact: State-Specific

Key Theme: Community Development (EXTENSION)

Extension Plan of Work: GOAL 5, Community Vitality Capacity Area--U-Facilitation Program

a. Description

U-Facilitation is a program that trains Extension educators and volunteer facilitators who then use their skills to assist non-profit community groups in addressing a variety of organizational and community issues. Facilitators are often called upon to assist groups and organizations in developing mission statements, visioning futures, developing strategic plans, and dealing with conflict. Contracts for these services earned nearly $3,000 in 2002.

b. Impact

The impact of U-Facilitation is as broad and varied as the kinds of groups and organizations served. Here are some examples of work done in 2002:

- A Peace Talks Program for youth in three southeastern Minnesota counties increased the ability of the students to solve their differences with their peers and improved the climate for learning in the schools.
- The Minnesota Forestry Association developed an annual work plan, wrote job descriptions for board members, and developed a communications plan for them, with the assistance of a U-Facilitator.
- A new Children and Family Collaborative developed a mission statement and a vision and goals to guide their work. They also developed processes to support administrative functions and decision-making within their board of directors.
- Four lakeshore management associations developed lake management plans.
- The LeSueur County Feedlot Ordinance Revision Task Force successfully set capacity limits and setbacks for new and expanding feedlots. The new ordinance will protect the environment, while allowing for livestock industry expansion and residential growth in the county.
- Two public boards developed new vision and values statements to direct their future work.
- A watershed organization successfully completed a complex revision of a plan they were required to submit.
- Two groups identified the data they need to successfully create a new working agreement/contract.

Reference:
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2996

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

d. Scope of Impact: State-Specific

Key Theme: Farm Safety (JOINT)

Extension Plan of Work: GOAL 5, Agriculture, Food, and Environment Capacity Area—Caring for Farm Families: Workplace Safety and Health and Sun Safety for Outdoor Workers Programs; Youth Development Capacity Area--Safety Day Camp Program

a. Description

Agriculture is now ranked as the most dangerous industry in the U. S., based on occupational fatality data gathered by the National Safety Council. Farm-related accidents claim more than 750 lives and result in more than 120,000 disabling injuries each year. In addition, agricultural farm and industry workers experience high rates of certain occupational illnesses and diseases, such as skin cancer, respiratory illnesses, and dermatological conditions. According to national estimates, farm workplace injuries and deaths cost $4 billion annually. This figure does not include the value of lost time and productivity that can be overwhelmingly high for individual producers and small businesses. Farming is also considered to be one of the most stressful occupations in the U. S. because of the working conditions, combined with the tremendous amount of ambiguity, uncertainty, and variable economic conditions. The high level of stress contributes to many of the injuries and illnesses that farmers, family members, and farm workers experience and accidents with agricultural chemicals that have environmental consequences.

Last year, 24 farm fatalities were reported in Minnesota, down from 30 deaths reported in 2001. Even the Twin City metro newspapers carry news of terrible farm and agricultural industry accidents that result in death and/or dismemberment of farm family members and agricultural industry workers. The "good news" is that the incidence of such accidents is declining, thanks at least in part to Agricultural Safety and Health Education, including safety day camps for kids. Sun safety education is also a major effort with emphasizing the prevention of skin cancer, especially with youth. Using derma scan equipment at farm expos, county fairs, health fairs, and other events to show youth and adults the extent of skin damage due to prolonged sun exposure without protection has helped to create greater awareness of the risk of skin cancer in Minnesota and Iowa.

Research is focused on creatively engineering solutions in order to protect workers and property from harm by preventing most occupational injury and disease problems. For example, recent work has focused on the creation, prototype development, and testing of a computer-controlled, sensor-based, human presence detection system that can "see" people

who are approaching or working too close to rotating machinery and other hazards. Another project involves in-depth investigation of fires that occur on grain combines.

Because of the growing diversity among farm workers, a need is being addressed to make existing agricultural safety and health guidelines and educational materials culturally and linguistically appropriate for immigrant farm families, e.g., the Hmong, Hispanic, and Somalis in Minnesota.

b. Impact

Agricultural Safety and Health research and Extension programs have clear economic, as well as social and environmental benefits. The National Safety Council estimates that a workplace fatality costs an average of $900,000. An average disabling injury costs $25,000 in hospitalization, etc. In addition, the "downtime" while a farmer or worker is recuperating from an accident is estimated at more than $2,000 per day! Environmental benefits accrue from avoiding misapplications and spills of agricultural chemicals.

During 2001-02, Agricultural Safety and Health Programs in Minnesota directly reached more than 2,400 people, including many racial/ethnic minority people and immigrants. This total also included 330 health professionals who were involved in workshops. An additional 4,500 youth participated in safety day camps. The farm safety and health media campaign that gets underway at the beginning of the Minnesota State Fair in August and continues through National Farm Safety and Health Week in mid-September, resulted in placement of safety and health-related articles in at least 225 newspapers and magazines with total circulation in excess of 500,000. In addition, two major national radio interviews were conducted with total coverage of more than 350 local stations nationwide. This included 23 of the 25 radio markets in the U. S. that cover nearly 85% of the broadcast area. Extension programs received more than $172,000 in grants and in-kind contributions last year.

An investigation of nearly 9,000 combine fires has resulted in detailed fire prevention and control recommendations that have been presented to farm machinery and insurance industry representatives.

Educators involved in the "Sunsmart" Sun Safety Program, reported that 80% of program participants knew someone who had skin cancer, was under going treatment, or had died as a result. 70% said they didn't regularly wear a hat or protective clothing at work and 90% did not take precautions, such as using a sunscreen, when outdoors for recreation. 60% took a derma scan skin damage test and 15% were encouraged to see a doctor for follow-up as a result of the test. All participants considered hats for skin protection from the sun that are currently on the market and voted on the one they would most likely buy. A local utility company provided sunscreen hats for all of their outdoor workers. Family members and stockholders were offered sunscreen hats at cost.

Youth were also taught lawn mower safety. Many do the mowing for their families or as a small business and risk the loss of fingers, toes, and even eyes.

Farm Safety & Health Information Clearinghouse Website:
http://safety.coafes.umn.edu

References:
MAES Research Project: MIN-12-027
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2798
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2866
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2888
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2961
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2980
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2981

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

d. Scope of Impact: Multi-State (IA, IL, ND, WI)

Key Theme: Impact of Change on Rural Communities

Extension Plan of Work: GOAL 5, Community Vitality Capacity Area--Northwest Minnesota Flood Recovery

a. Description

The weather again wreaked havoc on parts of Northwest Minnesota during 2002. This time much of the damage was in the county and town of Roseau, on the Canadian border. 95% of the homes and commercial buildings in Roseau were flooded, as well as hundreds more homes in the surrounding region. Extension educators were involved in providing immediate, critical information on short-term and long-term flood clean up to individuals, families, commercial businesses, other agencies who were also involved, and media outlets. A 12-page detailed newsletter with specific "how-to's" on flood cleanup, access to needed resources, and locations/relocations of emergency sites was prepared and distributed to 13,000 households within the week of the flood. Members of volunteer and paid crews were trained on safe, effective procedures for cleaning basements in homes and businesses. Building, electrical, and plumbing contractors were provided brief training and publications on "best practices" for re-building flood-damaged buildings. Workshops on "Moisture and Mold in Homes" were held in Roseau and Mahnomen (the most seriously affected communities) four months after the flooding. These workshops trained 90 participants—agency representatives and homeowners—on health aspects of mold, dealing with disaster-related stress, improving indoor air quality in homes with moisture problems, and legal aspects of these issues. Workshop participants used this information with hundreds of clients through staff development, mobilization of agency resources, and direct application via home visits. Through Extension's educational efforts, hundreds of local citizens in flood-affected areas learned about appropriate ways to salvage and clean household items/materials, sanitize wells,

remove mold, dry out basements and crawl spaces, use moisture meters, and manage the stress of dealing with a major disaster.

b. Impact

The major impact was the heightened collaborative knowledge and skills gained by multiple local, county, regional, state, and federal agencies working together to mitigate the problems caused by a massive natural disaster. Creation of a disaster center for one-stop services, joint funding of programs (the Extension effort was partially funded by a $60,000 USDA grant and two smaller grants totaling $4,082 from the Northwest Minnesota Foundation and the Minnesota 4-H Foundation), and enhanced communication among all agencies in the region resulted in faster response, higher morale, and more efficient use of financial and personnel resources. Long-term recovery will continue for several years, but work done during 2002 saved portions of homes and their contents, prevented potential illnesses with appropriate clean-up, ensured more appropriate, safer cleanup methods, and contributed substantially to economic and social recovery for the citizens in the affected areas.

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

d. Scope of Impact: State-Specific

Key Theme: Infant Mortality, Birth Weight (EXTENSION)

Extension Plan of Work: GOAL 5, Family Development Capacity Area--Nutrition Education Programs (other than FSNEP and EFNEP)

a. Description

"Maternal and Child Health Programs" in Dakota County, on the southern edge of the Twin Cities metro area, are delivered in collaboration with the Regional Extension Educator, Food Science. During 2002, 262 pregnant and parenting teens and families with children that are experiencing chronic or acute health and nutrition conditions were referred to Extension for in-depth group or individual sessions on health and nutrition. Depending on needs, up to six learning sessions were provided on subjects such as nutrition, food preparation, food safety, meal and snack planning, and community food and other resources. Limited resource families on Medical Assistance with a demonstrated risk of receiving appropriate health and nutrition services are referred to Dakota County Extension's "Child and Teen Check-Up Program" for follow up and educational services. Well-Child Federal Health Insurance Program outreach and promotion at community sites, WIC Clinics, community health fairs, and Headstart Program sites insures that families fully participate in nutrition and health programs.

"Child and Teen Check-Up Program" outreach provided in-home nutrition and health mentoring for 45 families that were experiencing mental health or cultural issues that prevented follow-up for appropriate health care for the children. A strong emphasis was

placed on enrolling youth in foster care and emancipated teens in the "0-21 years" health promotion program.

Monthly "Learn While You Wait" topics provided at community settings often frequented by target audiences reached 2,500 per month during 2002. Because in-home accidents in the U. S. result in 8,000 children being seriously injured and 300 killed annually, one of the topics emphasized is in-home accident prevention for children.

b. Impact

"Maternal and Child Health Program" participants graduated with 100% of them improving their food safety practices. 85% of the pregnant participants learned to monitor their weight gain during pregnancy. 90% of them learned to eat more foods high in iron and folic acid on a daily basis. 94% demonstrated improvement in food resource management practices. 94% reported eating a wider variety of foods than they had prior to completing the program. 100% chose more nutritious snacks and 97% considered nutrition as a factor when making food choices. Consumption of food groups changed positively from enrollment in the program to graduation with 92% consuming two or more servings of dairy products daily, 97% consuming two or more servings of fruits daily, 83% consuming vegetables daily, and 98% getting the recommended 6-11 servings of bread or grains daily. Referrals due to language or cultural barriers that resulted in health and nutrition issues for mothers and infants rose from 25% of participants in 2001 to 90% in 2002.

As a result of the "Learn While You Wait" topic on "Deadly Look-Alikes", 340 families changed how they store or lock up medicines, vitamins, and cleaning products. An additional 180 families requested and received an in-home safety inspection list to help them reduce in-home hazards to children from electricity, scalding, falls, and other accidents. As part of the in-home inspection, each family received up to $25 worth of safety equipment appropriate to their situation. A follow-up to the in-home safety inspection indicated that 100% of the 180 families had changed or removed at least one hazard in their home.

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

d. Scope of Impact: State-Specific

Key Theme: Leadership Training and Development (EXTENSION)

Extension Plan of Work: GOAL 5, Community Vitality Capacity Area--U LEAD and U-LEAD Leadership Academy for Soil and Water

a. Description

Extension is recognized as a leader in leadership development in Minnesota. A wide variety of local leadership programs are on-going, e.g., the Leadership Academy for Soil and Water that provides leadership training for elected Soil and Water Conservation District (SWCD)

officials and staff members and MARL, the Minnesota Agriculture and Rural Leadership Program. These programs and others trained more than 2,400 participants in 2002 and were supported by nearly $156,000 in grants, contracts, gifts, fees from participants, and the value of in-kind contributions.

Here are some specific examples of recent leadership training and development efforts:

- The goal of the Minnesota Academy for Soil and Water Conservation District (MASWCD) officials and staff is to enhance the leadership knowledge, skills, and actions of elected SWCD supervisors and local SWCD staff members. 90 supervisors and local staff members participated in MASWCD in 2002.
- In northwest Minnesota, 52 community leaders in three counties used a study circle curriculum on agriculture and rural policies to discuss their local situation. Forty-two community leaders explored building viable, sustainable rural communities and 52 leaders took part in a public policy forum to determine a rural policy agenda. Eighteen members of the University of Minnesota Northwest Partnership Board of Directors expanded their knowledge of the region, strengthened their decision-making skills, and set goals for building sustainable communities in the region.
- Four county commissioners and 20 department heads in Douglas County participated in a strategic leadership seminar to enhance their leadership skills and used new techniques to look more closely at issues internal to the administrative functions in the county.
- Thirty-two municipal clerks from 20 different counties took part in an advanced "leadership academy" to develop their leadership skills by examining their personal change profile and learning techniques for working with boards.
- Fifty participants in a community leadership training session developed their strategic questioning skills and applied them to the leadership roles that they play in their respective communities.
- Fifty-six elected and appointed local officials from 21 counties increased their knowledge of decision-making tools.
- The MARL Program, a 52-day, intensive leadership training experience for 30 local community leaders and aspiring leaders, primarily living in south central Minnesota, completed its first round of training and evaluated changes in behavior of participants.

b. Impact

State MASWCD staff members have observed three major behavioral changes in Leadership Academy graduates. First, academy graduates are more skilled and motivated to successfully interact with elected federal, state, and county officials. They are more effective and focused in their communication with these elected leaders who represent important SWCD partnerships. Second, academy graduates have developed and frequently use a much more extensive network of professional contacts and resources than their peers who have not had leadership training. MASWCD has helped graduates build and enhance a statewide network for information and assistance to local SWCD planning and program management. Third, academy graduates more frequently volunteer to serve in SWCD and MASWCD leadership roles (boards, committees, special task forces, etc.) than do their peers. These leadership roles are essential to the long-term health and survival of MASWCD and their work to support high quality local SWCD programs throughout Minnesota.

Evaluations from several of the U LEAD Programs in northwest Minnesota identified social and political changes in the communities where participants live and work. Participants identified gaining new insights, identifying common concerns, and agreeing on ideas for action as important first steps in putting their enhanced leadership skills to work. New strategic thinking and decision-making skills have value to participants personally and to their communities through networking with others interested in the same issues. There were some signs of potential for economic and environmental change as well. One study circle group reported the value of "coming together to work toward raising both human and financial capital". Another of the study circle discussions focused on "renewable resources" and finding ways to balance using the "environmental assets in the region to create economic opportunities". U LEAD graduates report that they "believe that the way to change the long-standing divisions and lack of trust between people is to engage them in conversations about cooperation and working together at every opportunity—in schools, churches, city and county government." Also noted was the value of "coming together to discuss and solve complex community issues", a first step in building the social capital of rural communities, that hopefully will lead toward sustaining them for the longer term.

The Leadership Attributes Inventory, a professionally recognized instrument, was used to assess changes in leadership behavior by the MARL Program participants. The instrument measures 37 leadership attributes. The results for 28 of the program participants indicated pre/post increases for 33 of the attributes, none for the remaining four. The greatest amount of change was on Tolerance of Ambiguity and Complexity, Commitment to Achievement, Tolerance of Frustration, Dependability and Reliability, Ability to Delegate Responsibility, Ability to Effectively Manage Time, Appropriate use of Leadership Styles, Appropriate Modeling of Organizational Values, and Information Management. Six statements asked participants to score themselves on their effectiveness as a leader. The greatest increase in leadership performance was in two areas: "Inspire a Shared Vision and Establish Standards That Help Your Organization Achieve Its Next Stage of Development" and "Exercise Power Effectively and Empower Others to Act". Overall, 82.5% of the program's participants increased their levels of participation as members of the group and 92.6% increased their levels of participation in leadership roles. 100% indicated that the MARL Program activities will help them in addressing agricultural and rural community issues effectively. In the last six months, five of the 28 MARL graduates have moved into new leadership positions—county commissioner, city council, vice-president of the Minnesota Pork Producers Association, National Policy Chair for the Corn Growers Association, and vice-president of the Minnesota Farm Bureau.

Reference:
MARL website: http://www.marlprogram.org

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

d. Scope of Impact: State-Specific

Key Theme: Multicultural and Diversity Issues (JOINT)

MAES Plan of Work: GOAL 5, Enhanced Economic Opportunity and Quality of Life for Americans

Extension Plan of Work: GOAL 5, Community Vitality Capacity Area: Building Cultural Understanding, Building Inclusive Communities, and Diversity and Inclusion Programs; Family Development Capacity Area: Project FINE: Focus on Integrating Newcomers Through Education Program

a. Description

Research: An underdeveloped yet increasingly important area of research focuses on mental health services with Latino/a populations. Increase in minority populations has not translated into improved mental health services for most ethnic minority groups. NIMH's National Advisory Mental Health Council has identified translational behavioral science research as one of their three priority areas. They list the need for studies that incorporate contextual factors such as ethnicity and culture to help bridge clinical and service research. U of M researchers have interviewed Latino/a mental health providers and community members to better understand how to develop and implement effective mental health interventions for Latino/a communities.

Researchers are also focusing on the physical health of diverse populations. The overall objective is to examine the nutritional status and dietary behaviors for community populations in transition due to changes in economic status, environment, age or migration. The goal is to develop culturally appropriate nutrition intervention, where appropriate. For example, this year a project examining the role of self-efficacy in dietary and exercise behavior modification was implemented at the Golden Eagle Program in Minneapolis. Assessment tools were developed and tested with 80 urban American Indian children. Baseline data on body composition, self-esteem, dietary intake, and physical fitness were assessed for approximately 180 children.

Extension: Many newcomers have come to Minnesota in recent years—immigrants and refugees from Mexico, Southeast Asia, Africa, and other localities. The 2000 Census noted that Minnesota's population is becoming far more diverse than it has been. Recent terrorism has also led to local cultural violence, so programs that focus on understanding different cultures and welcoming new neighbors are more important now than ever. Extension educators worked with local school systems, police, sheriff, and local human services departments, school systems, ECFE classes, and community organizations to deliver a variety of cultural awareness programs and activities. More than 11,000 people participated directly in these programs and more than 1,200 people were trained to extend the programs to others in their communities. Over $719,000 was raised through grants and in-kind contributions from a wide variety of sources to fund these efforts.

Outcomes varied from community to community. Here are some examples:

- County government departments (public health, mental health, social services, corrections, and Extension education) in one county changed their outreach, education,

and translator services to be more welcoming to immigrants, following a briefing from Extension educators.

- Public health nurses reported a 90% completion rate in teaching health practices and in enrolling clients from other countries in appropriate plans for well child follow-up medical and dental services after a "Cultural Health Update" provided by Extension staff.
- 95% of a random sample of participants in a program about being culturally sensitive to the changing demographics of the work environment said they'd gained new skills that would benefit them in addressing diversity in their work environments.
- All 450 youth and their parents in a "Multicultural Exhibition" had a conversation with a newcomer from another country to learn about their culture of origin and positive and negative experiences associated with living in the U.S.
- Representatives of 16 different community organizations participated in a "Welcoming Somali to Our Communities" program and reported re-teaching what they'd learned in other community settings to more than 1,200 other citizens.
- Students from diverse backgrounds formed a team called "Supporting Players" and made presentations about the impact of racism in public schools in their district.
- Following a regional "Diversity Day" training, 75 students started welcoming projects in 14 local school districts.
- 325 teachers were trained in methods of introducing cross-cultural understanding in their classrooms.
- Following participation in a "Minnesota Nice … or Not, Building Diverse Communities" workshop, a board member for a three-county Community Action Program reached more than 5,000 high-risk, income-eligible immigrant families with information about meeting their basic needs to successfully raise their families and contribute to their new communities.
- Participants gained more knowledge about family life, food, skills, customs, beliefs, values, and religion of Latino newcomers to their community.
- The interpreter network service in one county was expanded from 15 to 32 trained interpreters offering services in 9 languages. As a result, non-English speakers, as well as businesses and local agencies, are able to obtain interpretive services with less than 24-hour notice.
- Monthly meetings between newcomers and school and law enforcement officials, business representatives, and others are used to increase understanding and meet identified needs of newcomers.

Last year, Minnesota's New Immigrant Farmer and Farming Incubator Program worked with 518 people who want to become full-time or part-time farmers. Many immigrant families farmed small plots at the University's Rosemount Outreach Center in Dakota County, growing vegetables for themselves and for sale to others. Eight workshops were held for immigrant farmers prior to the 2002 growing season—four on Private Pesticide Applicator Training, two on vegetable crop integrated pest management, and one each on (1) site selection, soil fertility, sampling, and fertility management, (2) farm safety and health, (3) production and financial record keeping, and (4) USDA Farm Service Agency loan programs and application criteria.

b. Impact

Research: Some results of this work:

- Nutrition and physical activity lessons have been developed that incorporate teachings from an American Indian perspective.
- Materials on health care access as being provided to low literacy monolingual Spanish speaking Latin Americans in the Twin Cities.
- Basic bilingual health materials are being made available for use in English as a Second Language (ESL) classes to help people learn about both the health care system and health issues.

Extension: Over 38% of eligible EPSDT (Early, Periodic Screening, Diagnosing, and Testing) families received necessary health care and screening services in Dakota County, as a result of a joint Extension Service and Public Health intervention to address diverse cultural attitudes about health and healthcare. The educator estimated that every dollar spent on outreach and health screening will save $18 in future public healthcare costs.

Winona city police and officials credit Project FINE/Extension with the low incidence of hate crimes toward newcomer families in their city.

Four immigrant farm families have offered earnest money to buy 116 acres of farmland in Dakota County. Fourteen immigrant farmers who took the PPAT course passed the exam and received their private applicator's license.

References:

MAES Projects: MIN-52-066, MIN-52-077, MIN-53-063, MIN-55-048
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2772
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2858
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3077
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3089

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

d. Scope of Impact: Multi-State (IL)

Key Theme: Promoting Business Programs (EXTENSION)

Extension Plan of Work: GOAL 5, Community Vitality Capacity Area--Business Retention and Expansion Strategies Program

a. Description

Business Retention and Expansion Strategies Programs are carried out in communities that contract with the University of Minnesota Extension Service to provide training to a local group of volunteers and to provide analysis of the business surveys that the volunteers carry

out while visiting local businesses. The results of the surveys are used to identify community projects that address some of the key concerns raised by local businesses, in order to retain businesses and strengthen the business climate for expansion of existing businesses. BR&E programs often take 18 months or more to complete because of the amount of time needed to effectively complete some of the community projects.

Nine community BR&E Strategies Programs were active during 2002. Five were programs begun in earlier years with community projects in the process of completion. One program completed the visitation phase last year with 91 businesses surveyed with the help of 115 volunteers. Another location that had conducted one of the original BR&E Strategies Programs in Minnesota in 1991, conducted a second program in 2002. Two new locations, the city of Blaine and Traverse County, began planning and organizing in 2002, in preparation for the business visitation phase in 2003.

b. Impact

- In rural Springfield, Minnesota, where affordable housing was an issue/community project, an additional 4-plex apartment building was completed and four detached homes built in a new subdivision. The same locality reported four new retail businesses and a 98% occupancy rate in their downtown retail area.
- In Freeborn County, monument-style city welcome signs were installed as the first phase of a "Beautification of Albert Lea" project. A workforce retention campaign with $12,000 of local funding was initiated to entice 3,500 local graduates to remain in or return to the area to work, using a sequenced mailing and a website, www.albertleaworks.org.
- In Isanti, a city website has been implemented and a 25-acre park is under development as part of their quality of life project. Progress was also made on improving their city image by redeveloping downtown sidewalks, streets, and lighting.
- In Rice-Steele Counties, the new Rice County Comprehensive Plan adopted some of the recommendations in the farmland preservation report developed by one of their BR&E project teams. Options for alternative agriculture, including conversion to organic production and farm-direct marketing, are being explored.

Reference:
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=2738

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

d. Scope of Impact: State-Specific

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

Extension Plan of Work: GOAL 5, Youth Development Capacity Area--4-H After School Activities, Making the Case for Out of School Time, and MN Best: Promoting Youth Development Programs

a. Description

With so many parents working, 4-H After School Activities are very important in providing positive activities and asset-building growth for kids who otherwise often would be left on their own and therefore at risk for getting into trouble. In addition to providing 4-H After School Activities, youth educators and youth development specialists in Minnesota are involved in "Making the Case for Out of School Time", an effort to build connections between community-based youth-serving organizations and agencies, community leaders, parents, and families to more effectively provide youth asset-building after school activities. The "MN Best: Promoting Youth Development" Program provides 4-H curriculum materials and youth development training to youth-serving professionals and volunteers and encourages them to partner with youth to provide successful local asset-building after school programs. In 2002, these programs were supported with more than $308,000 in grants, gifts, and in-kind contributions and nearly $12,000 in fees charged for training.

4-H After School activities reach many kids, such as racial/ethnic minority and immigrant youth and other economically disadvantaged children that have not been participating in 4-H Club activities. For example, in Owatonna, 84 Hispanic youth are involved in Club Latino after school where they have the opportunity to learn about their history and culture. In another Owatonna school, 43 Somali and Sudanese youth are networking and making friends with others from their own culture. In northern Minnesota, another program involved 78 kids, many of them from the Red Lake Reservation.

b. Impact

Educators report that new immigrant youth have gained a feeling of belonging—they are more connected to their schools and other organizations in their communities. 4-H After School Activities provide youth with mental health disabilities with important preventive mechanisms that help keep them in family settings, rather than out-of-home placement. In another locality, an After School Nutrition program called "Kids" Café" taught youth nutrition and food safety, resulting in increased consumption of fruits and vegetables, whole grains, and water rather than soft drinks. Another educator reported that teachers had noticed a difference in the students who were participating in the 4-H After School Program—they became better listeners and were more attentive in the classroom.

After youth living in a manufactured housing community in the Twin Cities metro area, became involved in a 4-H summer program called "Terrific Tuesdays", vandalism and other youth related crime in the community and the number of police calls for juvenile offenses declined. The amount of loitering by teens also dropped. The program was expanded to include After School Activities with a grant from the McKnight Foundation, parents got involved, parks and recreation staff were trained in youth development, and a large community youth support network was developed.

"Making the Case for Out of School Time" is just beginning but is already showing evidence of success in encouraging more positive mentoring relationships between adults and youth

and in getting more communities to organize efforts to seek funds to start After-School and other youth programs. "MN Best" is training youth-serving agency staff and volunteers to deliver asset-building youth programs. The social impact of this effort is demonstrated by the increased capability of youth workers to better serve and involve youth in programs that enhance their knowledge and give them a wide variety of new skills, including leadership abilities.

Reference:

http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=410
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=896
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3068
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3074
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3144
http://www.extension.umn.edu/mnimpacts/impact.asp?projectID=3160

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

d. Scope of Impact: State-Specific

II. Stakeholder Input Process Update

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

In September 2002 we launched an integrated approach to program promotion and community assessment statewide--a responsibility of the newly appointed County Extension Directors. It was important to do both processes collectively as we implemented the new regional program delivery system.

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

County Extension Directors promote existing Extension programs outlined in our *Resources and Programs for Minnesota* brochure to various constituent groups in the county. At the same time, they are engaging stakeholders in understanding the programmatic opportunities Extension can provide in Community Development and Vitality, Land Food and Environment, and Youth Development and Family Living. They are also engaging stakeholders in identifying topics not in the brochure that they see a need for in their county.

C. Statement of how the collected input was considered.

The needs identified that do not relate to the current existing Extension programs are sent to the District Director and the Capacity Area Leader. This provides the opportunity to consider other University or agency programs that might meet the need identified. These issues/needs also become input for the Capacity Area's program planning process.

County Extension Directors and Regional Educators, responsible for program planning and delivery, are encouraged to meet with diverse groups of people across each county. They are expected to include residents of all ages, ethnic backgrounds, economic status, and residential areas in the county.

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

This process for stakeholder input is more focused than the processes we have used in the past. It allows us to promote and provide existing programs (that were identified through a statewide trend analysis in 2000) within a new delivery system and at the same time garner input from stakeholders. Our resources are limited; we are not able to respond to needs outside of the program foci identified within each area of expertise. Consequently, we do not want to set Extension up to meet local needs that we haven't the capacity or resources to meet.

III. Program Review Process Update

A. What is our process?

B. Have there been any significant changes in it during 2001-02? YES

When we initiated our 2002-2005 Change Plan in July 2002, Extension's program focus was narrowed and the infrastructure was established to support program priorities in each of our five Capacity Areas—Agriculture, Food, and Environment; Community Vitality, Family Development, Natural Resources and Environment, and Youth Development. This process included an in-depth review of ten statewide programs identified by Capacity Area Leaders and District Directors.

Ten program audits were completed between July 20 and August 8, 2002. The audit team included Extension staff with expertise in organizational marketing, accountability and evaluation, business plan development, use of technology, print/web based communication, and program development.

The program teams formally presented their program to the audit team, answered questions, and indicated areas of their program they would like to strengthen or improve. After each public presentation, several members of the audit team met with the program team to discuss the strengths of the program and offer assistance in the areas identified by the audit team.

Each program team decided if they were interested in the assistance offered by the audit team. In addition each program received $10,000 to be used to enhance their program. The program team members and the Capacity Area Leader determined how they would spend the money.

The ten programs that completed the audit became the "featured programs" at Extension's annual Program Summit in October 2002 and at the Association of Minnesota Counties annual conference in December 2002. The audit process also identified system issues that were forwarded to the Dean's Council. The audit process used in 2002 will be evaluated to determine if and when it should be replicated in the future.

The statewide Extension Citizen's Advisory Committee continues to advise our program development and review process and provides 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 four 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.

IV. 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 11 major programs that are in our 2001-2004 Plan of Work that we submitted March 1, 2001. During 2002, we have reduced the number of programs that we are delivering, in line with reduced resources and the need to demonstrate to university administration, the state legislature, and county commissioners that we are focusing on the most critical needs and issues. Our 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--audiences in the "under-served, under-represented" category. Some of these programs are mentioned under various Goal 5 key themes, e.g., Multicultural and Diversity Issues and Youth Development/4-H.

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 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 in 2003 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 (see list appended). 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 three of these locations. Each ROC has a cadre of academic faculty with joint Extension and research appointments officed 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.

V. 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.

Each year, we ask 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.

VI. 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.

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: X **Multistate Extension Activities**
___ **Integrated Activities (Hatch Act Funds)**
___ **Integrated Activities (Smith-Lever Act Funds)**

	Actual Expenditures				
Title of Planned Program/Activity	**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	--			
Goal 1, Agriculture, Food & Environment			$92,946		
Total					

Charles H. Casey — 2/28/03
Director — **Date**

Form CSREES-REPT (2/00)

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Institution University of Minnesota
State Minnesota

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

	Actual Expenditures				
Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
See attached Joint Themes Financial Data	$930,761	$957,640	$929,456		
Total					

Charles H. Casey
Director

2/28/03
Date

Form CSREES-REPT (2/00)