

**Michigan State University
Extension 2002-03 Annual Report
of Accomplishments and Results**

Margaret A. Bethel

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Director**

Overview

Michigan State University Extension (MSUE) uses an ecological model in approaching community needs by providing educational programs and information at multiple levels, which results in blended funding sources, programs crossing-over goal areas, integration of research and educational instruction, and multiple delivery approaches (direct and indirect). For example, land use in Michigan plays a critical role in agriculture, environment, and community and economic development, which is addressed by multiple resources (federal, state, county, and other) and through multiple Area of Expertise (AoE) teams. In addition, environmental factors (i.e., reduction of state and county dollars, early retirements of senior staff) have affected resources, number of staff, and the educational programs.

MSUE used stakeholder input to identify critical issues, prioritize programming, improve program designs and provide feedback (see 2004 Update to Plan of Work). During 2002 MSUE used the results of a statewide initiative of community input called "Sharpening Our Program Focus" that identified five priority areas: Building strong communities; Helping youth succeed; Enhancing profitability in agriculture; Encouraging responsible land and natural resources use; and Building healthy families. A survey was completed in the spring of 2002 by MSU's Institute for Public Policy and Social Research (IPPSR) called the State of the State Survey (SOSS). The survey assessed a variety of public topics with one set of questions asking for reactions to the identified program priorities for MSU Extension. The 1,012 random surveys were conducted in all six regions of the state. The findings supported the five priority areas with 78% of the respondents rated as a high priority to help youth succeed as well as building healthy families, followed by 70% indicating high priority for encouraging responsible land and natural resource use, 62% for building strong communities, and 51% for enhancing profitability for agriculture. It is noteworthy to state that only 3-5% indicated any of these areas as a low priority. Local, regional and state focus areas were used by the 29 AoE teams, in collaboration with their advisory committees, partners and stakeholders, to strengthen existing goals, drop completed or obsolete goals, and create new initiatives. The following report describes the outcomes and impacts of the programs and initiatives that were the result of this process.

Overall, MSUE:

- Impacted educational programs and applied research projects that addressed health and obesity issues, helped officials and communities deal with land use issues and service delivery issues, taught and supported parents, provided strong mentoring and other educational programs for children and youth (including 4-H), promoted value-added agriculture, helped protect the state's environment and natural resources, and controlled and eradicated the spread of infectious diseases.

- Conducted long-term research projects affecting various agricultural and natural resource industries (including forestry and tourism) that made major contributions to the state's economy.
- Strengthened the capacity to address threats to Michigan's food security and the health of its citizens. Key examples of current research included bovine tuberculosis, West Nile virus, chronic wasting disease, hoof and mouth disease, emerald ash borer etc.
- Worked with countless collaborations in communities in which MSU Extension provided the educational component to complement the services provided by other organizations and agencies (e.g., FIA, MDCH, WIC, DNR and MDA). This also included mandated continuing education programs for a variety of industries.
- Strengthened the research and educational capacity of Michigan's land grant university even through a reduction in MSUE educators and MAES scientists occurred.
- Strengthened the funding partnerships that created the state's land grant system of public access. These partnerships fund positions at the state and local levels and they ensure that state and local issues are addressed.

Inputs and Resources

Table 1. shows the overall expenditures for MSUE for the 2002-03 federal programming year to be \$77.6 million, with \$7.6 million being Federal B and C formula dollars. These dollars have been critical in contributing to base programming in the counties as well as enhancing programs by matching state and county dollars. During 2003, this became very evident as MSUE experienced a \$3 Million reduction from the state that rippled through all programs. In addition, the remaining \$29 Million was slated for total elimination but aggressive stakeholder input (thousands of citizens wrote the governor and legislators in support of MSUE programs) and documents of outputs and outcomes helped to convince decision makers to continue to support MSUE programming in the future. Because Federal 3b&c dollars, like the state and county dollars, are integrated into virtually every MSUE program, the following report reflects the whole rather than a part. One major part that is missing from the following report is in-kind contributions, which include volunteer time (more than 28,000 volunteers assisted programming in 2002-03) and tangible resources, such as building space, materials, and travel.

Table 1.
Overall MSU Extension Expenditures by Source of Funding and Federal Goal

Goal	Fed3b&c	Fed3d	State	Local	Other	Total
1) Agriculture	1,820,394	58,634	7,826,963	5,385,493	1,253,183	16,344,667
2) Food Safety	777,489	625,317	4,146,917	1,074,941	3,362,199	9,986,863
3) Food, Nutrition, and Health	744,844	1,269,503	3,392,919	1,074,941	6,573,213	13,055,420
4) Environmental	1,732,986	75,121	6,702,503	5,385,493	2,917,103	16,813,206
5) Community, Human, and Youth Development	2,569,979	24,654	7,600,328	8,618,408	2,540,341	21,353,710
Total	7,645,694	2,123,296	29,669,632	21,536,037	16,646,041	77,623,940

Figure 1. shows 10% of MSUE funds were **Federal 3b&c**, 3% **Federal 3d** (mainly EFNEP), 38% **State**, 28% **County**, and 21% **Other** (competitive grants – multiple sources with FNP being the largest).

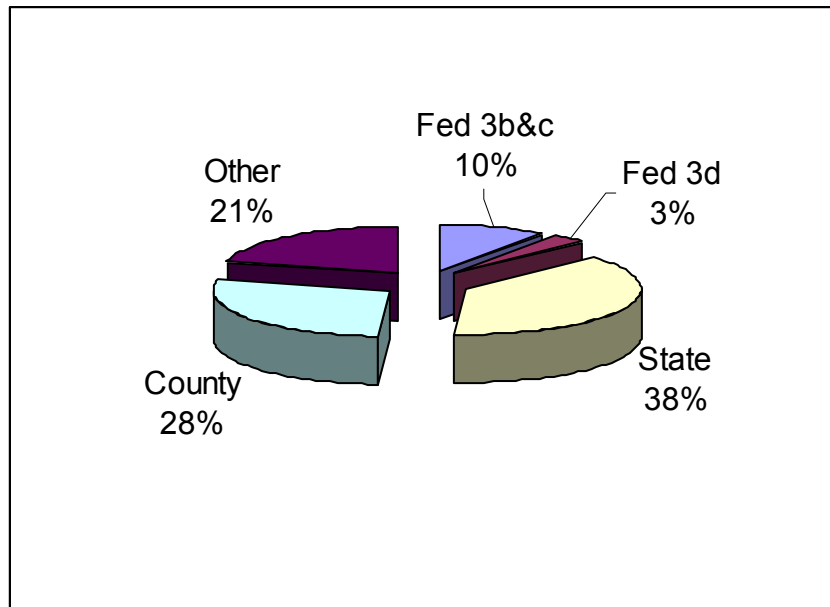


Figure 1.
Overall 2001-02 MSU Extension Expenditures by Source of Funding

Figure 2. shows overall funding for MSUE by Federal Goals: 21% of funding involved programs that addressed **Goal 1)** An agricultural system that is highly competitive in the global economy; 13% for **Goal 2)** A safe and secure food and fiber system; 17% for **Goal 3)** A healthy, well-nourished population; 22% for **Goal 4)** Greater harmony between agriculture and the environment; and 28% for **Goal 5)** Enhanced economic opportunity and quality of life for Americans.

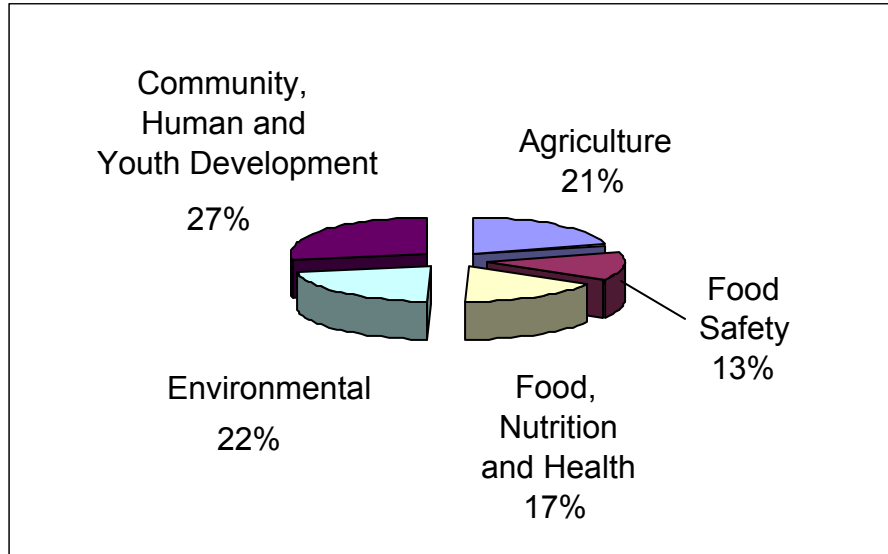


Figure 2.
Overall 2002-2003 MSU Extension Funding by Federal Goal

Table 2. shows that in 2002-2003, MSUE staff consisted of 1,132 full time equivalents (FTE) with 48% Professional (544 FTE's), 26% Para-Professional (293 FTE's), and 29% (295 FTE's) Office and Clerical staff members. Two changes have taken place in the past two years: a decrease in senior staff (i.e., County Extension Directors, field agents, specialists, and administrators); and an increase in starting level para-professionals, which have mainly been in parenting and 4-H Food and Nutrition programs. Fifteen percent of the total FTE's (169 FTE's) were funded by Federal 3b&c with 123 FTE's being Professional. Twenty-four percent of the total FTE's (272 FTE'S) were county funded employees.

Table 2.
Total FTE by Professional/Para-Professional by Federal Goal

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
Professional	132	47	61	134	170	544
Para-Professional	16	74	159	17	27	293
Office/Clerical	40	57	103	40	55	295
	188	178	323	191	252	1,132

Figure 3. shows the percentage of FTE by Federal Goal for Professional Staff members, where the largest group fell in Goal 5 (Community, Human, and Youth Dev.).

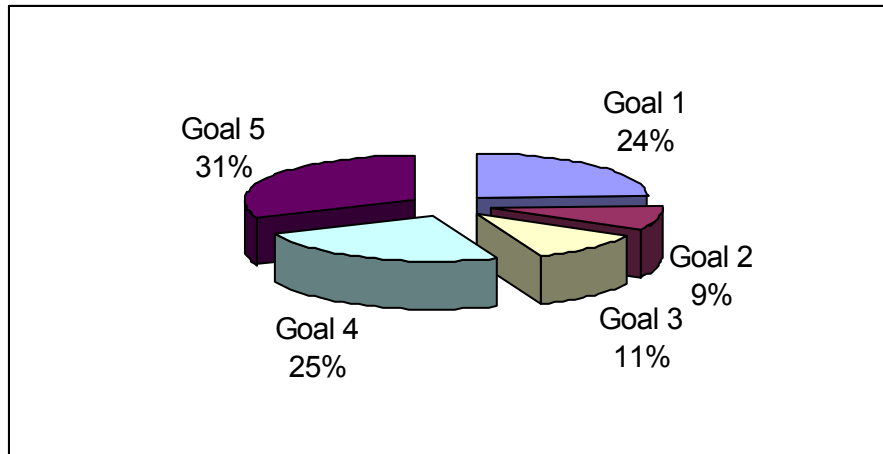


Figure 3.
Percentage of Professional FTE's by Federal Goals

Outputs

MSUE is dedicated to educating tomorrow's leaders and scholars. Innovative MSUE faculty and staff members create knowledge and extend learning to serve Michigan, the nation and the international community. At MSU, faculty and staff members are expected to be active, learner-focused scholars, exemplifying scholarship across the land-grant mission. The essence of this scholarship is the thoughtful discovery, transmission and application of knowledge based in the ideas and methods of recognized disciplines, professions and interdisciplinary fields. What qualifies an activity as scholarship is that it be deeply informed by the most recent knowledge in the field, that the knowledge is skillfully interpreted and deployed, and that the activity is carried out with intelligent openness to new information, debate and criticism. The primary mechanism for educational program planning, implementation and evaluation for Michigan State University Extension is the Area of Expertise (AoE) team concept, which brings stakeholders, collaborators, faculty members, field staff members, and communities together for community need assessments, prioritization of MSUE programming goals, program development and implementation, and assessment of impact. Documented impacts focused on information that reflect changes in knowledge, attitudes, skills, aspirations, and communities that ultimately lead to transformational education and scholarship of discovery, integration, and application (see Figure 4.)

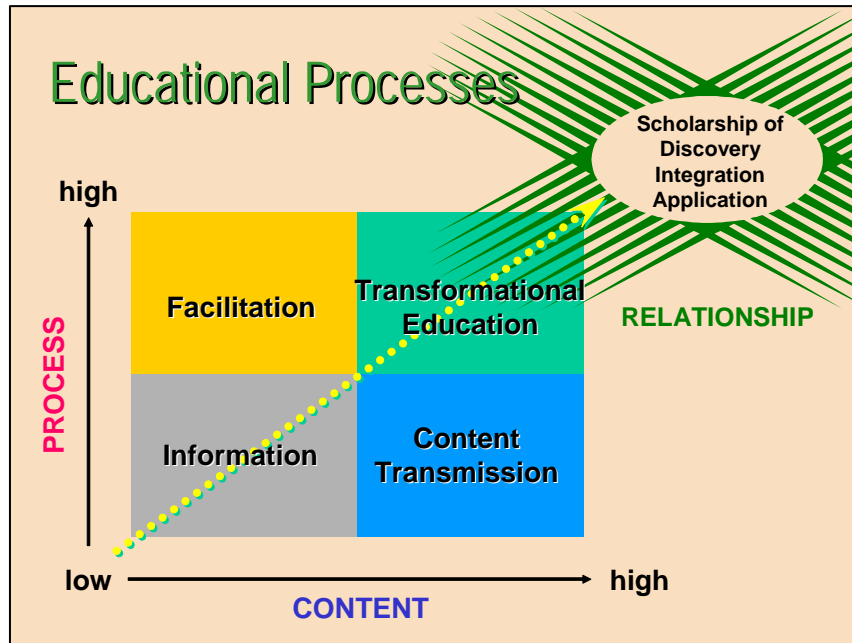


Figure 4.
Transformational Education

Table 3. shows AOE teams grouped by Federal Goal. The number of participants reached for each AOE's is provided:

Table 3.
Total Participants Reached Directly by AOE by Federal Goals

Goal 1 - Agriculture	Adult	Youth	Total
Beef	296	6,183	6,479
Consumer Horticulture	8,946	7,421	16,367
Dairy	4,011	3,071	7,082
Equine	207	17,511	17,718
Field Crops	14,429	4,221	18,650
Floriculture	854	0	854
Forage/Pastering/Grazing	978	4	982
Fruit	3,028	3,010	6,038
Livestock - Overall	2,068	5,624	7,692
Nursery/Landscape	1,700	0	1,700
Ornamentals - Overall	3,576	869	4,445
Sheep	49	4,925	4,974
Swine	540	9,452	9,992
Turfgrass	301	17	318
Vegetables	2,091	4,777	6,868
	43,073	67,085	110,158
Goal 2 - Food Safety			
Food Safety*	10,638	10,539	21,177
Goal 3 - Food, Nutrition, and Health			
Food, Nutrition & Health*	42,551	42,154	84,705

Goal 4 - Environmental			
Forestry	4,561	6,004	10,565
Land Use	3,703	7,525	11,228
Manure	3,511	255	3,766
Renewable Resources (RREA)	535	2,948	3,483
Sea Grant	4,097	5,526	9,623
Water Quality	11,972	13,776	25,748
Christmas Trees	663	0	663
	29,042	36,034	65,076
Goal 5 - Community, Human, and Youth Development			
Community Development	7,897	2,342	10,239
Economic Development	3,481	165	3,646
Family Resource Management	20,216	19,042	39,258
FIRM	7,455	1,672	9,127
Human Development	21,868	23,557	45,425
LeadNet	1,712	171	1,883
State & Local Government	1,988	19	2,007
Tourism	169	6	175
Volunteer Development	5,210	17,316	22,526
Youth Development**	10,568	56,275	66,843
	80,564	120,565	201,129

* To avoid duplication, participants who received both food safety and food nutrition were counted only once.

*** To avoid duplication, youth who crossed goals were not counted again in youth development.

In 2002-03, through the efforts of these 29 AoE teams and volunteers, MSUE reached 462,156 participants directly through educational programs. This was a decrease of 9% from the previous year, which was due to reduced funding and loss of senior staff who took early retirements. Table 4. shows the number of participants reached directly for each of the five Federal Goal areas. Goal 5 (Community, Human, and Youth Development) had the largest number of participants with 186,363, followed by Goal 1 (Agriculture) and Goal 3 (Food, Nutrition, and Health). The numbers below do not include the millions of people that are educated through newsletters, TV, internet, radio and conferences on topics that include: [Emerald Ash Borer](#), [Helping Children and Their Families Cope with Disasters](#), and [MSUE Emergency Management](#).

Table 4.
Total Participants Reached Directly by Federal Goal

Goal Area	Adult	Youth	Total	%
Agriculture	43,073	67,085	110,158	23.83%
Food Safety*	10,638	10,539	21,177	4.58%
Food Nutrition and Health*	42,551	42,154	84,705	18.32%
Environmental	23,719	36,034	59,753	12.92%
Community, Human and Youth Development**	65,798	120,565	186,363	40.32%
	185,779	276,377	462,156	

* To avoid duplication, participants who received both food safety and food nutrition were counted only once (20% Food Safety and 80% Food, Nutrition, and Health).

** To avoid duplication, youth who crossed goals were not counted again in youth development.

Figure 5. shows the ethnic distribution of the 462,156 participants educated directly.

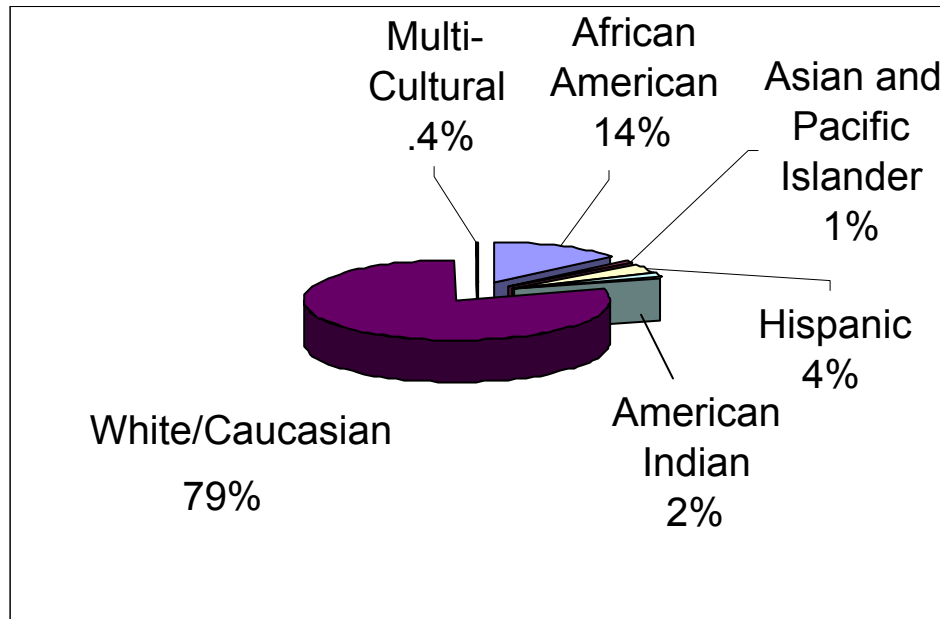
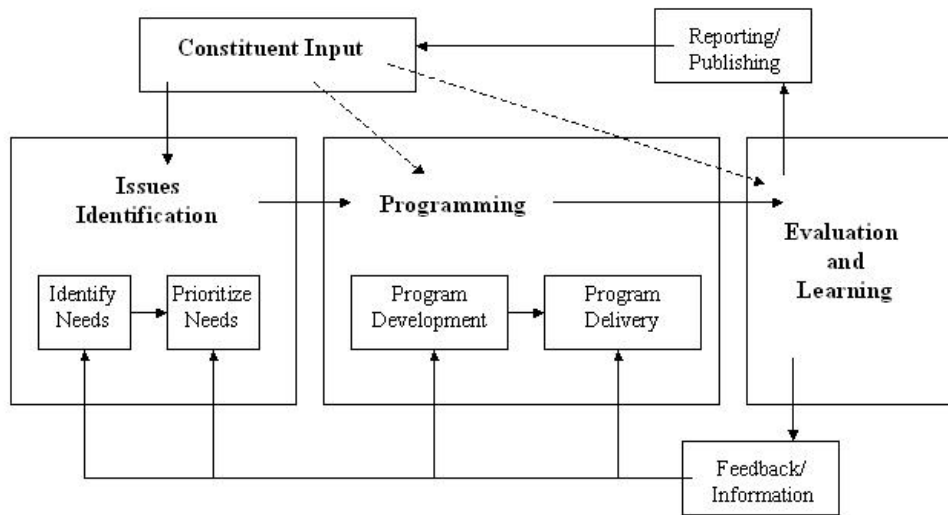


Figure 5.
Percentage of Participants by Ethnic Groups

Seventy-nine percent (79%) of the participants were Caucasian, 14% African American, 4% Hispanic, 1.5% Native American, 1% Asian, and .4% Multi-Cultural. This distribution is representative of Michigan's population: 80.9% Caucasian, 14.3% African American, 2.8% Hispanic, .6% Native American, and 1.7% Asian (Multi-Cultural was not used).

In 2002-03 MSU Extension used the 29 Area of Expertise (AoE) teams as its central vehicle to assess community needs (see Figure 6.) through stakeholders, advisory groups, and community (constituents) involvement in identifying and prioritizing community needs, integrating research with program development, delivering the program, and evaluating impact and reassessing the need and situation.

Issues Identification and Programming



Modified from Ted Ferris & Jim Kells Materials for Coaches and Co-Chairs

Figure 6.
Constituent (Stakeholder) Input Process for
Issues Identification and Programming

From this process, key federal areas addressed by the AoE Teams in 2002-03 were:

- Adding Value to New and Old Agricultural Products
- Agricultural Profitability
- Animal Health
- Animal Production Efficiency
- Emerging Infectious Diseases
- Home Lawn and Gardening
- New Uses for Agricultural Products
- Ornamentals/Green Agriculture
- Plant Health
- Plant Production Efficiency
- GIS/GPS
- Food Handling
- Food Safety

- HACCP
- Human Nutrition
- Agricultural Waste
- Forest Resource Management
- Integrated Pest Management
- Land Use
- Pesticide Application
- Water Quality
- Child Care
- Youth At-Risk
- Community Development
- Leadership Training and Development
- Parenting
- Promoting Business Opportunities
- Promoting Housing Programs
- Youth Development
- Family Resource Management

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

Over 100,000 participants (110,158) were directly involved in MSUE educational programs that focused on the agricultural system. Table 5. shows the number of participants and the Federal Key Themes for each of the sixteen AoE teams that worked in Goal 1. Key federal themes highlighted in this report demonstrating impact were: adding value to new and old agricultural products, agricultural profitability, animal health, animal production efficiency, emerging infectious diseases, home lawn and gardening, new uses for agricultural products, ornamentals/green agriculture, plant health, and plant production efficiency.

Table 5.
Number of Participants and Key Themes by AoE for Federal Goal 1

Goal 1	Adults	Youth	Total	Federal Key Themes
Beef	296	6,183	6,479	Animal Production Efficiency, Agricultural Profitability, Emerging Infectious Diseases
Consumer Horticulture	8,946	7,421	16,367	Home Lawn and Gardening, Ornamentals/Green Ag
Dairy	4,011	3,071	7,082	Animal Production Efficiency, Agricultural Profitability, Emerging Infectious Diseases
Equine	207	17,511	17,718	Animal Production Efficiency, Adding Value
Field Crops	14,429	4,221	17,718	Adding Value, Precision Ag, Agricultural Profitability, IPM

Goal 1 (continued)	Adults	Youth	Total	Federal Key Themes
Floriculture	854	0	854	Adding Value, Agricultural Profitability, Biotechnology, IPM, Ornamentals/Green Ag
Forage/Pasturing/Grazing	978	4	982	Adding Value, Grazing, Emerging Infectious Diseases
Fruit	3,028	3,010	6,038	Adding Value, Ag Profitability, Niche Market, IPM
Livestock - Overall	2,068	5,624	7,692	Animal Production Efficiency, Agricultural Profitability, Emerging Infectious Diseases
Nursery/Landscape	1,700	0	1,700	Home Lawn and Gardening, Ornamentals/Green Ag
Ornamentals - Overall	3,576	869	4,445	Adding Value, Agricultural Profitability, Biotechnology, IPM, Ornamentals/Green Ag
Sheep	49	4,925	4,974	Animal Production Efficiency, Small Farm Viability
Swine	540	9,452	9,992	Adding Value, Animal Production Efficiency, Manure Management
Turfgrass	301	17	318	Agricultural Profitability, Ornamental/Green Ag
Vegetables	2,091	4,777	6,868	Adding Value, Precision Ag, Agricultural Profitability, IPM
	43,073	67,085	110,158	

Highlights

- MSU Extension educators developed the “Farm Bill Analyzer,” a computer program to help producers navigate through the numerous program participation options presented in the 2002 Farm Bill. As a result of programs held across the state, 4,445 producers representing 2,888,357 acres benefited by over \$35 million by choosing the preferred option over the Farm Service Agency (FSA) default Option 2. These producers who used Extension assistance can expect \$439 million in payments (assuming mid-level prices over six years). The ripple effect or indirect benefits are unknown but probably easily double or triple these values.
- In a study conducted by the Extension Disaster Education Network, Extension was named as the first place crop producers said they would go for advice in the face of an unknown disease outbreak. It was the second choice for livestock producers, behind veterinarians. Having this network in place is vital if a threat to agrisecurity should arise.
- The MSU Product Center for Agriculture and Natural Resources, created in early 2003, works to help farmers, business owners and entrepreneurs develop new products and ventures related to adding value to the state’s agriculture and natural resource commodities. It received a nearly \$1 million grant from the USDA to assist with value-added agriculture ventures. Nearly 20 innovation counselors were identified and trained on the product center. They are working with clients across the state to identify and test potential products, research their market potential and guide them toward production, all with the assistance of faculty and staff members from across the university and other business development professionals from the Michigan Partnership for Product Agriculture.
- Project GREEN, the plant industry coalition initiative, awarded \$1.1 million to 36 new applied research projects during fiscal year 2003. Another \$900,000 was directed toward multiyear projects that started in 2001 or 2002 targeting priority issues affecting Michigan’s plant agriculture industries. Project GREEN continues to be an outstanding partnership among industry groups, MSU and state government. Research projects funded during the 2003 fiscal year attained nearly \$9.5 million in matching funds.
- Michigan Agricultural Experiment Station scientists developed a computer model to predict a cattle farm’s risk for bovine TB on the basis of farm facilities and management practices. This model is being integrated with an economic model to create a software package for on-farm use. This program will predict a farm’s risk for developing bovine TB and provide customized recommendations for management changes to reduce bovine TB risk.

Examples of Impact in Goal 1

Key Theme: Agriculture Profitability

Educational Initiative Title: 2002 Farm Bill Training

Phil Kaatz, Roger Betz, and James Hilker: Lapeer, Macomb, Oakland, and St. Clair Counties

Description of Program

The confusion for the farm community over the 2002 Farm Bill was enough to paralyze farmers from taking action during the sign-up period between Sept. 2002 and April 1, 2003. MSUE responded with a comprehensive training that provided guidance and direction to farm owners and helped them to improve their farm profitability. The goal was to provide training to farm owners and operators to increase their knowledge and provide direction for decisions that will have a positive economic impact on their farm operation. In July 2002, discussions with the Lapeer/Oakland County Farm Service Agency director revealed that there was little education being planned locally for the USDA 2002 Farm Bill Commodity Program. The FSA Director indicated that the sign-up was confusing, difficult and thought that very few farm owners and operators would be able to understand the program. In addition, two local agriculture advisory committees, each comprised of 15 farmers and agribusiness' agreed that training on the farm bill was a critical need for the entire area and needed prompt attention. This program was promoted to every farm family with an effort to include underserved and minority participants.

Impact

Between October 1, 2002 and April 1, 2003, 20 training meetings were conducted and 5 day-long help sessions were held. Each 3 hour training meeting involved a 1 1/2 hour PowerPoint session plus a hands on session using the "MSUE Farm Bill Analyzer." To increase participation, real life numbers were used in the analyzer by pre-selected farmers at the meeting. As a result of these meetings, 272 farmers and farm owners attended meetings. The meetings represented 31.4% (144,000 acres) of farmland in the coverage area. In addition, 62 individual farm owners and operators, representing 520 different farms and 37,360 acres, received instruction and guidance for the farm bill sign-up. The Farm Management Agent met with these individual farmers after they had gathered the necessary information needed for the analyzer. Individual meetings were important to keep financial facts confidential concerning their farm operation. Because government support payments represent roughly 45% of NET farm income, it was imperative to help the farmers make the "right decision" for each farm. The farmers had 7 options to choose from for each farm. The difference between the highest paying "right decision" and the lowest paying decision represented approximately \$9.7 Million dollars over the 6 year life of the farm bill, with average counter cyclical payments. Total payments over the life of

the 6 year farm bill, with average counter cyclical payments, was approximately \$26 Million dollars. Considering the fact that each dollar will stay within the area and have a multiplier effect of approximately 7X, the economic impact of the farm bill training will be nearly \$180 Million Dollars for the four county area over the life of the farm bill. From the group of farm owners that signed up before the deadline of April 1, 2003, the FSA Director reported that over 60% had gone through MSU Extension training and felt the training was critical in helping farmers make an educated decision.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Adding Value to New Agricultural Products

Educational Initiative Title: Michigan Asparagus Growers Get Fresh

Norm Myers, Tom Kalchik, Mary Hausbeck: State

Description of Program

Like many agricultural commodity producers, Michigan asparagus growers have faced the challenges of a changing national and world economy. They were hit especially hard in 2000 when changing U.S. trade practices drew a flood of low-priced South American asparagus to processors—a major outlet for Michigan asparagus. Concerned about the prospects for the long-term sustainability of the Michigan asparagus sector, a group of growers approached Norm Myers, Michigan State University (MSU) Extension director for Oceana County to ask for assistance. Together, they looked at the possibilities of long-term, value-added and fresh market opportunities. One of the major competitive edges is Michigan's growing season takes place at a time when other areas of the world don't produce asparagus. Myers connected the growers with MSU resources in the form of Tom Kalchik, former value-added agriculture agent and now assistant director of the MSU Product Center for Agriculture and Natural Resources, and Mary Hausbeck, professor of plant pathology. Along with the Michigan Asparagus Advisory Board (MAAB), a steering committee was formed to write a grant to conduct a fresh market feasibility study. The USDA's Rural Development program, the Michigan Department of Agriculture (MDA) and MSU's Project GREEN (Generating Research and Extension to meet Economic and Environmental Needs) and MAAB all provided support for the study, which was conducted by an outside contractor. "That study showed that while Michigan had problems to overcome, fresh market was indeed a potential for Michigan asparagus," Myers says. "One of the chief problems was the fact that growers had a tendency to sell to processors when prices were good and supply limited

because it is easier than fresh marketing. This has hurt the industry because you have to be consistent supplier of quality product to be a player.” The producers took the information to heart, forming a cooperative called Michigan Asparagus Growers Inc. (MAGI). Each member is required to buy stock in the cooperative and pay an annual performance bond. The bond is put into escrow, and if the grower fails to deliver on the promised fresh tonnage, it is lost. This incentive ensures that brokers will receive the consistent fresh product they need. It’s a strategy that Kalchik applauds. “Credit goes to the industry leaders who were willing to address concerns retailers had about the Michigan fresh asparagus industry,” he says. “They created a reputation for MAGI with brokers that they are going to deliver.” With Kalchik’s help, the group participated in the MDA’s 2003 Select a Taste of Michigan marketing program. The program targeted the Grand Rapids area with advertising and promotional materials. They also registered two brand names. One is Michigan Tender Tips and the other is Tender Tips Asparagus.

Impact

It was a successful effort, as the growers realized a five-dollar advantage over prices paid for competing states’ product. According to MDA records, the promotional efforts increased product sales by 65 percent and kept the price per case of Michigan product 27 percent above competing states (California, Washington and Ontario). “This is a situation where an industry was under extreme pressure. By MSU Extension being involved, we could provide objective counseling and help them discern directions they should be taking to improve the economic return to the industry,” Kalchik says. MAGI sales went from 285,000 pounds in 2002 to more than double that rate (about 650,000 pounds) in 2003. Myers credits the good track record the group built with brokers during the 2002 season, and the participation in Select a Taste of Michigan. Kalchik sees a looming industry turnaround. “Prior to this effort growers were taking ground out of asparagus,” he says. “Now, the brokers want more product and so they’re looking for land to put back into production.” Plans for the coming season include a return to the MDA promotion in the Grand Rapids area and a foray into southeastern Michigan. Further into the future, the growers are looking at possibilities for partnerships with asparagus-producing states and countries. It’s a transition in thinking that they did not come to alone. Tom Oomen a grower from Crystal Valley, Mich., and MAGI president values the support his group has received from MSU Extension. “The MSU resources helped us immensely. I can’t say enough positive about them. If we’ve got an issue, they continue to be involved. Tom and Norm have their ears to the industry. I can’t say enough positive about them. They have gone far above and beyond what they were supposed to do.”

In addition, during this time an Asparagus Disease Prediction System was implemented that helped to protect 30% of the State's asparagus acreage valued at over \$15,000,000 to Michigan growers from *Stemphyllium Purple Spot*. In

2002-2003, the Vegetable Area of Expertise Team trained 6,868 participants throughout the state.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Agriculture Profitability

Educational Initiative Title: Five State Beef Initiative

Beef AoE, Kevin Gould: State

Description of Program

The Five-State Beef Initiative (FSBI) was formed to address common concerns and issues impacting profitability and sustainability of the beef cattle industry in the Eastern Corn Belt. The FSBI is a unique partnership between producers, beef cattle associations, land grant universities, state departments of agriculture, Farm Bureaus and a livestock marketing cooperative in IL, IN, KY, MI, and OH. The goal is to help beef producers capture more value from their cattle by meeting consumer expectations through a responsive production, marketing and information sharing system. Beginning as part of two USDA grants in 2000, the FSBI created action teams consisting of producers and partner group members to address the following areas of regional beef improvement: Producer Certification for Beef Quality Assurance (BQA); animal health; animal handling and well-being; environmental stewardship; genetics; and use of performance, carcass and economic data. There are both face-to-face and online formats of the training and certification. Genetic requirements have been developed using performance and carcass Power Scores for sires. The objective is to increase the likelihood that calves will meet production and economic targets set by the initiative.

Impact

To date, over 1500 bulls have been certified, with 191 bulls coming from Michigan. Overall, 73% of the sires certified have been Angus, followed by 14% Simmental. Uniform health requirements were created for preconditioning calves and recommendations were created for cows, stockers and feedlot animals. Not only are these requirements being implemented in direct marketing, these requirements are being adopted by special sales throughout the region. A partnership between the FSBI and eMerge Interactive, Inc. has created a web-based CattleLog ME system for data entry, data warehouse, and data summarization. To date, more than 24,000 cattle have been tagged and detailed

data collected on more than 4,900 carcasses. Michigan has tagged 4,800 animals and has collected carcass data on 875 animals to date. In general, FSBI cattle have had higher quality grades and similar yield grades compared to the 2000 National Beef Quality Audit. Coordinated System Resource Management Processing plants in the region have undergone dramatic changes since 1999. The FSBI is involved in ongoing dialog with potential post-harvest partners. A harvest and(or) post-harvest partner is critical to establishing the economic incentive necessary for long term profitability. The FSBI has developed a regionally-coordinated Integrated Resource Management (IRM) network to help cow/calf, backgrounder, and feedlot operators adopt record keeping systems conforming to Standardized Production Analysis guidelines. These individual analyses can then be benchmarked against state and regional averages. The goal of the FSBI is to create a system that is both profitable and environmentally friendly. Therefore, the FSBI certification training covers applicable state and federal regulations regarding the environment. The FSBI is proactive in addressing current issues regarding handling and well-being of livestock. Certification training includes education on proper cattle handling techniques, and practices that will ensure animal well-being. Another FSBI project focuses on attracting a post-harvest partner that is a five-phase system over a two-year period that results in delivery of 120 carcasses per month to a post-harvest partner. Cattle will ultimately be source-verified from birth to harvest, sired by registered Angus, FSBI certified bulls. The cooperating feedlots are in Michigan, and feeder cattle have been sourced in Indiana and Kentucky. United Producers - MBA Program United Producers, Inc. is launching the Managed Beef Alliance Program (MBA) in Sept., 2003 which is based on FSBI principles. The MBA will require producer certification, adherence to Beef Quality Assurance guidelines, and willingness to collect and share data.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

Multi-State

Key Theme: Agriculture Profitability

**Educational Initiative Title: MCA Grade Vaccinated Feeder Cattle Program
Beef AoE, Kevin Gould: State**

Description of Program

Michigan cow calf producers have no direct method of grouping calves to meet the needs of cattle feeders in Michigan. With our current bovine TB movement restrictions, feeder cattle must be marketed within the state, requiring packaging

based on local cattle feeder specifications. Annual surveys were conducted of the cattle feeders in Michigan to identify their requirements when purchasing feeder cattle. Survey results were compiled and the program was developed. The goals of the initiative were: to increase the health of Michigan feeder cattle to better meet industry demands; package cattle to fit the Michigan cattle feeding industry; increase profitability and sustainability of the Michigan cow-calf industry; develop standard health and management practices for Michigan cattle producers; and further develop this program into a coordinated production system in the future. The initiative involved the beef specialists from the Large Animal Clinic and Dept. of Animal Science. Linkages between the MSU Beef Team and Michigan Cattlemen's Association were essential for the program development phase. Resulting linkages include: United Producers Livestock Markets, Pharmaceutical Companies, Michigan cow-calf producers and cattle feeders, and large animal Veterinarians across the state.

Impact

Calves marketed through the Graded Sale system average \$5-6/cwt. over traditional marketing methods. This results in \$30.00/head of additional value for the Michigan Beef Cow-calf producer. With 900 calves marketed last year that equated to over \$27,000 in added value. To date, over 4,800 calves have been market in this way resulting in over \$141,390 in added value to Michigan Agriculture. Based on the number of repeat consignors and buyers, we continue to provide one of the strongest markets for feeder cattle through this system.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

The AoE teams in Goal 1 met its 2002-03 Plan of Work goals by reaching its targeted population. The team and members have become more active in recruiting stakeholder input and involving collaborators in setting priorities and designing and implementing programs. Examples of collaborators included Michigan Cattlemen's Association, Department of Natural Resources, Michigan Department of Agriculture, Michigan Farm Bureau, Farm Credit Services, Michigan Bean Commission, Upper Peninsula Potato Growers Association, Soil Conservation District, Citizens Bank, Saginaw Valley State University/SBDC, Michigan Pork Producers, Michigan Department of Career Development, Michigan Grape Society, Cornell University, Ohio State University, Rutgers University, Michigan Apple Commission, and Michigan Migrant Legal Services.

Overview of Goal 2: A safe and secure food and fiber system

Funding and programming for Goal 2 overlaps Goal 3 by approximately 80% through EFNEP (Expanded Food and Nutrition Education Programs) and FNP (Family Nutrition Program) which provide education in both food safety and food nutrition. For this reason, it is difficult to separate the two goals without duplication. On the other hand, it is clear that the majority of effort in each of these programs is focused on food nutrition (approximately 80% of the effort is spent on nutrition). Therefore, the estimate of 21,177 participants is low for food safety and does not include the majority of participants who received both food safety information and food and nutrition education, estimated at 100,000. Table 6. shows the number of participants and Key Themes addressed by the Food Safety AoE Team.

Table 6.
Number of Participants and Key Themes by AoE for Federal Goal 2 and Goal 3

Goal 2	Adults	Youth	Total	Key Themes
Food Safety*	10,063	10,539	21,177	Food Handling, Food Safety, HACCP
Goal 3				
Food, Nutrition & Health*	42,551	42,154	84,705	Birth Weight, Human Health, Human Nutrition

* To avoid duplication, participants who received both food safety and food nutrition were counted only once (20% Food Safety and 80% Food, Nutrition, and Health).

Highlights

- Cost-benefit studies have been completed on the Cooperative Extension System’s Expanded Food and Nutrition Education Program (EFNEP) in several states. Results have consistently been shown that every dollar invested in EFNEP saves about \$10 in healthcare costs. In 2003, Michigan’s EFNEP has educated more than 4,000 parents, who represent a total of more than 15,000 individuals, plus 800 youths.

Examples of Impact in Goal 2

Key Theme: Food Safety and Food Handling

Educational Initiative Title: Fresh Produce Production: Reducing Risks

Brenda Reau: Monroe County

Description of Program

Consumer awareness regarding the safety of fresh produce has risen sharply over the last 10 years in response to media coverage of microbial contamination in fruits and vegetables. Retailers in southeastern Michigan and northern Ohio who purchase fresh produce are placing more demands on local growers to ensure a safe produce supply in the supermarket. In response to these issues MSUE with the help of the Monroe County Environmental Health Sanitarian and a MSUE specialist designed a multidisciplinary program called, "Fresh Produce Production: Reducing Risks," to assist producers in ensuring the produce they grow and market remains free of microbial contamination.

Impact

In a written post workshop evaluation, a significant number of producers stated they planned to make changes in their operation to ensure produce safety as a result of what they learned in the workshop. A one year follow-up mail survey was conducted to determine the outcome. A good response rate of 70% was achieved. One hundred percent of respondents reported that they had changed at least one management practice in their operations. Fifty seven percent made two or more changes in their management practices. Examples of the kinds of management practices that were instituted included monitoring of chlorine level of water in which produce is washed or rinsed, developing a procedure for sanitation of the packing area, and providing workers with training. The most significant management practice that was adopted was instituting a hand washing policy in the operation. One hundred percent of respondents had developed and adopted a hand washing policy for their produce handlers. Growers who participated in the program represented over 2000 acres of produce production in the Monroe county area and employed approximately 400 workers in their operations. Given the scope of the growers who were involved in this program and the reported changes they made in their operations in the past year this program has demonstrated a major impact on fresh produce safety in Monroe county as well as southeastern Michigan as most of the growers supply produce to the metro Detroit area.

Source of Funds

Smith-Lever 3b&c, state, local, county

Scope of Impact

Multi-State

Key Theme: Food Safety and Food Handling

Educational Initiative Title: Food Safety Education: “ServSafe” Training

Darci Seamon and Cynthia Warren: Bay and Cass Counties

Description of Program

The Bay County Department of Environmental Health as well as members of the Bay County Extension Council determined that there was a need to provide education to individuals and organizations preparing food for others. The Tri-County Food Safety Task Force comprised of schools, health departments, division on aging, FDA, MDA and Extension Educators also recognized this as a need. A survey of the recipients of the local Family Focus newsletter showed that residents of Bay County were unaware of the new pathogens causing foodborne illnesses. Individuals and businesses involved in selling and preparing food were confused as to the requirements under the new Food Code. Due to new pathogens, food preservation and storage techniques “ServSafe” workshops were implemented to help restaurants, schools, and others serving food. In a similar fashion, the Cass County Health Department identified the need for MSUE to provide these types of trainings.

Impact

Evaluation of the Bay County workshops found that 90% of the participants gained knowledge regarding food safety and handling. One of the organizations reported in a follow-up that it is saving \$3,000 a year from information gathered at a “ServSafe” 4-hour class. The organization realized that they were sanitizing dishes and utensils twice what the recommendation was. A six month follow-up evaluation of the Cass County workshops found 86% indicated that they had made changes in their food handling practices as a result of the program and 100% stated that they would recommend the “ServSafe” program to others. Topics that showed the greatest change were knowledge about food temperatures during cooking and the use of thermometers, wearing gloves, and preventing cross-contamination through proper sanitizing.

Source of Funds

Smith-Lever 3b&c, state, local, county

Scope of Impact

State

Key Theme: Food Safety and Human Nutrition
Educational Initiative: Family Nutrition Program
Gayle Coleman: State

Description of Program

Michigan State University Extension (MSUE) worked in collaboration with the state of Michigan's Family Independence Agency (FIA) to provide education through the Family Nutrition Program (FNP) for persons eligible for or receiving food stamps in all of Michigan's 83 counties during the 2002-03 program year. The educational efforts of FNP did not duplicate or supplant the efforts of other food and nutrition education programs such as the United States Department of Agriculture's (USDA) Expanded Food and Nutrition Education Program (EFNEP), Supplemental Nutrition Program for Women, Infants and Children (WIC), or the Commodity Supplemental Food Program (CSFP). In counties that have both FNP and EFNEP, FNP provided education to audiences not reached through EFNEP, such as seniors without children. FNP enabled county Extension Educators to reach a more diverse audience. The primary objective of the FNP was to provide education to help individuals and families eligible for or receiving food stamps make safe, nutritious, and economical food choices. Education provided through FNP addressed four of the core elements identified by the Food and Nutrition Service (FNS) of the USDA: dietary quality, food resource management/shopping behaviors, food safety, and food security. The fifth core element, systems and environmental change, was addressed in a variety of ways. Examples include working with the Michigan Department of Community Health, Michigan Department of Education – Commodity Supplemental Food Program, Michigan Office of Services to the Aging, and three Indian Tribal Organizations to pilot the Senior Farmers' Market Nutrition Program.

Impact

FNP educated 52,614 participants directly during 2002-03. These direct contacts included adults reached through either a series of lessons (7,574 adults) or one-time presentations (44,383 adults). There was a total of 52,693 direct educational contacts with youth. Approximately 2,000 adult participants who received a series of lessons completed both pre and post surveys. Results regarding food safety from this tool indicated: 44% fewer participants reported thawing frozen meat on the counter; 26% fewer participants reported letting food such as milk or meat sit out for more than two hours; and 17% more participants reported washing their hands before preparing or eating food.

Source of Funds

Smith-Lever 3b&c, federal, state, county

Scope of Impact

State

The Food Safety AoE team in Goal 2 met its 2002-03 Plan of Work goals by reaching its targeted population. The team and members have become more active in recruiting stakeholder input and involving collaborators in setting priorities and designing and implementing programs. Examples of collaborators included U.S. Food and Drug Administration, Health Departments, Substance Abuse Rehabilitation Centers, schools, juvenile centers and courts, Oakland Livingston Human Services Agency, Older Persons Commission, Child and Family Services of Southwest Michigan, University of Michigan, USDA, Kalamazoo Loaves & Fishes, Child Care Network, Great Lakes Indian Fish and Wildlife Commission, food banks, Hunger Action Coalition, Michigan Partnership for Community Caring, Michigan Department of Agriculture, and Salvation Army.

Overview of Goal 3: A healthy, well-nourished population

As previously stated, funding and programming for Goal 2 overlaps Goal 3 by approximately 80%. EFNEP (Expanded Food and Nutrition Education Programs) and FNP (Family Nutrition Programs) provide education in both food safety and food nutrition. For this reason, it is difficult to separate the two goals without duplication. It is estimated that 105,882 received nutrition and health information. Table 7 shows the number of participants and Key Themes addressed by the Food, Nutrition, and Health AoE Team.

Table 7.
Number of Participants and Key Themes by AoE for Federal Goal 2. and Goal 3.

Goal 2	Adults	Youth	Total	Key Themes
Food Safety*	10,063	10,539	21,177	Food Handling, Food Safety, HACCP
Goal 3				
Food, Nutrition & Health*	42,551	42,154	84,705	Birth Weight, Human Health, Human Nutrition

* To avoid duplication, participants who received both food safety and food nutrition were counted only once (20% Food Safety and 80% Food, Nutrition, and Health).

Highlights

- In 2003, more than 800 Michigan schools participated in Team Nutrition, an effort spearheaded by MSU Extension and the Michigan Department of Education and carried out in collaboration with a variety of other partners. Participating schools reported improvements in their school nutrition and physical activity environments. Team Nutrition has secured more than \$1,700,000 in grants and more than \$60,000 in private contributions since 1996.
- In 2003, more than 30,000 nutritionally at-risk, low-income women and children received education and coupons to purchase fresh Michigan fruits and vegetables at local farmers' markets through the Project FRESH program. In a follow-up evaluation, 57 percent of program participants reported eating more fruit and vegetables as a result of Project FRESH.
- More than 6 million federal dollars were brought into Michigan during 2003 by leveraging state funding for Food Stamp Nutrition Education (FSNE). The FSNE program provided direct education to more than 90,000 adults and more than 100,000 youths in all of Michigan's 83 counties. FSNE, in partnership with private companies, state agencies and MSU faculty members provided education focused on nutrition and physical activity, obesity prevention, food safety and

food resource management. More than 200 partners collaborated to reach more than 200,000 people with messages about the importance of eating breakfast.

- More than 4,500 pregnant or breast-feeding women completed MSU Extension's Breastfeeding Initiative, a mother-to-mother peer education program, between 1994 and 2003. Among the women enrolled in the program in 2002-2003, about 95 percent initiated breast-feeding, compared with 44 percent of women in the overall Michigan WIC population. At six months old, twice as many babies enrolled in the program were still breastfeeding when compared to the overall Michigan WIC population. A research study has estimated that for every infant that breastfeeds exclusively for the first 12 weeks of life (instead of formula feeding), HMO medical cost savings would be \$331-\$475 dollars during the child's first year. Another study found savings to Medicaid and WIC of \$478 in the first 6 months of life for infants exclusively breastfed for the first 12 weeks.

Examples of Impact in Goal 3

Key Theme: Human Nutrition

Educational Initiative: Family Nutrition Program

Gayle Coleman: State

Description of Program

Michigan State University Extension (MSUE) worked in collaboration with the state of Michigan's Family Independence Agency (FIA) to provide education through the Family Nutrition Program (FNP) for persons eligible for or receiving food stamps in all of Michigan's 83 counties during the 2002-03 program year (see full description in Food Safety).

Impact

FNP educated 54,534 participants directly during 2001-2002. These direct contacts included adults reached through either a series of lessons (7,317 adults) or one-time presentations (47,217 adults). There was a total of 48,647 direct educational contacts with youth. These direct contacts included youth reached through either a series of lessons (20,328 youth) or one-time presentations (28,319 youth). Approximately 2,000 adult participants who received a series of lessons completed both pre and post surveys. Results regarding nutrition and food preparation from this tool indicated:

- 52% more participants reported using information on food labels to compare the fat or other nutrients in the food.
- 51% more participants reported thinking about healthy food choices.

- 48% more participants reported eating three or more kinds of vegetables during each day.
- 43% more participants reported eating more than one kind of fruit each day.
- 25% more participants reported preparing foods without adding salt.
- 25% more participants reported that their children ate within two hours of waking up.
- 56% more participants reported planning meals for a few days ahead before going grocery shopping.
- 45% more participants reported using a grocery list when shopping for food.
- 41% more participants reported comparing prices when shopping to find the best buy.
- 34% fewer participants reported running out of food at the end of the month.

In 2003, Michigan FNP worked in partnership with the Center for Civil Justice to increase participation in the Food Stamp Program (FSP). The Center for Civil Justice offered a toll-free Helpline that assisted low-income families in understanding how to apply for the FSP and offered telephone screening. MSU Extension staff members across the state provided information on this Helpline to the families with whom they worked, and distributed flyers and similar information to agencies such as WIC and emergency food providers in an effort to increase awareness of the Helpline and FSP. As a result of this project, over 2500 callers contacted the Helpline for screening or assistance. Of these callers, 95% of the callers were not receiving Food Stamps at the time they called, 82% received a Food Stamp screening, and 98% of the households screened appeared eligible for Food Stamps. The average amount for which callers were eligible was \$178.64. Many childless adults, immigrants, and recently unemployed persons were happy to hear that they could qualify for food stamps.

Source of Funds

Smith-Lever 3b&c, Smith-Lever 3d, state, county, local

Scope of Impact

State

Key Theme: Human Nutrition
Educational Initiative: Breastfeeding Initiative
Gayle Coleman: State

Program Description

Breastfeeding rates are low among limited income women. Low income mothers have higher infant mortality rates, premature births and low birth weight infants. Breastfeeding has been identified as one of the most important contributors to infant health, yet breastfeeding is not a well established practice in low income communities. There is a significant lack of role models, family/community support and knowledge of the practice of breastfeeding. This need was identified by the state WIC, local health departments, community programs and local hospitals serving indigent and limited income populations. MSUE responded through a breastfeeding initiative with two main program goals: to increase breastfeeding rates among low income mothers; and lengthen the time mothers breastfeed.

Impact

During the 2002-03 program year, 96% of the 1106 pregnant/breastfeeding mothers who enrolled in the Mother-to-Mother breastfeeding project reported initiating breastfeeding. At the end of two months, 61 % reported that they were still breastfeeding and at the end of 6 months 34% reported that they were still breastfeeding. The average duration of breastfeeding among participants was 20 weeks for this program year compared to 18 weeks last year.

Source of Funds

Smith-Lever 3b&c, federal, state, county, local

Scope of Impact

State

Key Theme: Human Nutrition
Educational Initiative: Family Nutrition Program
Joan Miller: Washtenaw County

Description of Program

In the year 2000, 33,450 persons in Washtenaw County lived below the poverty line. This represents an increase an increase from 31,777 persons in 1990. In Ypsilanti and Willow Run respectively, 3.5% and 4.25% of children come from households below the poverty line, while in Ann Arbor, only 1% of children come from poverty status. While services for those in poverty exist in these

geographical areas, they are not as organized and well developed as they are in Ann Arbor. At the request of two organizations, Washtenaw County FNP formed special collaborations to bring needed nutrition education to the residents of Ypsilanti and Willow Run. These collaborations included: Hope Administration, a non-profit faith based organization identified the need for nutrition education for many of their clients in the Ypsilanti area and Oasis Cafe, a restaurant in downtown Ypsilanti is supported by Hope Administration and provides sound nutrition for low-income Ypsilanti residents offered at special discounts of 70% on meals.

Impact

During 2002-2003, over 150 seniors were educated through the program. Telephone surveys to Senior Nutrition Network participants found: 85% of participants increased their nutritional knowledge and food preparation skills; 100% of them used less animal fat, sugar and salt in cooking; 100% of them reported using more fresh fruit, vegetables and whole grains; and 63% believed they were able to prepare healthier meals at lower cost.

Source of Funds

Smith-Lever 3b&c, federal, state, county, local

Scope of Impact

State

The Food, Nutrition, and Health AoE team in Goal 3 met its 2002-03 Plan of Work goals by reaching its targeted population. The team and members have become more active in recruiting stakeholder input and involving collaborators in setting priorities and designing and implementing programs. Examples of collaborators included WIC, Head Start, Work First, Early On, pregnant teen programs, Michigan Family Independence Agency, Michigan Department of Public Health, hospitals, Commodity Foods, shelters, Sault Tribe of Chippewa Indians Youth Services, Alpena Community College, U.S. Food and Drug Administration, Health Departments, Substance Abuse Rehabilitation Centers, schools, juvenile centers and courts, Oakland Livingston Human Services Agency, Older Persons Commission, Child and Family Services of Southwest Michigan, USDA, Kalamazoo Loaves & Fishes, Child Care Network, Great Lakes Indian Fish and Wildlife Commission, food banks, Hunger Action Coalition, Michigan Partnership for Community Caring, Michigan Department of Agriculture, and Salvation Army. In addition, the team is engaged in identifying underserved populations and developing strategies, collaborations, and programs to address these populations.

Overview of Goal 4: Greater harmony between agriculture and the environment

Participants numbering 46,390 received direct training on key themes in Goal 4. Table 8. shows the AoE Teams in this area, the number of participants, and the federal key themes for Goal 4.

Table 8.
Number of Participants and Key Themes by AoE for Goal 4

Goal 4	Adults	Youth	Total	Key Themes
Forestry	4,561	6,004	4,836	Forest Crops, Forest Resource Management
Land Use	3,703	7,525	11,228	Land Use, IPM, Natural Resources
Manure	3,511	255	3,766	Agricultural Waste, Water Quality
Renewable Resources(RREA)	535	2,948	3,483	Recycling, Forest Resource Management
Sea Grant	4,097	5,526	9,623	Water Quality, Natural Resources Management
Water Quality	11,972	13,776	25,748	Water Quality, Riparian Management, Nutrient Management
Christmas Trees	663	0	663	Forest Crops, IPM, Water Quality
	29,042	36,034	65,076	

Highlights

- MSU Extension's Citizen Planner program trained more than 500 local land use decision makers in 20 counties across the state during 2002-03. These individuals, representing local planning commissions, zoning boards of appeals and similar bodies, learned about the tools and information for making local land use decisions that affect their communities' futures.

- MSU Extension's United Growth for Kent County is helping develop today's elementary school students into tomorrow's land use leaders. The organization recently released a curriculum designed to educate students who will someday address the problems associated with poor land use planning. Titled "This Land is Your Land," the curriculum targets third through fifth grade students. Nearly 500 educators have already used the curriculum in such settings as classrooms and MSU Extension activities. The curriculum uses activity-based, service learning lessons to help students begin this involvement by working with their parents. Activities include conducting neighborhood surveys, participating in planning commission meetings and planning imaginary cities. These activities can also help parents get involved with land use issues.
- Redeveloping abandoned industrial sites is a key component of revitalizing urban areas and limiting sprawl. To help municipalities navigate through the challenges of reporting brownfield redevelopment authority financial activities to state regulators, MSU Extension specialists developed the Brownfields Reporter. This computer database program can help simplify the process of generating reports, easing the burden on communities that are working to revitalize former industrial sites. The Michigan Department of Treasury adopted the MSU developed Brownfields Reporter as the official reporting software for Michigan communities.
- The Environmental Management and Remediation Certificate Program, an Extension education program offered through the Victor Institute for Responsible Land Development and Use, provides knowledge and perspectives for carrying out environmentally sustainable development practices. The purpose of the program is to inform developers about tools for communities to develop environmentally responsible projects that revitalize contaminated or obsolete sites, especially in the state's core communities.
- Michigan Agricultural Experiment Station researchers have discovered better pest monitoring strategies for Michigan's important fruit industry. Discoveries in how fruit moth pests respond to pheromones, an organic method of pest control, will improve non-pesticide control options. A new wax-based formulation of a pheromone-dispensing system was found to be more effective, long lasting and economical than other systems used to control Oriental fruit moth a major pest of apples.
- Michigan farmers learned to use their manure resources better and protect our water resources through an MSU Extension program to help them develop manure management system plans. The program was offered in 12 counties and was a collaborative effort with the Natural Resources Conservation Service, the Michigan Department of Agriculture and others, with funding support from the USDA's Sustainable Agriculture Research and Education program. After completing the program, participants estimated that they could save an average

of \$7,707 in purchased fertilizer expenses and said that they better understood what it means to comply with Michigan's Right-to-Farm Act guidelines.

- MSU Extension staff members, MSU researchers from the Michigan Agricultural Experiment Station, and staff members from a number of state and federal agencies are monitoring the threat to urban and suburban ash trees posed by the emerald ash borer. This exotic insect was identified in southeastern Michigan in 2002 and has caused a widespread ash tree die-off, primarily in a six-county area. Collaborators (MSU Extension Specialists, MSU Scientists, and Michigan Department of Agriculture personnel) are working to identify control methods and helping residents dispose of dying trees. They are also working with the region's landscape industry to help businesses identify potential replacement species.

- The Michigan Lake and Stream Leaders Institute helps participants, primarily lake residents, develop their potential as resource management leaders and trains them in water resource planning and program implementation. The program was first offered in 2002, and as part of their learning, participants were required to develop community projects related to water resource management. One participant's project looked at the effects of stream restoration efforts on Montmorency County's Cheboygan and Black rivers. Another examined the collaborative efforts to manage multiple uses for Eaton County's Carrier Creek. A third explored solutions for problems caused by failing septic systems on Mason County's Gunn Lake.

- A program partnering MSU Extension with faculty members from the MSU departments of Fisheries and Wildlife, Sociology and Agricultural Engineering, local high schools and the USDA is helping communities in five Michigan counties better understand how agriculture affects their water quality. The partnership is part of a multidisciplinary attempt to improve community water quality monitoring efforts and to implement agricultural best management practices (BMPs) -- cost-effective techniques for managing water quality -- in the Stony Creek, Lake Macatawa, Gun River and Rice Creek watersheds of Clinton, Ionia, Ottawa, Calhoun, Jackson, Barry and Allegan counties. MSUE's role includes helping researchers learn what resources communities need to develop their awareness of water quality issues.

- MSU Extension educates members of the forestry industry about the importance of wise resource management through the Sustainable Forestry Education (SFE) Logger Education Program. Since 1996 more than 2,300 people have completed the entire SFE core training program. Additionally, more than 3,000 people have participated in some phase of the core program. Although loggers and foresters have been the primary audience for the program, interest has been growing among private landowners. Landowner participation is valuable because loggers learn about landowner perspectives on logging and forest management.

Examples of Impact in Goal 4

Key Theme: Nutrient Management and Water Quality

Educational Initiative Title: Promoting Environmental Stewardship Among Dairy Producers

Dann Bolinger, Marilyn Thelen, Natalie Rector and Katherine Lee: State

Description of Program

Mid-Michigan Manure Management Field Day was held June 26 at Green Meadow Farms. The program was a representation of a MSUE led partnership with the Michigan Agriculture Environmental Assurance Program (MAEAP), North Central Region SARE funds, and local industry through a planning committee and financial support. The one day event's theme was "Issues of Today & Technology of Tomorrow." The "issues of today" addressed were associated with field application of manure including the proper crediting of manure nutrients in a cropping system, appreciating the dollar value of manure nutrients, and avoiding discharges to surface water from field applied manure. The technologies experienced by participants at Green Meadow Farms included using a system approach to managing and handling manure, utilizing constructed wetlands for treatment of nutrient laden wastewater, and the chemical treatment of manure to remove nutrients from the liquid stream. MSU research was highlighted through the technology portion while touring the associated facilities on the farm. Participants also were able to visit with more than 20 manure related service providers who were also sponsors of the event.

Impact

More than 320 farmers, agribusiness persons, and agency personnel participated in Manure Tour 2003. A post-event evaluation revealed the following impact: 61% feel more comfortable about crediting manure nutrients as fertilizer in a cropping system; 67% have a greater appreciation for the dollar value of manure; 78% have a greater understanding of the risk to surface water from field applied manure; 52% are more likely than not to improve or implement practices to reduce risk associated with winter application of manure; 56% are more likely than not to improve or implement practices to reduce risk associated with applying manure on tile drain fields; 79% are more likely than not to consider the impact on manure management when making decisions in other areas of manure management; 74% are more likely to consider non-traditional, new and innovative manure management technologies in future decisions. Farmers in attendance represented more than 26,000 dairy cows and 55,000 hogs (nearly 9% of all dairy cows and 6% of all hogs in the state of Michigan).

During 2002-2003, 3,766 participants were trained by the Manure AoE Team and 25,748 participants by the Water Quality AoE Team.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

Multi-State

Key Theme: Nutrient Management and Water Quality

Educational Initiative Title: Manure Management System Plans (MMSP)

Charles Gould, Ira Krupp, Paul Wylie, and William Robb: Ottawa, Barry, Kent, Muskegon and Allegan Counties

Program Description

Livestock producers in Michigan are under increasing pressure by the public to improve their ability to manage manure. This has been due to documented surface water contamination in Allegan, Barry, Kent, Muskegon, and Ottawa Counties, some of which can be tied directly back to agriculture. In addition, there has been state and national pressure, typically in the form of laws and public perception, to hold the animal agriculture industry accountable for how it manages manure. Producers are asking Extension agents for direction on how to deal with this increased scrutiny. Extension agents are responding by helping individual producers put together Manure Management Systems Plans (MMSP) for their farms that eventually will lead to the completion of Comprehensive Nutrient Management Plans (CNMP). There is a need to: change attitudes and perceptions that manure is an asset, not a liability; manage manure better to recoup the economic benefits from not having to purchase commercial fertilizer; and help the horticulture industry to develop at least Nutrient Management Plans as they use a significant amount of manure on ornamentals. To utilize manure in an environmentally response manor, livestock farmers need to put together manure application plans for their farms. If farmers wish to be in compliance with MDA Right to Farm Guidelines they need a Manure management system Plan (MMSP). With EPA looking over Agriculture's shoulder more and more in Michigan, livestock producers need to be able to better document responsible use of livestock manure.

Impact

During 2002, 60 Manure Management workshops were put together in Allegan and Ottawa Counties to assist farmers with writing Manure Management System Plans for their farms. Over 120 MMSP's were developed in the West Michigan area from 2002-03. A post-pre survey (n=94) was developed to measure the effectiveness of these workshops in changing producer attitudes, knowledge and skills. Mean score differences for the questions were calculated and determined

to be significant at $p < 0.05$ using the paired t-test. The five largest changes were: increased understanding of becoming “environmentally assured” through the Michigan Agriculture Environmental Assurance Program (MAEAP); increased understanding of conformance with Michigan Right to Farm guidelines; increased willingness to develop a Comprehensive Nutrient Management Plan (CNMP); increased confidence in managing manure by following the Generally Accepted Agricultural Management Practices for Manure Management and Utilization; and increased willingness to maintain a recordkeeping system. A follow up survey of producers ($n=26$) was conducted during this quarter to assess their management changes as a result of developing a MMSP. The top five changes were: started to keep manure application records, reduced commercial fertilizer use, developed a manure spreading plan, stopped spreading manure on fields testing over 300 lbs. phosphorus/acre, and improved current manure application recordkeeping. Seven farms began development of a CNMP. Seventy-five percent of the respondents thought that their manure plan will help them reduce or minimize accidental manure releases. The substitution value of manure nutrients for fertilizer averaged \$10.50/acre or \$106,000 on 10,150 acres. One farm reported as a result of following their plan during one cropping season, they reduced their total commercial fertilizer expense by \$20,000 with no crop yield loss attributable to lack of nutrients. Implementing the plans demonstrated three things: 1. Farms can in fact, cut out excess commercial fertilizer and not have yield losses. This is an economic benefit. 2. That you can be environmentally friendly and still farm. 3. While CNMPs take time to develop, they don't bite. If a plan is developed correctly, based on factual information, it can be a valuable decision making tool for the producer.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Pesticide Application

Educational Initiative Title: Fruit Sprayer Technology

Philip Schwallier, Amy Irish-Brown, and Richard Ledebuhr, West Central Region and Clarksville Horticulture AES

Description of Program

At fruit grower meetings the need had been identified that pest control had become more difficult, expensive and less effective. Fruit growers in the West Central Region expressed the need to reduce pest application time and improve pest control using new sprayer technology that replaced conventional single point

air blast sprayers. This was a perfect Land-Grant project. MSU researchers developed the new improved technology. MSU extension agents brought the new technology to the industry and growers. Through this process, growers learned how to use the new technology. Extension agents and specialist demonstrated the new sprayers at sprayer demonstrations, at meetings and on personal farm demonstrations. Growers learned from extension personal the benefits of the new technology sprayers. Agents informed growers on the proper usage of the machine and the proper rate of pesticides applied by the sprayer.

Impact

Fifteen growers purchased high tech sprayers built by MSU. These sprayers and others were used to reach over 100 growers. Evaluation of the process found that spray rates were reduced by 33% and time was cut in half. Approximately 5,000 acres of fruit trees were impacted by this project.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Pesticide Application

Educational Initiative Title: Pesticide Education

Field Crops AoE Team, George Silva: State

Description of Program

In 2000 the Michigan pesticide dealerships sought assistance from the MSUE Field Crops AoE Team to dedicate a special pesticide update meeting to assist them in making year end pesticide sales and purchasing decisions. It is worthwhile to note that pesticide manufacturing and marketing is exclusively handled by private dealerships, but pesticide recommendations are determined by MSUE. Pesticide dealerships and applicators feel that the MSU research data is both scientific and unbiased and is a source of 'information you can trust'. A workshop was developed with the input from MSU faculty, private pesticide industry, and the Michigan corn and soybean organizations. This is an example of MSU Extension demonstrating leadership amongst pesticide users.

Impact

Judging from the participant interest and high attendance, 145 in 2000, 175 in 2001, and 217 in 2002, this event has been an overwhelming success.

Participants were from 33 Michigan counties and 5 representatives from Ohio and Indiana. Some highlights from the 2002 evaluation were: understanding MSU's 'Insect and Nematode Control Recommendations' for field crops at the changed from the start of the session to the end from 66% to 88%; understanding of MSU's 'Weed Control Recommendations' changed from 75% to 90%; and 88% stated that the educational information they received at the session benefited them in terms of changing to more effective pest management practices and making better business decisions in 2003 towards enhancing agricultural profitability. Approximately 96,950 acres were impacted by the training with a rough estimate of \$257,000 were saved or added revenues. Another impact was in regards to MDA Pesticide credits that were granted for the session in 2000, 2001, and 2002 that were 2, 2, and 4 respectively. Participants in 2000 and 2001 had requested MSUE to offer more re-certification credits in 2002, particularly in the 'commercial core' category because most of them were pesticide dealerships and commercial applicators. By collaborating with the speakers and altering the content and the time duration of the talks, MSUE was able to convince the MDA to double the number of credits in 2002. The doubling of credits in 2002 and the inclusion of the commercial category credits reflected a close coordination with MDA officials.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

Multi-State

Key Theme: Wildlife Management

Educational Initiative Title: Northeast Michigan Deer Management Workshops

Robyn Oliver: Northeastern Michigan

Since the 1970's, many individuals relied heavily on supplemental feeding and baiting as a viable way to attract wildlife, especially white-tailed deer, to their property for recreational viewing and hunting opportunities. In 1994, Bovine TB was discovered in wild deer in Northeastern Michigan. Since then these practices have been banned or severely restricted. Previous deer meetings have been sponsored by regulating authorities and have focused on discussing deer harvest regulations. Initially, these meetings were intended to be an educational forum. However, due to the emotional and political issues surrounding management of Michigan's deer herd, many participants became disillusioned with this format. As a result of new regulations and the apparent need for an unbiased approach, MSUE determined that landowners would benefit from attending deer trainings to learn sound scientific management practices that can be implemented to manage

deer and deer habitat. The program called, "Improving Your Land for Wildlife: Alternatives to Supplemental Feeding," was one of MSU Extension's programming responses to the Bovine TB issue in Michigan. Due to tremendous interest by private landowners and hunters throughout the state to use scientific management practices to improve the deer herd on their property, this program was converted to focus specifically on white-tailed deer and is used as a base for "MSU Extension Deer Management Workshops". Helping landowners to scientifically manage the deer herd on their property will most likely spread the deer population (by reducing concentrations) across the landscape, thus reducing deer-to-deer or deer-to-cattle interactions which might be effective in reducing the spread of Bovine TB.

Impact

The evaluation process included determining the effectiveness of the program (e.g., did participants learn techniques that can be applied to their property) and encouraging a change in behavior (e.g., do participants plan to implement these techniques to manage deer as opposed to feeding or baiting). General survey results were pooled over 3 workshops. Participant survey returns were 74% (n = 228), an outstanding response rate based on survey literature. Survey results indicated that this program was effective in providing educational opportunities to participants. Overall, the "Deer Management Workshops" received an informative to very informative rating of 87% (n = 199). In addition, changes in behavior were calculated for the West Branch responses (n = 77). Change in behavior was favorable with 34% of participants indicating they would no longer use bait. We should note that many respondents who used bait either extensively or occasionally before the workshop, left the "what would you do after today" portion blank. Intended food plot use was positive with 51% of respondents indicating they would either start incorporating food plots into their management plans or would increase their use of food plots. Timber management showed a positive increase of 49%. Opening management was also favorable with 56% indicating an increase in intended usage. This is especially encouraging because we strongly advocated mowing and fertilizing existing forest openings as opposed to tilling them and planting annuals or non-native plant species. Many participants were already involved in varying degrees with a scientific deer management program. However, 43% of respondents indicated they would implement a program that focused on scientific deer management.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

The AoE Teams in Goal 4 met their 2002-03 Plan of Work goals by reaching their targeted population. All teams and members have become more active in recruiting stakeholder input and involving collaborators in setting priorities, and designing and implementing programs. Examples of collaborators have included: Northwest Michigan Council of Governments, planning departments, Western Michigan University, watershed groups, Rotaries, Chambers of Commerce, League of Women Voters, Farm Bureau, schools, DNR, U.S. Forest Service, drain commissioners, and Michigan Milk Producers Association.

Overview of Goal 5: Enhanced economic opportunity and quality of life for Americans

Table 9 shows the AoE Teams, number of program participants, and federal key themes address by the AoE teams for Goal 5. It is important to note that youth were distributed by the content area and were not duplicated in Goal 5., whereby, an additional 164,115 youth from Goals 1 through 4 should be added to make the total number of youth to be 281,273.

Table 9.
Total Participants Reached Directly by AOE for Federal Goal 5

Goal 5	Adults	Youth	Total	Key Themes
Community Development	7,897	2,342	10,239	Community Development
Economic Development	3,481	165	3,646	Promoting Business Opportunities
Family Resource Management	20,216	19,042	39,258	Family Resource Management, Children, Youth and Families at Risk
FIRM	7,455	1,672	9,127	Agricultural Financial Management
Human Development	21,868	23,557	45,425	Parenting, Child Care
LeadNet	1,712	171	1,883	Leadership Training
State & Local Government	1,988	19	2,007	Community Development, Leadership Training
Tourism	169	6	175	Tourism
Volunteer Development*	5,210	17,316	22,526	Youth Development, Leadership Training
Youth Development**	10,568	56,275	66,843	Youth Development/4-H, Character Education, Children, Youth and Families at Risk
	80,564	120,565	201,129	

* Number of adult volunteers who were trained. A total of 23,814 adults volunteered for 4-H and 3,000 for Master Gardeners.

** To avoid duplication, youth who crossed goals were not counted again in youth development.

Highlights

- The need to better prepare children to read well is critical across Michigan. About 35,000 students from kindergarten through third grade in 24 Michigan counties developed reading skills through the 4-H Club Read program during the project's first three years (September 2000-03). At least 78 percent of participants were from low-income families. Ninety percent of the children in Club Read's in-school tutor/mentoring programs improved reading skills by at least one grade level. Seventy-seven percent of the children in the out-of-school tutor/mentoring programs improved their reading skills by at least one grade level.
- Michigan 4-H's Double Klick program helps youths learn technology skills to improve success in school and later in careers. Program evaluation of the pilot program, which was conducted in Wayne, Chippewa and Lake counties, showed that 80 percent of the youths directly linked skills learned through 4-H's Double Klick with schoolwork. Most connections were based around using the Internet for research or developing presentation skills. All 100 percent of the youths reported learning some aspect of technology that they didn't know before entering the program.
- In 2003, "Pyramids Between the Pages," a pilot program that links nutrition education with literacy was implemented in over 25 schools and out-of-school-time programs. Over 1500 low-income students took part in hands on lessons that taught healthy eating and physical activity habits, while teaching and reinforcing the development of basic literacy skills. The content for each lesson has been aligned with the Michigan Curriculum Framework. While teaching students about nutrition and physical activity, MSU Extension staff members also teach to State core subject standards and benchmarks for reading/language arts, math, science, and social studies.
- Studies show that youngsters who are unsupervised after school are at higher risk of getting poor grades, being crime victims, or experimenting with tobacco, alcohol, drugs and sex. Michigan 4-H annually involves 276,000 Michigan youths. It is the largest out-of-school-time program in the state, largely coordinated by a volunteer core of 21,000 adult mentors. Each of these volunteers annually contributes an average of 36 hours to Michigan's young people. The value of their time contribution is roughly \$12.5 million per year.
- Michigan 4-H Youth Development created the 4-H Fun Zone project to provide unsupervised children in low-income communities with fun and educational after-school activities. Sixteen counties participated in 2002, the project's second year. More than 1,300 children took part in activities led by volunteers, who contributed more than 10,500 hours.

- Since 2000, more than 18,918 Michigan young people have been directly involved in 4-H character education efforts. These include communitywide Character Counts! programs involving parents, schools, after-school programs, youth and family agencies, law enforcement, faith-based and other organizations. Anti-bullying education is conducted with community members representing a variety of organizations (4-H, schools, child and family services, juvenile facilities, child care groups, faith community, scouts, camps, Big Brothers/Big Sisters, Y's and police departments) and for hundreds of teens.
- Residents in low-income neighborhoods can learn the skills and information they need to become licensed childcare providers through MSU Extension's Better Kid Care program. Participants are prepared to apply for licensing and take part in a support network through this program. During 2002, Saginaw County graduates of the Better Kid Care program generated \$1.7 million in income as a result of their new businesses.
- The Building Strong Families program works in 43 Michigan counties to help parents of children from newborn to age three gain knowledge and learn skills to help their children reach their full potential. In 2002 nearly 3,500 families participated in the program. A long-term evaluation found that as a result of completing the eight-week program, parents are more likely to promote their children's cognitive, emotional, social, language and physical development, use positive discipline and encourage their children's self-help skills. They say they have increased feelings of personal power and are more satisfied with their social support.
- MSUE is involved in a multi-year initiative to increase access to the Earned Income Tax Credit (EITC) in underserved areas of Michigan. A program offering free tax services, financial education, and financial services was piloted during 2002 in four communities in Cheboygan, Muskegon, Lansing, and Saginaw counties. In a survey that was completed in conjunction with the free tax services, 75.8 percent of all individuals who filed in those communities were using their tax refunds to pay bills. Survey results showed that the EITC increased household income and people used their refunds to consume local goods and services. This year, staff members are working with the governor's office to expand access to the EITC statewide. The goal is to insure that all eligible Michigan residents take advantage of the federal EITC and that affordable tax preparation services can be sustained in those communities with the highest number of eligible households.
- The Michigan Family Independence Agency contracted with MSUE to assist in developing a financial literacy curriculum to help foster care youths make the transition out of the system to financial independence. A curriculum was piloted in two locations—a 10-county region in northwest Michigan (Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford) and in Detroit. MSUE developed the curriculum and

educated youths about opening and maintaining individual development accounts.

- MSU Extension is assisting a group of urban citizens on Detroit's east side to realize a vision for a thriving, healthy community surrounding a bustling farmers' market. Revitalizing the Detroit Chene-Ferry Farmers' Market is the aspiration of the Michigan Coalition of Black Farmers. Members are working to bring fresh produce, jobs, education and training opportunities to a depressed area with the help of MSU Extension. A conference was held and support for the vision garnered at the local, state and federal levels. Their goal is to reopen the market in 2004.
- Cities and towns of all sizes face issues related to topics such as planning downtowns, designing walking or biking paths and industrial parks, land use planning and brownfield redevelopment. MSU's Small Town Design Initiative (STDI) offers communities with fewer than 15,000 residents opportunities to develop projects to improve their physical environments with help from campus-based faculty members, students and programs. Nineteen small towns in 14 Michigan counties took part in the STDI in 2001 and 2002.
- The Urban Collaborators initiative is a joint effort of MSU Extension, the MSU College of Social Science and MSU's Urban Affairs Programs. It links MSU's research and outreach resources with the urban community and economic development needs of residents in Detroit, Flint, Grand Rapids, Lansing, Pontiac and Saginaw. The program offers mini-grants, including one that made it possible to offer a summit that gave residents in southwest Grand Rapids the opportunity to develop a vision and ideas for redeveloping their neighborhood. Another funded a Flint economic development project to redevelop Windmill Place, an obsolete commercial/retail/office facility. The program also offers student internships, planning partnerships that match student work teams with urban planning projects, and research aimed at creating and disseminating new knowledge about the urban condition.
- An intensive two-day diversity and pluralism educational program developed by Extension focuses on helping staff members increase their awareness of areas of prejudice, discrimination and oppression including racism, sexism, classism and heterosexism. This workshop has been offered in numerous locations across Michigan to encourage participants to reflect on how they've learned to think about human differences and on the widespread tendency to view differences within a monocultural view of "better than/less than" thinking. The MSUE diversity team is currently working with the city of Lansing to develop a custom training program for city employees.

Examples of Impact in Goal 5

Key Theme: Promoting Business Programs and Agricultural Profitability
Educational Initiative Title: Fast Track and Business Education
Economic AoE Team, Mark Thomas: State

Description of Program

Business Education program obtained training with assistance from the Extension Economic Development AoE and the USDA RBE Grant. Eight Extension agents and three Iosco County Extension contractors received certification for facilitator training by FastTrac programs in Bay City due to cooperation among the AoE leadership, Bay County Extension Director, Kauffman Center FastTrac national staff and Iosco County Extension. Iosco County advertised and began its first New Venture FastTrac class with 14 enrollees. In addition, the Business educator and the CED began intensive marketing toward producing a FastTrac Planning class for people already in business. Attended "Going Solo" youth entrepreneurship curriculum training in Chicago, Illinois. Promotion and recruitment for the NxLevel "Tilling the Soil of Opportunity Business planning program was in full swing. A joint program with Marilyn Thelen in Clinton Co. Open the Window of Opportunity was an excellent program to kick off this project and motivate participants. The sign up for NxLevel has ended up at about 15. Nine potential new business start-ups are examining their business dreams in light of cold reality. These individuals (and one team of two) are developing business feasibility plans that will be more realistic and have greater chances of success. Some thirty businesses have a better sense of community appreciation for their efforts and their problems. Most have expressed interest in seeing the summary report from the BRE work group this fall. NxLevel Entrepreneurship Course for individuals looking at launching new business enterprise, or those with existing businesses who are seeking to enhance their business skills. A partnership with the Broad School of Business allowed MBA students to work with my class participants in further developing their business plans.

Impact

The participants indicated that they intend to create 24 new jobs (10 full time, 14 part-time) as a result of growth within their business. Agricultural Entrepreneurial Training - Fourteen individuals are better prepared to expand or launch an agricultural value added business as a result of a 10-week entrepreneurial business planning program conducted by Clinton, Gratiot, and Isabella MSU-Extension staff. Eight participants have projected an estimated combined sales for the next year of \$966,000, an increase of over \$360,000 from previous levels. Business training such as this will help provide more profitable agricultural operations and a financially stronger community. Assistance was provided to 18 existing or start-up businesses.

In 2002-2003, the Economic Development Area of Expertise Team trained 3,646 participants throughout the state.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Agricultural Financial Management

Educational Initiative Title: Farm Information Systems - Telfarm

Roger Betz: Southwest Region

Description of Program

Many of the commodity groups and AoE teams identify financial management and profitability as an important goal. In order to improve profitability, one has to understand what ones actual profitability is in order to compare. Besides useful income tax information, producers need to have accurate business analysis information to evaluate if the farm is actually making money, or is cash flow being obtained from outside sources? Businesses also need a comparative tool so that they can evaluate their business compared to others to help identify strengths and weaknesses within their business. State summaries are used from the individual's input data in order to create state type of farm reports. Individuals can use information to compare from one year to the next. Also, Michigan uses the information for various activities including the status of individual commodity groups. This is used, for one example, to help law makers determine state and federal programs to assist producers. This helps secure and maintain a national healthy and adequate food supply.

Impact

120 Financial Business Analysis were completed in the southwest region through the cooperation of the southwest staff. The number of people impacted was much higher as many operations have 2 or more operators for the business. Producers were asked to rate their understanding of 11 financial indicators and ratios for their business, both before and after the Telfarm Business Analysis session. Of these indicators, producers indicated a change from 7.3% to 68.0% increase in their understanding of these individual ratios and financial indicators for their business. Additional questions from the formal written evaluation: 1) How valuable do you consider this session to be to your farm business? 90% rated very valuable, with 10% somewhat valuable, 0 of little, and 0 of no value,

indicating a very strong feelings of the importance of this session; 2) Did you learn something about your business today that you did not know before? Even though several of these producers have participated in these sessions for many years, 83% of them indicated yes, only 17% indicated no. When asked if yes, what they've learned? Examples included: Can see trends and assumptions quantified that I had a better year than what I realized; that we should continue in the business; gain an understanding of the previous year's balance sheet and how you have to use both of them; profitability appears to be low because of land values (in other words, a person understands the difference between profitability and inflation of land in terms of their balance sheet); we learned that debt to asset ratio isn't bad, and that we need to get our operating expenses down; how to make an expansion budget plan for the lender; that an expansion may be okay; understand the need for accurate records; that their draw was more than what their income was for the year; what areas to watch for as to not to get into financial trouble; good job of explaining things; business is in better shape than we anticipated; 3) Will the information received about your farm business influence your decision making in the next year? 80% indicated yes, only 20% indicated no. As a result of participating in the Telfarm system, producers from Southwest Michigan benefited by over \$1.5 Million in income tax savings for the year.

Source of Funds

Smith-Lever 3b&c, state, county

Scope of Impact

State

Key Theme: Promoting Housing Programs

Educational Initiative Title: Washtenaw Housing Education and Partners Collaboration

Caton Gauthier: Washtenaw County

Description of Program

Washtenaw County and the City of Ann Arbor have identified affordable housing as a key community issue which needs to be addressed. Working class households are priced out of the county's housing market and this is creating a void of lower paid workers for area businesses. Helping individuals and families to purchase affordable homes benefits the general economy as well as households directly. As there are many barriers to attaining affordable homeownership in Washtenaw County, MSUE focused program efforts on collaborating with government and non-profit agencies to provide a variety of educational and Down Payment Assistance options in the community. MSUE organized the MSDHA Certified Housing Counseling agencies, including

Community Housing Alternatives and POWER, Inc. to collaborate to offer comprehensive education and counseling services for the MSHDA Links to Homeownership program. The three-agency partnership known as the Washtenaw Housing Education Partners (WHEP), now collectively markets its homebuyer education program and, cooperates to support shared clientele.

Impact

In the three years of partnership the WHEP collaborative has helped 58 families attain homeownership and helped them receive over \$560,000 in down payment assistance, buy down funds and rehab assistance through state and local funding sources. WHEP has gained an excellent reputation within the community and its recognition has been exemplified by funding that partner agencies have subsequently received. Partner agency POWER, Inc. received \$100,000 of administration and matching funds for 27 participants in the Washtenaw County IDA program. Partner Agency Community Housing Alternatives received \$75,000 for a County Funded Down Payment Assistance program in 2002. Community Housing Alternatives launched its Acquisition and Rehab program with \$430,000 from Washtenaw County and received an additional \$30,000 in Down Payment Assistance funds, all which serve WHEP customers. The WHEP partnership is currently collaborating with the City of Ann Arbor and Vaneck and Associates to find and educate families for a 55-unit affordable Stone School Townhome project. The City of Ann Arbor is providing \$480,000 in buy down subsidies to purchasers of the units and \$300,000 in revolving loan funds. The Builder is contributing \$110,000 to WHEP for services and is foregoing a \$3,000,000 profit by to provide a builder subsidy. The partnership is currently focusing on preparing buyers for the Stone School Townhome project in Ann Arbor, which will provide 55 two- to four -bedroom unit condos which will be subsidized to be affordable to individuals and families at the 60%, 80% and 100 % Area Median Income levels. Each agency serves on the Stone School Townhome Steering Committee and specializes on specific areas of the homebuyer education program.

In 2002-03, over 12 hundred participants received training on affordable housing throughout the state.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Children, Youth and Families At-Risk
Educational Initiative Title: Dawn Farm: A Drug and Alcohol Rehabilitation Center
Caton Gauthier: Washtenaw County

Description of Program

Dawn Farms, a residential treatment program for adults, recognized a need for life skill education. Participants of this program have numerous issues stemming from their addiction and are preparing to go out and make changes to their lives. Many have low levels of life skills, especially in the area of communication. Dawn Farms requested MSUE to provide communication workshops to participants in a drug and alcohol treatment center. Washtenaw County/MSU Extension has been working with Dawn Farms for approximately three years.

Impact

An evaluation of the program found: 83% of survey respondents gave examples of knowledge gained on communication skills as a result of the class; and 100% of survey respondents indicated that they plan to use assertive communication and active listening skills in their every day lives. In addition, evaluations have found: 63% increased in the understanding of the difference between assertive, passive and aggressive communication styles; 32% increased in knowledge level of factors that contribute to how a message is heard and interpreted; 36% increased in their awareness of their own communication style; 22% increased in their understanding of the ways "I" influence people by what "I" say and how "I" say it; and 37% increased their understanding of how "I" respond to other peoples' communication styles.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Community Development
Educational Initiative Title: Small Town Success Strategies
David Ivan and Dave Thomas, Economic AoE Team: Clinton County and State

Description of Program

While some communities in Michigan have prospered during the past decade, According to USDA Rural Development, and the Michigan Economic Development Corporation (MEDC) many rural communities (less than 10,000 in population) have struggled. Vacant storefronts, half-filled industrial parks, and limited programs/activities for their youth/senior populations have resulted in a declining population base. In visiting with representatives of the Michigan Municipal League, and community leaders from Mid-Michigan, communities were eager to pursue new strategies, however, they were unsure of proactive initiatives to pursue, and the potential costs involved. Succinctly put, many communities were unaware of where to turn for assistance, advice and ideas for improvement. Utilizing an advisory committee composed of community leaders from six rural communities, the most pressing issues facing their communities were identified, and sorted into three areas of concern: economic development, land use coordination, and overall quality of life. Additionally, representatives from Michigan Municipal League, MEDC, and MSU Extension, were solicited to identify "best-practice" communities. Each best practice community visited was solicited for additional progressive communities in which they benchmark against. The goals of the initiative were: assist downtown development authorities, economic development corporations and other units address priorities and reinvigorate groups toward broader development actions; implement Premier Fast Trac programs for small business development in rural communities; enhance community capacity through facilitation, resource linkage, and leadership development; and through a best-management practices approach, enhance the knowledge and skill level of sustainability strategies for smaller communities in mid-Michigan.

Impact

A statewide seminar, entitled "Small Town Success Strategies" was conducted in December with 160 participants from all regions of the state attended. The evaluations spoke highly of the program, and the materials presented were "institutionalized" for AoE use statewide. Based on a follow-up survey of 100 participants of the statewide community sustainability seminar, 88% of the program participants indicated that the program improved their understanding of the various tools of community development. 90% of the survey participants indicated that they brought at least one new idea back to their community from the program. Individual written comments were also highly supportive of the initiative's impact. The curriculum and materials were used at three regional Michigan Municipal League meetings and an article was printed in MML publication.

During 2002-03, seventeen counties had local initiatives addressing violence prevention.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Community Development

Educational Initiative Title: Macomb County Purchase of Development Rights (PDR)

Marilyn Rudzinski: Macomb County

Description of Program

Macomb County is the 3rd largest county in Michigan bordering Detroit. It has enjoyed a tremendous growth development over the last 10 years, hosting the 1st and 2nd fastest growing community in the State. The loss of agricultural land, farming business and rural character are a by-product of the development.

A group of farmers, citizens and township officials explored ways to monitor and manage growth. A committee representing Armada, Bruce, Lennox, Ray, Richmond and Washington townships came together and developed a structure that would support the townships desire to preserve farm land. The committee became known as the Northern 5 Purchase of Development Rights (PDR) committee. The Northern 5 utilized and involved local such as Macomb County Planning, Michigan State University Extension (MSUE), Michigan Department of Agriculture, Michigan Farmland & Community Alliance and the Macomb County Farm Bureau. Meeting over a three-year period, the group developed a PDR ordinance that provided the framework for farm preservation.

Impact

The townships acting as a unit established an assessment system so that local government could intervene and actualize farm preservation. Once the ordinance was developed, MSUE, local government specialist led the development of an inter-local government agreement. Through citizen, farmer and public official education, collaborations and diligent efforts the Northern 5 townships adopted the Farm Preservation Ordinance and the local inter-government agreement. Beginning 2004 the committee is notifying farmers and seeking external funding to preserve their first farm. The Northern 5 received statewide recognition for it accomplishments. They were able to develop a cohesive, diverse, multi-phase, partner work team. It formulated and adopted a farm preservation ordinance, an assessment/application process and an inter-governmental agreement. This committed collaborative unit responded to citizen desires to manage their community to retain the rural character and farming industry to the extent possible in a highly urbanized county.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Youth Development

Educational Initiative Title: Teaching Our Kids to Kill

Julie Moberg: Delta County

Description of Program

MSUE assisted the Family Coordinating Council in completing a full community assessment. The Compass, a United Way tool, was utilized for the survey process. Telephone interviews, mailed surveys, face to face surveys, and data collection were utilized in the process. One of the needs identified was community violence prevention. MSUE participated on a collaborative community violence prevention council which coordinated a workshop on "Teaching our Kids to Kill". A national speaker was brought into Escanaba and presented to 72 participants. The focus was upon the effect of media violence and children.

Impact

Pre-tests and post-tests were completed for the workshop "Teaching Our Kids To Kill". MSUE assisted in the development of the survey tool. The pre-test indicated that 31% of the participants had a high knowledge of the effect of TV violence on children's behavior. Post-test indicated 95% of the participants had a high knowledge of the effect of TV violence on children's behavior with a net increase of 64%. The pre-test indicated that 37% of the participants had a high knowledge of the effect of movie violence on children's behavior. Post-test indicated 95% of the participants had a high knowledge of the effect of movie violence on children's behavior with a net increase of 58%. The pre-test indicated that 35% of the participants had a high knowledge of the effect of video game violence on children's behavior. Post-test indicated 97% of the participants had a high knowledge of the effect of video game violence on children's behavior with a net increase of 62%. The pre-test indicated that 32% of the participants had a high knowledge of the media's role in desensitizing youth to violent behavior. Post-test indicated 98% of the participants had a high knowledge of the media's role in desensitizing youth to violent behavior with a net increase of 66%. One of the next steps is a community plan to address media violence in children that is being developed by the Community Violence Prevention Council.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Children, Youth and Families at Risk

Educational Initiative Title: PLANT-A-RROW FOR THE HUNGRY PROGRAM

Mary Wilson and George Silva: Genesee and Eaton Counties

Description of Program

PLANT-A-RROW FOR THE HUNGRY PROGRAM This is a national project in cooperation with the Garden Writers Association of America and the Home and Garden Television Network. The mission is to provide an avenue through which more than 70 million gardeners in this country can help more than 35 million men women and children who go to bed hungry daily. Seven counties started programs to help feed the poor in their communities.

Impact

During 2002-03 in Genesee County, Plant-a-Row for the Hungry donated over 19,000 pounds of fresh produce to the Food Bank of East Michigan this season. Since the program started in 1999, 56,500 pounds of fresh produce has been donated for the hungry and homeless in Genesee County. In Eaton County, Channel 6 TV(CBS) covered this story on six separate prime time newscasts. Radio and print media were highlighted on this project. Aided by this publicity, our gardening community pledged unconditional support by donating a bountiful supply of fresh food. We ignited the spirit of goodwill in our communities and rallied support for this worthwhile cause. As a result, MSUE donated over 1,500 pounds of fresh produce to the Salvation Army, Cristo Rey Community Center, and the Eaton SIREN Shelter.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Family Resource Management
Educational Initiative Title: On the Path
Resource Management AoE Team, Linda Huyck: State

Description of Program

Through stakeholder input and focus groups, the need for an educational program that focused on family resource management for low income families was identified. The family skills needed were effective money management practices to purchase food and provide proper nutrition for their families, to be able to provide housing and clothing for their family members and to gain assets for future needs. In response to this need, MSUE developed a program called, On the Path, that offers hands-on activities to help low-literacy adults to understand and recognize the need for assistance with organization, tracking of expenses, and paying of their bills. MSUE developed a curriculum and the program that focused on family strengths rather than deficits.

Impact

Thirteen counties tested the new program and collected evaluation information. Approximately 110 individuals completed the program. Evaluation of the program found: 86.4% felt they were more able to organize bills and papers; 78% had attitude changes and 88.8% intended to use the organizational tools learned in the future. The program continues to expand and train more participants.

During 2002-03, the Family Resource Development AoE Team trained 39,258 participants.

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Parenting
Educational Initiative Title: Building Strong Families
Dawn Contreas: State

Description of Program

Several governmental and human services agencies look to MSU Extension to provide sound research base parenting education. In 1989, the Extension Home Economics Program developed a comprehensive parenting program called

"Building Strong Families: Parenting Young Children." "Building Strong Families" is designed to deliver parenting information to limited-resource parents of children aged 0 to 3 in small groups or one-on-one. The educational materials that are part of "Building Strong Families" include multicultural, cartoon-style flipcharts and real-life videotapes. The flipcharts present scenarios that parents often encounter with their children and prompt discussion of behavioral choices parents can make. The curriculum stresses the importance of parenting in the child's early development. It is intended to empower the parents to positively affect their children's future.

Impact

During 2002-03, 1061 parents received training. Evaluation of the program found parents significantly interacted differently with their children, where parents were more likely to encourage their child to play pretend (Pre-36%, Post-56%), make up games for their child to play (Pre-43%, Post-72%), encourage child to do things on his/her own (Pre-65%, Post-81%), talk to their child about how things look or happen (Pre-53%, Post-73%), let their child make choices (Pre-48%, Post-67%), and encourage their child to move and explore safely (Pre-74%, Post-88%). In addition, parents were more likely to set limits for their children (Pre-59%, Post-77%), teach their children through example (Pre-63%, Post-78%), act calm when child has temper tantrum (Pre-56%, Post-77%), give child time to calm down (Pre-66%, Post-82%), and discipline child without spanking (Pre-62%, Post-75%). Finally, parents were more likely to read to their child (Pre-65%, Post-83%).

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

Key Theme: Youth Development

Educational Initiative Title: Building Youth Assets in 4-H Clubs

Cynthia Mark and Bruce Haas: State

Description of Program

The vision of Michigan 4-H is that involvement in 4-H helps kids explore new ideas, experience a variety of new opportunities and friendships, and build skills designed to help them achieve. In 2002-03, 276,377 youth participated in 4-H with 60,486 involved in intensive ongoing organized club activities. To date, little information has been available about the impact of these clubs. During 2002-03, nine counties volunteered to collect information from their clubs to better

understand the impact of their programs and improve them. Counties involved were: Allegan, Cheboygan, Clinton, Grand Traverse, Ingham, Isabella, Kalamazoo, Leelanau, and Wexford.

Impact

Evaluation of 200 youth in clubs found 95% were highly satisfied with their clubs, 90% felt the club leaders cared about them, 88% felt their 4-H club was a caring environment, and 87% felt safe in their 4-H club. In addition, 90% stated they learned new things (i.e., knowledge about animals, nutrition, and photography) and 83% learned new skills (i.e., skills that included archery, raising sheep, growing plants, working with wood, and writing calligraphy). Research from the youth asset data revealed several findings useful for program design and evaluation that included: youth at the age of 13-14 dropped in all of the six youth asset areas assessed (i.e., positive identity, positive values, service to others, social competencies, safety and support, and commitment to learning); and adult support and encouragement was significantly correlated with youth positive identity ($r=.513$), youth positive values ($r=.420$), and youth's commitment to learning ($r=.416$).

Source of Funds

Smith-Lever 3b&c, state, county, local

Scope of Impact

State

The AoE Teams in Goal 5 met their 2002-03 Plan of Work goals by reaching their targeted population. All teams and members have become more active in recruiting stakeholder input and involving collaborators in setting priorities, and designing and implementing programs. In addition, the teams are engaged in identifying underserved populations and developing strategies, collaborations, and programs to address these populations. Examples of collaborators have included: Farm Credit Services, Intermediate School Districts, Chambers of Commerce, Community Foundations, Capital Area United Way, Kellogg Community College, Community Mental Health, Michigan Townships Association, Farm Bureau, Michigan State Police, Spectrum Health, Michigan Nonprofit Association, Michigan Department of Transportation, Small Business Development Center, Michigan State Housing Development Authority, Harvard University, Lutheran Social Services, Michigan Family Independence Agency, Family Counseling Center, Early Headstart, W.K. Kellogg Foundation, University of Wisconsin, American Youth Foundation, 4C, Child Abuse and Neglect Council, Community Action Agency, Michigan Department of Public Health, University of Michigan, NAACP, YMCA, Michigan Council on Crime and Delinquency, and Big Brothers/Big Sisters.

Stakeholder Input Process

MSU Extension is committed to creating access to research-based knowledge to meet the needs of Michigan residents. As an organization, we are constantly gathering input on RESPONSIVE program direction based on a variety of inputs, including:

- Extension councils.
- AoE advisory groups.
- Industry or stakeholder groups.
- Partnering agencies and organizations.
- Current community or industry issues.

Michigan residents' needs and interests are the driving force behind MSU Extension programs. In 2001, volunteer county Extension council members, along with staff members in every Michigan county, selected focus areas for local programming. Regional Extension council conferences provided an important opportunity to highlight the issues identified by stakeholders across the state.

The primary purpose of the *sharpening our program focus* process was to identify local needs for educational programming. Each county undertook a customized process and selected initiatives specific to its communities. Five major statewide themes emerged from these processes:

- Building strong communities.
- Helping youth succeed.
- Enhancing profitability in agriculture.
- Encouraging responsible land and natural resources use.
- Building healthy families.

Developing action strategies

MSU Extension's 34 area of expertise (AoE) teams were each asked to carefully review the statewide program input, synthesize the results with their external stakeholder and advisory groups, refine the needs cited and develop program plans supporting attention to broader focus areas (see Update to 5-Year Plan of Work). In addition, all field staff are now reporting each year on their progress in Civil Rights that uses stakeholder and advisory group input to clearly identify goals and priorities, target audiences that include underserved audiences, researched based information, program planning and implementation, methodology for evaluation of impact, and, sometimes, feedback.

An example of the impact of stakeholder input and the county advisory council process of Sharpening Our Program Focus, was that many counties reported

collaboration building as one of the most important roles for MSUE in Building Strong Communities. As a result of this identified need, the Community Development AOE team formed a collaboration with USDA Rural Development, Michigan Economic Development Corporation and Michigan Housing Development Authority to provide informational workshops locally to better inform local decision-makers and leaders of educational opportunities and resources available for their communities.

Reaching Underserved Audiences

All agents identify in their educational initiative plans their target audiences for their programs and assess who is being reached and who is underserved. Based on these assessments, agents develop new educational initiatives to address reaching underserved populations. During 2002-03 MSU Extension reported progress and impact on over 50 educational initiatives that reached new underserved audiences in their counties. Progress was made in reaching new audiences for programs, involving new stakeholders from underserved areas and groups, expanding programs in new geographic (underserved) areas, and development of new programs.

Examples of progress in 2002-03 towards reaching underserved audiences included:

- more diverse audiences in 4-H Youth Development;
- more males in food and nutrition programs;
- more commodity marketing workshops that specifically targeted farm wives/spouses;
- more seniors and underserved youth recruited through a variety of organizations serving these populations;
- more fathers recruited for parenting programs;
- more low-income mothers recruited for parenting programs;
- more pork producers served, where they indicated they have recently become an underserved audience because feed companies and producer organizations no longer provide educational events;
- more low-income African American youth targeted through 4-H;
- more leaders were trained from underserved areas and populations;
- more outreach through Chambers of Commerce and local libraries to provide local community contacts, (especially underserved groups) through which information on classes, programs and volunteer opportunities was distributed;
- more services to Amish farmers;
- more collaboration with county health department clinics that resulted in more educational services to underserved audiences;
- and more housing programs for low-income audiences.
- more youth involved in state and local government issues;

In addition, AoE teams are examining the stakeholder input from Sharpening Our Program Focus to address new needs and underserved populations.

An example of addressing underserved audiences in 2002-2003 was a program in Clare County that helped Project FRESH clients receive housing assistance. In the Clare community, WIC and the Allen Foundation identified WIC participants needed not only nutrition education, but also housing assistance. MSUE expanded its Project FRESH program to include housing education. Integrating the WIC families reached during Project FRESH with the housing programs provided one more avenue to reach a previously underserved population.

Program Review Process

MSU Extension continues to use the AoE team structure for the Program Review Process as stated in the Plan of Work with no changes. As mentioned above, the teams have begun to incorporate the information from the Sharpening Our Program Focus process into their goals and priorities.

In addition to the above process, counties and AoE teams during 2002-03 used over 200 advisory groups to identify local needs and action strategies. Information regarding the advisory groups have been added to the Extension Information System (EIS) that include names and demographics of the members, purpose and role of the advisory group, recommendations, and, in time, impact of the group. These groups ranged from local 4-H Foundations to Technical Advisory Committee Southwestern Michigan Solid Waste Consortium. This information will continue to be used for stakeholder input and Civil Rights compliance.

Evaluation of the Success of Multi-state and Joint Activities

MSU Extension met its goal of 2% or \$164,511 as proposed in the Plan of Work by spending \$227,379 on multi-state activities (see Appendix A). The majority of these activities involved sharing information and educating others from other states. Some of the major collaborations consisted of: Floriculture Programming in Michigan, Ohio, Indiana, Illinois; National Issues Forum leadership with The Ohio State University Extension; "Learning From Land Use Change Models" with The Ohio State University; leadership academy and diversity training with The Ohio State University; developed with The Ohio State University a training on yellow perch aquaculture; trained Ohio and Michigan greenhouse industry personnel in response steep increases in fuel costs (from two to five times year-ago costs) that threatened profitability and even survival of these family-owned firms; collaborated with University of Wisconsin Extension on poverty issues; the Tri-State Dairy Management Conference with Purdue University and The Ohio

State University; five state beef alliance with North Central Region states; national Emergency Management & Disaster Response; North Central Region Aquaculture Conference; North Central Show Stock Producers; Michigan-Ohio Grain Marketing Expo; and National Extension Tourism Conference. In all of these collaborations, staff members reported sharing resources and information as well as building stronger relationships between the states.

A detailed example of multi-state activity (Michigan, Ohio, Indiana, and Illinois) was Great Lakes International Grazing Conference (GLIGC) CD-ROM Project . In terms of total costs, "Conferences" are very expensive and are extremely inefficient. With a great deal of trust and cooperation from the Conference presenters and the CD-ROM Project Team an entire two day conference was digitized and captured on a series of interactive CD-ROM disk. The Great Lakes International Grazing Conference is a highly successful Conference that just completed it's tenth annual Conference. This year's Conference and Trade Show was held in Battle Creek with 200 participants. The Conference is a multi-state Extension event committed to rotating to a different state every two years. This multi-state leadership and support has helped to create new audience potential, maintained program quality and attracts leading speakers and trade show exhibitors while spreading the overhead cost and labor. This year 27 speakers and producer/industry panel members made presentations. These were identified by a Multi-State Planning Committee as the best available resource people to share research and acquired knowledge with the conference participant. In spite of this continued success this Conference is very expensive in terms of total costs typical of many Extension events. This years Conference cost over \$20,000 in cash expenses and another estimated \$130,000 of other cost for a total cost of \$150,000 to hold and attend this event. That results in approximately \$1,000 cost per registered conference attendee at this year's event. By the production of this CD-ROM Project this year's GLIGC has a realistic audience potential in the thousands instead of what has been it's traditional several hundred attendees. This would not have been possible without the multi-state cooperation and contributions. The potential of expanding outreach of this conference information as well as the financial savings and impact is in the thousands of dollars.

Evaluation of the Success of Integration Activities

Michigan State University Extension achieved its Integrated Activities goal with \$329,023 spent in this area that exceeds the 4% goal of \$329,023 (see Appendix B). Examples of integrated activities conducted during 2002-03 included: conducted MCP studies to determine methods to increase storage life of apples, that included work with Janice Harte in Food Science to develop the protocol/mechanism for proper scientific evaluation; development of farm Manure Management System Plans (MMSP) with Maynard Hogberg from Animal Science; feeding strategies to lower Nitrogen and Potassium in Manure through

Dave Beede from Animal Science; pathogen kill in morts and manure project with Margaret Bensen from Animal Science; dairy nutrition updates from Herb Bucholtz; Mathieu Ngouajio from Agriculture and Natural Resources helped in the late summer evaluation of plots and determining the differences in the nitrate levels in the various plots; Dr. Annemiek Schilder from Plant Pathology worked with farmers on disease control in grapes and the importance of bloom sprays; and Dr. Sharon Hoerr from Food Science worked with extension staff on an obesity project.

An example of integration activities was the development and implementation of a new fruit sprayer technology, MSU researchers developed the new improved technology and MSU extension agents brought the new technology to the industry and growers. Extension agents and specialist demonstrated the new sprayers at sprayer demonstrations, at meetings and on personal farm demonstrations. Growers learned from extension personal the benefits of the new technology sprayers. Agents informed growers on the proper usage of the machine and the proper rate of pesticides applied by the sprayer. Evaluation of the process found that spray rates were reduced by 33% and time was cut in half. Approximately 5,000 acres of fruit trees were impacted by this project.

For further information regarding this report or MSU Extension contact Bruce E. Haas, Ph.D. at haasb@msue.msu.edu or (517) 432-3491.

Appendix

Michigan Multistate Extension Form and Documentation And Michigan Integrated Extension Form and Documentation

