

# 2008 University of Minnesota Combined Research and Extension Plan of Work

## I. Plan Overview

### 1. Brief Summary about Plan Of Work

This plan of work describes the goals of seventeen integrated planned programs. These programs operate as areas of expertise delivered by the University of Minnesota Extension Service and share research interests with the Minnesota Agricultural Experiment Station research. Program teams involve researchers and educators in the design, development, deliver and evaluation of educational programs grounded in research related to their priority issue. By coordinating program, business and research plans, these teams reach target audiences, evaluate stakeholder input, evaluate their work and update their program design. Working alongside these teams are administrative structures that support programs, manage stakeholders and communicate the value of the land grant system to Minnesota. From 2008 - 2012, the University of Minnesota Extension Service and the Minnesota Agricultural Experiment Station will work together to:

- strengthen the ties between Extension and the Experiment Station;
- enhance the scholarship of programs and educators;
- strengthen connections between research, extension programming and communities' assessed needs;
- continue to analyze the outcomes and impact of programming;
- strengthen the diversity of programs and improve the cultural competence of staff; and
- increase the impact of both research and outreach through multidisciplinary research and collaborative learning partnerships.

### Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2008	367.0	0.0	536.1	0.0
2009	367.0	0.0	536.1	0.0
2010	367.0	0.0	536.1	0.0
2011	367.0	0.0	536.1	0.0
2012	367.0	0.0	536.1	0.0

## II. Merit Review Process

### 1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review

### 2. Brief Explanation

The Minnesota Agricultural Experiment Station engages in a scientific merit and peer review processes for all research projects. Peer review involves both reviewers internal and external to the University. This takes place within each college that receives MAES funding and under the review and approval of the college department heads and associate deans for research. Each college engages in a yearly strategic planning process to submit a "compact" that is negotiated with central administration and assures that the colleges' research and outreach goals and direction are connected with priorities.

### III. Evaluation of Multis & Joint Activities

#### 1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Each program team is responsible for a planned program regularly reviews trends, conducts new research and interviews key informants to assure that educational programs and field research are addressing issues of strategic importance. Program teams meet regularly to review the work in communities and available research. This team approach also supports the monitoring of critical issues and needs. Their review culminates in the yearly development and updating of program business plans that articulate yearly goals for program adaptation and outreach.

#### 2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

During the winter of 2004, the dean and director appointed a task force to examine the status of diversity and inclusion efforts within Extension. A full report was presented in May of 2005. Nineteen recommendations were made in the areas of 1) access and representation, 2) climate and environment, 3) programs and products and 4) special initiatives. By the end of 2006, benchmarks were set for these goals and by 2012, progress will be made in each of these areas. These benchmarks and institutional investments will affect planned programs through HR documentation, personnel assessment of cultural competence, task forces committed to improving relationships with key groups, professional development and hiring and outreach incentives. MAES has surveyed all colleges' departments that receive funding to ascertain their processes for getting input from underserved and under-represented populations to inform their research decisions, as well as their strategies for hiring graduate research assistants to achieve more diversity.

When important to making a difference, program teams will target specific minority groups, new immigrants and other underserved audiences. Efforts to redesign programs for these targeted groups will reach underserved populations from 2008-2012. Each year, we will provide qualitative and quantitative data about service to underserved audiences.

#### 3. How will the planned programs describe the expected outcomes and impacts?

We have elected to describe our CSREES planned programs around Extension's seventeen areas of expertise. These are implemented and monitored by program teams that work together to plan and enhance their program business plans yearly. This "straight line" between the research and field work and our CSREES reporting system will assure field accountability to CSREES as a key stakeholder. Benchmarks will be monitored and changed based on yearly assessments and will be incorporated into the Program Business Plans as well as the CSREES Plan of work.

#### 4. How will the planned programs result in improved program effectiveness and/or efficiency?

By clustering our programs and research under areas of expertise we have created a matrix for both managing programs and evaluating their effectiveness. It is clear we have been operating for some time in an environment of increasing need from our stakeholders, and increasing complexity of research problems, while at the same time seeing no-growth or diminishment of formula funding for that work. By selecting critical issues, focusing our work and tightening the links between areas of expertise in Extension and research, we can both increase our effectiveness and also have a feedback system that tells us when to increase, decrease, or shift focus to maintain or increase efficiency.

### IV. Stakeholder Input

#### 1. Actions taken to seek stakeholder input that encourages their participation

- Survey of traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Survey of traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder individuals
- Use of media to announce public meetings and listening sessions

##### Brief explanation.

The University of Minnesota works hard to maintain the confidence and trust of the people, organizations and communities it serves in all regions of Minnesota. We are firmly committed to building strong relationships that bring together the knowledge,

skills and abilities necessary to build capacity in individuals, geographic communities and communities of interest. Extension and MAES strive to listen carefully and to be flexible and creative in its programs, collaborating with a wide range of diverse Minnesotans to assert the position, "We know Minnesota." Generally, Extension and MAES builds relationships with opinion leaders in government, education, agriculture, business, community organizations, the media, nonprofits, communities of interest and other opinion leaders. Targeted communications strategies build appreciation and active support. Audiences for each program receive high-quality, customized education. The appropriate technology is used to expand the reach of these programs.

**2(A). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them**

**1. Method to identify individuals and groups**

- Use External Focus Groups
- Open Listening Sessions
- Use Advisory Committees
- Use Surveys
- Needs Assessments
- Use Internal Focus Groups

**Brief explanation.**

1. A statewide Extension Citizen Advisory Committee is convened three times a year and receives conference calls and informational reports. This committee reflects our various geographic and demographic constituencies. 2. Counties conduct yearly budget reviews, assess the past performance of local Extension positions and programs, as well as their current relevance to county priorities. They base their budget decisions on the quality and relevance of the service they receive from local positions. 3. Current program participants have their needs and satisfaction measured through post-event surveys. 4. Targeted program audiences and constituents are identified by regional educators and their needs are assessed through regular conversations, end-of-event evaluations and more formal market surveys. By deciding whether or not to partner with Extension programming, they are "voting" on the relevance and effectiveness of programs. 5. Regional educators and researchers act as an internal focus group. By forming program teams of regional educators and researchers who have relationships with key stakeholders, these stakeholders have a say in future program efforts. 6. Legislators and higher education committees are identified by university relations and Extension's government relations department. Through personal meetings and committee presentations, Extension monitors whether the goals of the state and the voters are considered. 7. Colleges receiving MAES funding have advisory groups to inform their research decisions. This broad based input is supplemented by the stakeholder group input that individual researchers seek to provide feedback and support to their research programs.

**2(B). A brief statement of the process that will be used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them**

**1. Methods for collecting Stakeholder Input**

- Meeting specifically with non-traditional individuals
- Survey of traditional Stakeholder individuals
- Meeting with invited selected individuals from the general public
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder groups
- Survey of selected individuals from the general public
- Meeting with traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals

**Brief explanation**

Stakeholder input from geographic communities is incorporated at the county level through county extension committees. Regional extension directors act as liaisons to these committees, in collaboration with local extension educators and area program leaders. Stakeholder input from communities of interest is incorporated through ongoing contact between the leaders of these communities, their state associations, end of event evaluations, formal needs assessments and market research done by

program teams. Fiscal partners (county commissioners and communities of interest) "vote with their dollars" as they fund local and/or regional positions. Targeted advisory groups provide feedback through formal meetings and communications. Some research funding programs administered by MAES, such as the Rapid Agricultural Response Fund, have explicit requirements for stakeholder input and support for a project before funding is granted.

### 3. A statement of how the input will be considered

- To Set Priorities
- In the Budget Process
- In the Staff Hiring Process
- In the Action Plans
- To Identify Emerging Issues
- Redirect Research Programs
- Redirect Extension Programs

#### **Brief explanation.**

Input from stakeholders guides program teams and administration as they design research programs, outreach plans and structures. Stakeholder input is considered when answering questions such as:

Which stakeholders should educators work with as they conduct programming and market new research to places where it is needed?

Who is interested in our work?

How should research-based education be delivered? (Long-term consultation, workshop format, on-line courses, assessment, one-on-one consultation, mass media, web site, etc.)

What other resources do stakeholders turn to? Do these intermediaries need research-based information? Are we duplicating a service? What is our program niche?

What do stakeholders know about our programs? How do they hear about them?

Has past service and research been satisfactory? How might it be changed?

What new research should shift how we deliver programs?

What external factors have occurred which require us to change program strategies?

As Extension has established program specialization, regional centers and county purchase of service, stakeholder input is more integrated into our organizational response. The extent to which programs continue, grow and evolve relies upon satisfaction, positive feedback and investment from stakeholders as well as demonstration of positive educational impacts. Each program business plan and capacity area work plan includes input from external scans, stakeholder input and secondary data that feed the strategic planning process. It will directly influence the use of resources and the direction of research and outreach programs.

## V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	4-H Programs in Minnesota
2	Agricultural Business Management
3	Commercial Horticulture
4	Commodity Crop Production
5	Community Economics
6	Community Youth Development
7	Consumer Horticulture
8	Environmental Science Education
9	Family Relations
10	Family Resource Management
11	Food Safety Education
12	Housing Technology
13	Leadership and Civic Engagement
14	Livestock
15	Natural Resources Management and Utilization
16	Nutrition Education Program
17	Water Resource Management and Policy

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

4-H Programs in Minnesota

**2. Brief summary about Planned Program**

The 4-H Program of the University of Minnesota support three programmatic strategies that provide quality, research-based out-of-schooltime learning opportunities for youth in kindergarten through one-year post high school. Each strategy is built upon Eight Key Elements of Quality Youth Development. These three program strategies include: 1) "Adventures" programs which provide fun, short-term learning experiences that reach new audiences of youth and family meeting quality standards outlined by the Eight Key Elements of Quality Youth Development. Adventures programs also identify youth for long-term term experiences. 2) "Clubs" programs are intended to involve young people in a longer term and more intensive learning and personal development experience. 3) "Urban Youth Learn" programs provide program leaders with tools, strategies and information about multiple aspects of program planning and development so that they can become more informed participants thereby more empowered in their practices.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 805 20% Community Institutions, Health, and Social Services
- 806 80% Youth Development

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Research indicates that Minnesota has the highest percent of two-parent working families and the highest percentage of young people in self-care during non-school hours. In fact, 40% of Minnesota's 10-12 year olds are home alone after school, with 56% of children in this age group spending some time in self-care each week (Cappizzano, 2000). Non-school hours can be a time of great risk OR opportunity. Research reveals that how young people spend their free time is a more powerful predictor of risk behavior than is race, family structure or socio-economic status. The 2001 MN 4-H Youth Survey revealed that youth involved in 4-H are more likely to volunteer in their communities and less likely to smoke cigarettes, consume alcohol or ride with a driver who has, spend an unhealthy amount of time watching TV and/or playing video and computer games. They are also less likely to have stolen or damaged property. The need for productive activity is strong, and requires an individualized approach, in urban Minnesota. Sixty-five percent of students in the St. Paul Public Schools are from low-income households. The St. Paul Public School Class of 2000 had a 62% graduation rates, and rates for African-American, American Indian and Latino students were under 50%. In Minneapolis Public Schools, 65% of the students are from low-income households. The Class of 2000 graduation rate was 42%; rates for African-American, American Indian and Latino students were under 35%. One way to positively impact the lives of urban youth is to ensure that out-of-school time opportunities are available to youth who need them. Youth-serving organizations, public school systems, and community members need to work together to optimize the learning and development of urban youth.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

Because use of out-of-school time is related to negative outcomes, positive use of out-of-school time will, ultimately, improve outcomes for youth. Trained community members and youth can deliver research-based experiences for youth. Long-term experiences are more beneficial than short-term experiences for youth, but short-term experiences can attract youth for long-term club experiences.

**2. Ultimate goal(s) of this Program**

To provide out-of-school time experiences that, by research, is connected to positive outcomes for youth.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	44.1	0.0	0.0	0.0
2009	44.1	0.0	0.0	0.0
2010	44.1	0.0	0.0	0.0
2011	44.1	0.0	0.0	0.0
2012	44.1	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

A variety of long and short-term activities conducted in counties will engage Minnesota's youth in long-term relationships and program activities that help them see their potential by:

Learning By Doing

Practicing Leadership

Projects on gardening, animals, photography and much more

Science & Arts Enrichment

Service to Communities

In urban areas, community partnerships will create these experiences, and will also provide youth-to-youth education that makes a difference.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● One-on-One Intervention</li> <li>● Group Discussion</li> <li>● Other 1 (train the trainer/volunteer)</li> <li>● Workshop</li> <li>● Demonstrations</li> <li>● Education Class</li> <li>● Other 2 (Youth Activities)</li> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● TV Media Programs</li> <li>● Billboards</li> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 1 (youth activity curricula)</li> </ul>

**3. Description of targeted audience**

The target market for 4-H clubs is youth. In the coming five years, strategic recruitment as well as training for local club leaders, has been designed to double 4-H club membership by 2010 from 26,000 to 52,000. Through training and resources to support staff and volunteers to create quality learning environments in clubs that are inviting, accessible and welcoming to a broader range of Minnesota youth. The Urban Youth Learn audience includes adults working with schools, agencies and organizations and volunteers interested in building sustainable youth programs. Youth leadership programs targets young learners who are working in the context of their neighborhood or community to make a difference.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	0	4500	169000	10
2009	0	4500	179000	10
2010	0	4500	189000	10
2011	0	4500	189000	10
2012	0	4500	189000	10

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 : 0                      2011 : 0                      2012 : 0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	0	2
2009	0	2
2010	0	2
2011	0	2
2012	0	2

**V(H). State Defined Outputs**

**1. Output Target**

- The number of underserved youth participating in 4-H program activities will increase yearly. (Target expressed as a percentage of youth involved in programs from groups targeted as "underserved.")

2008 :12                      2009 :15                      2010 : 17                      2011 :20                      2012 :20

- Participants will be satisfied with the out-of-school activities delivered through the 4-H program. (Target expressed as percentage of those who are satisfied.)

2008 :95                      2009 :95                      2010 : 95                      2011 :95                      2012 :95

- Well-trained adult volunteers will work with Minnesota's young people. (Target expressed as percentage of volunteers trained in effective practices for working with 4-H youth.)

2008 :80                      2009 :85                      2010 : 90                      2011 :95                      2012 :95

- Learning settings (or point of service) in 4-H will meet the essential elements that promote positive youth development. (Target expressed as scores out of 20 items on the 4-H Youth Program Survey.)

2008 :16                      2009 :17                      2010 : 17                      2011 :17                      2012 :17

**V(I). State Defined Outcome****1. Outcome Target**

Youth involved in 4-H programs will demonstrate skills and knowledge on target with their youth development. (Target expressed as a percentage of 4-H youth showing appropriate skills.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :75                      2009 : 75                      2010 : 75                      2011 :75                      2012 : 75

**3. Associated Knowledge Area(s)**

- 806 - Youth Development

**1. Outcome Target**

Youth participating in 4-H programs will demonstrate more civic engagement and volunteerism in their communities than a statewide comparison group. (Target expressed as a percentage of difference between the two groups.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :21                      2009 : 21                      2010 : 21                      2011 :21                      2012 : 21

**3. Associated Knowledge Area(s)**

- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

**1. Outcome Target**

Youth participating in 4-H programs will be less likely to engage in risk behaviors (e.g., smoking, drinking, riding in cars with people drinking) than a comparison group of Minnesota youth. (Target expressed as an average of difference among five targeted behaviors.)

**2. Outcome Type :** Change in Condition Outcome Measure

2008 :15                      2009 : 15                      2010 : 15                      2011 :15                      2012 : 15

**3. Associated Knowledge Area(s)**

- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

**V(J). Planned Program (External Factors)****1. External Factors which may affect Outcomes**

- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)
- Public Policy changes
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programatic Challenges

**Description**

Public commitment to youth in Minnesota is strong. However, as local government face competing demands for local tax dollars and philanthropic dollars, commitment to youth development programs fluctuate. In order to attract and sustain involvement of new cultural groupings, 4-H programs will vary their activities for cultural appropriateness.

## **V(K). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Comparison between locales where the program operates and sites without program intervention
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Time series (multiple points before and after program)
- Case Study
- During (during program)
- Before-After (before and after program)
- Retrospective (post program)

#### **Description**

MN 4-H is made up of layers of local, regional and statewide programming opportunities all across the state. Given the complexity of the organization and the hundreds of program opportunities offered throughout the state, the evaluation strategies are also multi-layered. Short-terms activities are typically evaluated using post-only, retrospective pre-post survey, and pre-post survey strategies. Longer terms efforts will be evaluated using statewide studies. (In 2006, for example, we completed participation in the national longitudinal study of 4-H Positive Youth Development spearheaded by Tufts University. Statewide studies of a random, representative sample of 4-Hers will also be conducted to coincide with the MN Department of Education's MN Student Survey (this will offer us some ability to compare). This survey is a comprehensive impact survey designed to assess the eight keys to positive youth development, program satisfaction, and youth development outcomes such as life skills, connection to peers, family, school and community, and engagement in pro-social and risk behaviors. All clubs will continue to complete the annual "4-H Youth Program Survey" designed to assess the learning climate and critical educational processes. In addition, some clubs will participate in the Youth Program Quality Assessment (YPQA) study being conducted with partners at High/Scope Educational Research Foundation. Participant numbers are tracked yearly with 4HPlus, an enrollment software.

### **2. Data Collection Methods**

- Structured
- Portfolio Reviews
- Sampling
- Whole population
- Observation
- On-Site

#### **Description**

See above.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Agricultural Business Management

**2. Brief summary about Planned Program**

Agricultural Business Management (ABM) provides farm decision-makers with knowledge about production, marketing and management that they need to improve their farming operation. ABM is also concerned for the whole Minnesota economy. ABM tracks financial performance of Minnesota farms; provides farm management information to farmers, bankers and others concerned with the future of Minnesota agriculture and develops educational programs on and off campus. ABM improves farmers' information and knowledge in areas where strategic and operational management changes can improve progress toward his/her business and family goals. The information this program provides farmers is based on MAES research that considers long-term and short-term business decisions, the impact of global markets, the opportunities of new technologies and the impacts of Minnesota's geography, and political and social landscape for farm business management.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 601 20% Economics of Agricultural Production and Farm Management
- 602 20% Business Management, Finance, and Taxation
- 603 30% Market Economics
- 604 20% Marketing and Distribution Practices
- 610 10% Domestic Policy Analysis

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Farm records compiled by the University of Minnesota Department of Applied Economics consistently show a net farm income range of over \$150,000 between the most profitable and least profitable Minnesota farms each business year. As farm incomes have become more variable, the job of managing a farm has become ever more complex. Today's farm managers are managing more dollars and more people. They are often their own accountants, business analysts, market specialists, and human resource departments, as well as being production specialists. Demand for the information and events developed and provided by ABM increases yearly largely due to the quality of its information and events. The professionals on the team have a priority to increase the information received by farmers and producers, as well as those providing inputs, services and markets to them.

Some of the primary issues Minnesota agricultural producers need to address as a result of changes in the agricultural industry and policy include: strategic positioning, transferring management capabilities, frequent performance monitoring, evaluating new technology, monitoring external factors, managing information, and accountability.

**2. Scope of the Program**

- In-State Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension
- Multistate Research
- In-State Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

If farm businesses understand the markets, and have the tools, they will market their products more successfully. They need unbiased and broad-based information to understand their opportunities in the market and be able to effectively access those opportunities.

**2. Ultimate goal(s) of this Program**

Agricultural Business Management programs will bring in-depth, research-based expertise to critical, cutting edge issues in managing farms. As a result, revenue generated by the agricultural sector in Minnesota will be optimized.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	8.9	0.0	16.3	0.0
2009	8.9	0.0	16.3	0.0
2010	8.9	0.0	16.3	0.0
2011	8.9	0.0	16.3	0.0
2012	8.9	0.0	16.3	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Through educational events, consultations and media resources, ABM will provide education about:

- ag tax issues
- land rent data
- machinery management
- strategic planning and business planning
- earning a living on a modern farm
- current events in agricultural business management
- special purpose technology
- ag lending
- farm business transfer and estate planning.

Research foci will be on review of policy that relates to ag business management, the farm bill, commodity crops and precision agriculture. Key research studies will include the following:

- Research to support improved decision-making in farm planning and financing for farmers and lenders
- Research to support improved decision-making in financing for agricultural business owners.
- Research on the economic interrelationships in both the domestic and foreign food and agricultural industries.
- Development and maintenance of an analytical support system that facilitates research and analysis on food, agricultural and trade policy issues.
- Evaluation of supply, demand and policy factors in the U.S. and abroad that influence both short-term and long-term trade prospects and patterns.
- Information to help public policy participants and decision makers evaluate issues and increase public understanding of these issues.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● One-on-One Intervention</li> <li>● Workshop</li> <li>● Group Discussion</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Software)</li> <li>● TV Media Programs</li> <li>● Other 2 (Books, Articles and Pubs)</li> <li>● Public Service Announcement</li> <li>● Newsletters</li> <li>● Web sites</li> </ul>

**3. Description of targeted audience**

Our survey and anecdotal data has shown that Extension and Experiment Station research has a greater impact on agriculture when it directly reaches key information disseminators. Therefore, our target audiences for Ag Business Management programs include:

- Minnesota's farmers
- Farm business management associations
- Agricultural leaders
- Other agricultural professionals (e.g., crop consultants)
- Farm business management educators
- State and federal policy makers

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	4500	4000	0	0
2009	4590	4000	0	0
2010	4680	4000	0	0
2011	4770	4000	0	0
2012	4860	4000	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :1                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	15	1
2009	15	1
2010	15	1
2011	15	1
2012	15	1

**V(H). State Defined Outputs**

**1. Output Target**

- Educational events will deliver agricultural business management content. (Target expressed as the number of events.)

2008 :140                      2009 :143                      2010 : 146                      2011 :150                      2012 :154

**V(I). State Defined Outcome**

**1. Outcome Target**

Participants will gain knowledge in business management and risk management practicees. (Target expressed as the number of direct person contacts reporting new knowledge.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :2500                      2009 : 2550                      2010 : 2600                      2011 :2650                      2012 : 2700

**3. Associated Knowledge Area(s)**

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices

**1. Outcome Target**

Participants will act on university-based research they learned. (Target expressed as the number of direct "person contacts" who acted on or have made plans to act on information associated with their Extension learning.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :2500                      2009 : 2550                      2010 : 2600                      2011 :2650                      2012 : 2700

**3. Associated Knowledge Area(s)**

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices

**1. Outcome Target**

In post-program surveys, farm owners will report increased net in farm income as a result of actions taken. (Target expressed as an average net income increase for outcomes of any program intervention.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :6700

2009 : 6700

2010 : 6700

2011 :6700

2012 : 6700

**3. Associated Knowledge Area(s)**

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 604 - Marketing and Distribution Practices

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Public priorities
- Competing Programatic Challenges
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations

**Description**

The Agricultural Business Management Educational content constantly adjusts to help farmers address current public policy issues (including, for example, farm bill legislation), current economics and risk management for natural disasters. We expect that these matters will be constantly fluctuating and that the program will continue to be nimble in addressing those issues.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Time series (multiple points before and after program)

**Description**

Surveys are distributed six months after program delivery in order to determine how information from agricultural business management programs was used, and the impact on profitability.

**2. Data Collection Methods**

- Sampling

**Description**

Surveys are distributed six months after program delivery in order to determine how information from agricultural business management programs was used, and the impact on profitability.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Commercial Horticulture

**2. Brief summary about Planned Program**

This program supports the major components of this industry: commercial fruit and vegetable growers, landscape services, nursery/greenhouse production and distribution, and florists. Within the nursery sector, there are also three basic activities: production of plant materials, wholesale distribution and retail distribution of nursery products. Research to develop new varieties and to support the commercial horticulture industry ranges from basic to applied. The Extension/outreach component of this planned program engages and serves a diverse audience of growers who raise and sell fruits and vegetables for profit. Production systems include the employment of organic, conventional and integrated crop management strategies. Extension programs in nursery and plant health deliver information regarding plant health and growth to members of the green industry and related industries. Another program in this area connects the nationally recognized and leading apiculture research at the University with commercial and hobby beekeepers.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 201 10% Plant Genome, Genetics, and Genetic Mechanisms
- 204 40% Plant Product Quality and Utility (Preharvest)
- 205 40% Plant Management Systems
- 211 10% Insects, Mites, and Other Arthropods Affecting Plants

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Commercial horticulture and the green industry are some of the fastest growing segments of Minnesota's agricultural economy. Commercial growers and turf and nursery professionals continue to seek new research information and educational opportunities to refine their production practices, to increase profitability, reduce inputs, and protect natural resources. Minnesota's cold climate make conditions for growth of horticultural product challenging. Research and education will continue to reach the horticulture industry with new products and management practices that assure success.

**2. Scope of the Program**

- Multistate Research
- Multistate Integrated Research and Extension
- Multistate Extension
- In-State Extension
- Integrated Research and Extension
- In-State Research

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

Minnesota's unique and difficult climate for fruit and vegetable growers and ornamental nurseries make it essential that we undertake research specific to our geographic conditions. Though challenging, there is also enormous potential in this endeavor, and growers in Minnesota rely on the University of Minnesota's research and Extension services. Regarding Extension programming, exploring new audiences is important to the sustainability of this work. Continued growth in the numbers of small-scale commercial growers is anticipated in the next three years. This group is usually not trained in agricultural disciplines, but often has experience in business, framing the needs and expectations of this clientele group.

**2. Ultimate goal(s) of this Program**

Extension goals:

To enhance the profitability of fruit and vegetable production, maintain food security, increase the potential of locally-grown food sources, and add value while maintaining the sustainability of the vegetable and fruit crop industry in Minnesota.

Research goals:

To develop nursery products that enhance the ethical and economic progress of the industry.

To improve nursery products and techniques.

To develop new technologies and strategies that increase profitability while minimizing the environmental impact from urban agriculture.

To develop new turfgrass varieties and management practices for turfgrass.

To research cultivars/rootstocks and cultural systems that improve production efficiency and promote sustainability

To research post harvest handling practices that improve crop use and product safety.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	8.1	0.0	36.5	0.0
2009	8.1	0.0	36.5	0.0
2010	8.1	0.0	36.5	0.0
2011	8.1	0.0	36.5	0.0
2012	8.1	0.0	36.5	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

MAES research will be conducted that will achieve the goals outlined under "Ultimate Goals," including discovery and development research.

Extension activities will include:

Organize, coordinate and participate in events that assist us in reaching the commercial horticulture industry, including (but not limited to) The Potato Growers Association conference, Beginning Grower workshops, Famers Markets workshops, turfgrass professional workshops, High tunnel workshops, International Crop Expo, Midwest Apple Growers Association conference and field day, MN Fruit and Vegetable Growers Association conference and field day, North Country Small Fruit and Vegetable Schools, and Research and Outreach Center Horticulture Days.

Produce online information and websites.

Work through the Minnesota Landscape Association to to produce shows on nursery and plant health and pesticide recertification.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Group Discussion</li> <li>● Workshop</li> <li>● Demonstrations</li> <li>● Education Class</li> </ul>	<ul style="list-style-type: none"> <li>● Other 2 (local newspapers)</li> <li>● Web sites</li> <li>● Other 1 (radio programs)</li> <li>● Newsletters</li> </ul>

**3. Description of targeted audience**

The audiences are fresh market producers including growers of fruits and vegetables for processing, the processing industry,

associated agribusinesses turf professionals, nurseries and garden centers, and landscape professionals. Several of these groups have high representations of new immigrants.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	13000	18500	0	0
2009	13000	18500	0	0
2010	13000	18500	0	0
2011	13000	18500	0	0
2012	13000	18500	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :2                      2009 :2                      2010 :2                      2011 :2                      2012 :2

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	32	0
2009	32	0
2010	32	0
2011	32	0
2012	32	0

**V(H). State Defined Outputs**

**1. Output Target**

- Deliver workshops, classes and seminars and other events to provide information to targeted audiences.

2008 :95                      2009 :95                      2010 :95                      2011 :95                      2012 :95

**V(I). State Defined Outcome**

**1. Outcome Target**

Participants will gain knowledge in fruit and vegetable growing practices. (Target expressed as number of direct person contacts reporting new knowledge.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :7470                      2009 : 7470                      2010 : 7470                      2011 :7470                      2012 : 7470

**3. Associated Knowledge Area(s)**

- 204 - Plant Product Quality and Utility (Preharvest)

- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants

### 1. Outcome Target

Participants will act on university based information they learn. (Target expressed as the number of direct person contacts who acted on or have made plans to act on information associated with their Extension learning.)

### 2. Outcome Type : Change in Action Outcome Measure

2008 :2130

2009 : 2130

2010 : 2130

2011 :2130

2012 : 2130

### 3. Associated Knowledge Area(s)

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants

## V(J). Planned Program (External Factors)

### 1. External Factors which may affect Outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Public Policy changes
- Competing Programatic Challenges
- Competing Public priorities
- Appropriations changes
- Economy
- Government Regulations

#### Description

This program is sensitive to the changing demographics of Minnesota, which is bringing new immigrants into the workforce. It is also sensitive to competition from other growing areas with transportation advantages, to changing expectations and demands of consumers, and the increasing interest especially of urban consumers in local and organic produce, which both increases demand for products and increases expectations and demand for quality products.

## V(K). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- Comparison between locales where the program operates and sites without program intervention
- During (during program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Before-After (before and after program)
- After Only (post program)
- Retrospective (post program)
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Case Study

#### Description

Partition survey data by commodity, percent of income due to vegetable and fruit farming, years of experience, etc, to gain a better understanding of needs of each commodity group.

### 2. Data Collection Methods

- On-Site
- Sampling
- Observation
- Case Study

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Commodity Crop Production

**2. Brief summary about Planned Program**

The Commodity Crop Production program focuses on the development and delivery of timely research information transfer and sound agronomic production principles. This research accelerates the adoption of production practices that increase profitability and reduce risks that face commodity crop producers in Minnesota. Production capacity and efficiency and crop protection are major factors supporting Minnesota crop productivity. Minnesota producers seek ways to minimize their inputs in the areas of pesticides and fertilizers by adopting new crop technologies, diversifying their crops, minimizing soil erosion with less tillage operations, and taking advantage of new alternative crop markets. New technologies, including plant transformation, genomics, and computer-assisted biology will help provide the necessary tools needed to understand and later modify plants for improved production characteristics.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 201 10% Plant Genome, Genetics, and Genetic Mechanisms
- 204 20% Plant Product Quality and Utility (Preharvest)
- 205 20% Plant Management Systems
- 206 10% Basic Plant Biology
- 211 10% Insects, Mites, and Other Arthropods Affecting Plants
- 212 10% Pathogens and Nematodes Affecting Plants
- 213 10% Weeds Affecting Plants
- 216 10% Integrated Pest Management Systems

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

The primary commodity crops produced in Minnesota are corn, small grains (spring wheat, barley and oats) and soybean. These crops produce approximately \$3 billion in cash receipts to Minnesotafarmers, contributing economically to Minnesota's rural communities and to the state as a whole. Another important commodity crop in Minnesota is sugar beets. Minnesota ranks first nationally in sugarbeet production, raising 460,000 acres annually. The annual economic benefits from the beet sugar industry in Minnesota-North Dakota include \$1.1 billion in direct impacts plus another \$2 billion in secondary impacts.

**2. Scope of the Program**

- In-State Extension
- Integrated Research and Extension
- Multistate Research
- Multistate Integrated Research and Extension
- In-State Research
- Multistate Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

A balanced approach toward commodity, industry and regulatory partners is necessary to maintain programmatic funding and our competitive position. The biggest challenge to the Commodity Crops program is how to efficiently and effectively integrate across

county, regional and state levels of programming to best serve the commodity crop producers who farm these 17 million acres of land each growing season.

**2. Ultimate goal(s) of this Program**

The ultimate goal of this program is to accelerate the adoption of production practices that increase profitability and reduce economic and environmental risks that face commodity crop producers in Minnesota. Research components seek to:

Identify and overcome constraints to crop production.

Focus on soil health, tillage systems, crop rotations, pest management and decision support systems that will accelerate the adoption of research results on farms by demonstrating the benefits of research in terms of the whole farm.

Enhance the health and safety of producers and pesticide applicators.

Develop efficient crop production and sustainable cropping systems.

Create discoveries in germplasm development, genetic transformation and the development and application of molecular markets - -crop improvement for the introduction of new genes to increase resistance to pests and diseases; and improvement of productivity and crop quality,.

Develop new approaches for breeding and genetic improvement using molecular technologies.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	11.9	0.0	98.2	0.0
2009	11.9	0.0	98.2	0.0
2010	11.9	0.0	98.2	0.0
2011	11.9	0.0	98.2	0.0
2012	11.9	0.0	98.2	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research will be conducted to achieve the goals outlined under "Ultimate Goals." Note that KA 201 Plant Genome, Genetics and Genetic Mechanisms, and KA 206 Basic Plant Biology, will be used to report mainly MAES research activities and outcomes in this joint report, while other KAs will be used to discuss both Extension and Experiment Station results and impact. Within this planned program, both basic and applied research activities will focus on a broad range of efforts to support the viability and success of Minnesota's crop producers, including such emerging opportunities as biomass, alternative crops and response to new pests and pathogens.

Crop production programming will:

Offer research based educational opportunities to Ag Professionals

Produce regional events for crop producers on topics such as pest management, fertility, health and safety, and production practices.

Produce publications and support materials, both online and hard copy.

Do applied research on production practices.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● One-on-One Intervention</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● Demonstrations</li> <li>● Education Class</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> </ul>

**3. Description of targeted audience**

The primary audience are the producers of corn, soybean, small grains and sugar beets. The secondary audience is the consultants who have commodity crop producers as their customers.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	54300	20000	0	0
2009	53210	20000	0	0
2010	52150	20000	0	0
2011	51100	20000	0	0
2012	50070	20000	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :2                      2009 :2                      2010 :2                      2011 :2                      2012 :2

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	120	10
2009	120	10
2010	120	10
2011	120	10
2012	120	10

**V(H). State Defined Outputs**

**1. Output Target**

- Conduct regional and local events to provide producers with latest applied research for improved crop management. (Target expressed as number of events)

2008 :810                      2009 :790                      2010 : 770                      2011 :750                      2012 :730

- On-farm research will be conducted and result in findings that will inform producers about best management practices.

2008 :0                      2009 :0                      2010 : 0                      2011 :0                      2012 :0

**V(I). State Defined Outcome**

**1. Outcome Target**

Participants will gain research-based knowledge in crop and water management and workplace safety. (Target expressed as the number of direct person contacts reporting new research-based knowledge.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :18900                      2009 : 18520                      2010 : 18150                      2011 :17780                      2012 : 17410

**3. Associated Knowledge Area(s)**

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 206 - Basic Plant Biology
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

**1. Outcome Target**

Participants will act on university-based research they learned. (Target expressed as the number of direct person contacts from meetings who acted on or have made plans to act on information associated with their Extension learning.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :5425                      2009 : 5315                      2010 : 5205                      2011 :5095                      2012 : 4985

**3. Associated Knowledge Area(s)**

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 206 - Basic Plant Biology
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Competing Public priorities
- Natural Disasters (drought, weather extremes, etc.)
- Populations changes (immigration, new cultural groupings, etc.)
- Appropriations changes
- Government Regulations
- Public Policy changes
- Economy
- Competing Programmatic Challenges

**Description**

Adjustments to both the research and outreach work of the program will be necessary in response to all of the above listed external factors, some of which are more predictable than others in an increasingly large-scale and global environment. Crop producers are affected by changes in government regulations, the economy and, as always, the weather.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- Comparison between locales where the program operates and sites without program intervention
- During (during program)
- Retrospective (post program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

**Description**

Evaluation of events will include post program studies and comparison studies. Evaluation of on-farm studies will include comparison and case studies. Input from producers, crop scientists and specialists and the agricultural input industry will be used each year to enhance and improve the program.

**2. Data Collection Methods**

- Observation
- Sampling
- Case Study
- On-Site

**Description**

Evaluation of events will include post program studies and comparison studies. Evaluation of on-farm studies will include comparison and case studies. Input from producers, crop scientists and specialists and the agricultural input industry will be used each year to enhance and improve the program.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Community Economics

**2. Brief summary about Planned Program**

The focus of community economics programming is the empowerment of communities, through research-based information, to address the economic change and challenges facing them. Specific research addresses the relationship of supply and demand for housing in rural communities, understanding family businesses as a vehicle for economic development, and improving the management skills of small business owners relative to business structures, product development and market evaluation. Community Economics outreach programs deliver education, local assessments and discussions as decision-makers plan for the future of their economy and public finance options. Programs include technology literacy programs, customer service training in communities, business retention and expansion programs, retail analysis and development, public finance education programs, tourism development and certificate in festival and event management. Each of these programs informs local decisions and builds on strengths of local economies.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 602 33% Business Management, Finance, and Taxation
- 608 67% Community Resource Planning and Development

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Global economic forces affect local economies and require decision makers to diversify their local economic base. Economic opportunities in both rural and urban areas depend significantly on the health of existing businesses, on the availability of affordable housing, and on the organization, delivery and finance of local government services. To remain healthy and viable, businesses in rural communities increasingly need information about local labor markets and employment trends, and assistance in market evaluation, new product development, and improved small business decision-making. Suburban and urban communities also need to examine their competitiveness and their role in Minnesota's new regional economy. All communities must address the quality of life for businesses and for the workforce during demographic shifts.

Many communities strive to build a strong economic future, but rely too much upon "guess work" to inform their ideas. Our priority is to strengthen the information base from which local leaders act, and to encourage them to develop a plan for their community's future. Minnesota communities are challenged to cope with shifts that develop from changing industries, global markets, regionalization of the retail sector, and increased pressure on local governments to provide for their needs. As these shifts occur, local decision-makers need to learn, research, plan and act for the future of the community.

**2. Scope of the Program**

- Multistate Extension
- Integrated Research and Extension
- In-State Research
- Multistate Research
- Multistate Integrated Research and Extension
- In-State Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

Actions on the part of the entire community can affect the success of individual businesses in that community. Research-based

information can inform community action.

**2. Ultimate goal(s) of this Program**

The goal of our community economics programs is improved local decisions based upon high quality information and effective research and Extension education on topics of business and industry climate, tourism and public finance issues.

MAES research to support the understanding of community economics focuses on public policy, state and local taxation impacts and the state of Minnesota's economy and the challenges facing local communities and local governments.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	9.0	0.0	6.5	0.0
2009	9.0	0.0	6.5	0.0
2010	9.0	0.0	6.5	0.0
2011	9.0	0.0	6.5	0.0
2012	9.0	0.0	6.5	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research will be conducted to assess impact of public policies, the impact of change on rural, suburban and urban communities and businesses as well as community and business challenges and opportunities related to demographic changes, housing, and tourism.

Work in communities is achieved through the efforts of Extension Educators and campus Extension staf, researchers at the Department of Applied Economics, the Department of Housing, Design and Apparel, and the staff of the University of Minnesota Tourism Center. Extension educators deliver workshops in communities, conduct and deliver applied research at the community level, connect communities to university researchers and deliver skills trainings in the areas of customer service and internet education. Research is disseminated through a variety of web, publication and community-based education vehicles.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Other 1 (Research and Summary Reports)</li> <li>● Workshop</li> <li>● Education Class</li> <li>● Group Discussion</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Other 1 (newspaper articles)</li> <li>● Other 2 (on-line courses)</li> </ul>

**3. Description of targeted audience**

Primary audiences for community economics programs include chambers of commerce, the tourism industry, economic development officers, local governments, and nonprofits that can, in turn, support local economic development efforts.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	8800	8000	0	0
2009	9070	8000	0	0
2010	9170	8000	0	0
2011	9270	8000	0	0
2012	9240	8000	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

**2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0**

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	16	10
2009	16	10
2010	16	10
2011	16	10
2012	16	10

**V(H). State Defined Outputs**

**1. Output Target**

- Educational workshops will be provided (face-to-face and on-line). (Target expressed as numbers of workshops.)

**2008 :239                      2009 :255                      2010 :263                      2011 :269                      2012 :268**

- Community-based applied research will be conducted regarding retail trade, business retention and expansion and tourism development. (Target expressed as numbers of communities engaged.)

**2008 :12                      2009 :14                      2010 :16                      2011 :18                      2012 :0**

- Community-based trainers will be trained to continue providing education in communities through business retention and expansion programming, customer service training and internet literacy programs. (Target expressed as the numbers of trainers trained.)

**2008 :99                      2009 :92                      2010 :100                      2011 :108                      2012 :108**

**V(I). State Defined Outcome**

**1. Outcome Target**

Participants in Community Economics programs will increase their knowledge of relevant community economic development topics. (Target expressed as the percentage of participants reporting increased knowledge.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :80                      2009 : 80                      2010 : 80                      2011 :80                      2012 : 80**

**3. Associated Knowledge Area(s)**

- 602 - Business Management, Finance, and Taxation
- 608 - Community Resource Planning and Development

**1. Outcome Target**

Participants in long-term programs (Business Retention and Expansion, Tourism Development, Connecting Rural Communities) will contribute to new plans for local economic development. (Target expressed as a percentage of participants in long-term programs initiated in prior three years who report that participation in Community Economics programming led to creation of new plans.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :70                      2009 : 72                      2010 : 75                      2011 :77                      2012 : 80**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**1. Outcome Target**

Communities engaged in long-term programs (Business Retention and Expansion, Tourism Development, Connecting Rural Communities) will report that plans developed as a result of Community Economics programming were implemented to the betterment of their local economies. (Target expressed as a percentage of communities in long-term programs initiated in prior three years who report that participation in Community Economics programming led to creation of new plans). Note: Communities could be those of place (geographic) or those of interest (industry or sector-based.)

**2. Outcome Type :** Change in Condition Outcome Measure

**2008 :75                      2009 : 75                      2010 : 76                      2011 :76                      2012 : 76**

**3. Associated Knowledge Area(s)**

- 602 - Business Management, Finance, and Taxation
- 608 - Community Resource Planning and Development

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations
- Economy
- Competing Public priorities
- Public Policy changes

**Description**

Economies shift with a myriad of external forces, including economic shifts which can challenge or support local businesses, government regulations that affect tax bases or support one industry over another, and population changes that can drain communities of their population base or create influxes. All of these changes require communities to act on new information, and so challenges research and Extension to respond.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- Retrospective (post program)
- Case Study

**Description**

Post-program evaluations will determine whether knowledge was gained. Phone and one-on-one "check-ins" will gather information about community planning efforts. Longitudinal follow up will assess the success of local planning.

**2. Data Collection Methods**

- Structured
- Telephone
- On-Site
- Mail
- Unstructured

**Description**

Data will be collected through post-program written surveys and one-on-one phone interviews with community leaders who are in touch with community actions and outcomes.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Community Youth Development

**2. Brief summary about Planned Program**

Community Youth Development educators and specialists are managing Minnesota's Youth Work Institute. The Youth Work Institute provides education, research, evaluation and consultation to develop strong professionals, strong programs and a strong youth development field. The Youth Work Institute works with individuals and organizations to develop curricula responsive to community needs and to bridge research and practice that assures quality, capacity, accountability and high levels of youth participation. The Institute also collaborates with other community leaders to promote public conversation and community action that shapes public policy and builds public will on behalf of out-of-school-time learning opportunities for young people.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 805 30% Community Institutions, Health, and Social Services
- 806 70% Youth Development

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Major policy initiatives in the last five years have elevated understanding of the importance of out-of-school time learning opportunities for young people. The Minnesota Mott statewide network called Youth Community Connections, the MN Commission on Out-of-School Time, and reports by the Rand Corporation and the Mott Foundation are only a few of these important reports. Many in Minnesota are committed to ensuring that all young people have opportunities to learn and develop during non-school hours. Organizations and networks are promoting a major effort to build public will in support of community youth programs. The Youth Work Institute, a part of the University of Minnesota Extension's Center for 4-H and Community Youth Development, plays a leading role statewide in providing educational programs and public learning opportunities to build strong professionals, strong programs and a strong field.

**2. Scope of the Program**

- Multistate Extension
- In-State Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

1. While youth programs already exist, research indicates that quality is critical to the ultimate impact those programs make. 2. Youth workers benefit when they have access to current research and have an opportunity to apply it in their daily practice.3. Community programs and organizations benefit from intentional efforts to bridge research and practice.

**2. Ultimate goal(s) of this Program**

The goal is to: a) develop competent youth work professionals; b) build strong, high-quality youth programs; and c) build a strong youth development field so that exceptional out-of-school learning opportunities are accessible and have the capacity to contribute to the positive learning and development of young people.

**V(E). Planned Program (Inputs)****1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	12.8	0.0	0.0	0.0
2009	12.8	0.0	0.0	0.0
2010	12.8	0.0	0.0	0.0
2011	12.8	0.0	0.0	0.0
2012	12.8	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

The Youth Work Institute organizes educational activities to achieve our goals: 1) education programs and training workshops that bridge research and practice; 2) community forums and public seminars; 3) organizational partnerships and collaborations; and, 4) development of publications and educational products. All of the Institute's program activities are based on a commitment to bridge university research and community practice, to promote an asset-based youth development framework, and to promote accountability and quality in program practice.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Education Class</li> <li>● Other 2 (on-line and internet study)</li> <li>● Group Discussion</li> <li>● Other 1 (Support for collaboratives)</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Publications &amp; products)</li> <li>● Public Service Announcement</li> <li>● Web sites</li> </ul>

**3. Description of targeted audience**

The audience for Youth Work Institute programs is all persons working with and on behalf of youth. This includes those who interact with youth through community-based programming as well as decision-makers who can improve the quality and quantity of opportunities for youth to be involved in out-of-school-time activities. Examples include: youth program directors, youth workers, volunteers, teachers, coaches and parents, as well as youth program and school administrators, professionals, elected officials, voters, community collaboratives and policy makers.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	2250	4250	0	0
2009	2500	4500	0	0
2010	2750	4750	0	0
2011	3000	5000	0	0
2012	3000	5000	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	0	2
2009	0	2
2010	0	2
2011	0	2
2012	0	2

**V(H). State Defined Outputs**

**1. Output Target**

- Youth Work Institute products and publications will be disseminated statewide

2008 :550                      2009 :600                      2010 :650                      2011 :700                      2012 :700

- The number of educational events offered to professionals will increase. (Target expressed as the number of events, classes, workshops, etc. offered.)

2008 :175                      2009 :185                      2010 :190                      2011 :200                      2012 :210

- The number of organizations participating in capacity building consultation and technical assistance will increase. (Target expressed as number of participating organizations.)

2008 :75                      2009 :80                      2010 :85                      2011 :90                      2012 :95

- Individuals representing diverse organizations will participate in networks and collaboratives supported by Youth Work Institute Staff. (Target expressed as number of organizations involved.)

2008 :115                      2009 :130                      2010 :140                      2011 :150                      2012 :160

**V(I). State Defined Outcome**

**1. Outcome Target**

Participants at public educational offerings will report that they increased their knowledge of current research and effective program practices. (Target expressed as a percentage of participants.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :90                      2009 : 90                      2010 : 90                      2011 :90                      2012 : 90

**3. Associated Knowledge Area(s)**

- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

**1. Outcome Target**

Youth Development organizations participating in consultation and technical assistance will report that their participation increased their ability to effectively serve youth. (Target expressed as percentage of those in agreement.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :80                      2009 : 80                      2010 : 80                      2011 :85                      2012 : 85

**3. Associated Knowledge Area(s)**

- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Appropriations changes
- Competing Programatic Challenges
- Public Policy changes
- Competing Public priorities
- Government Regulations

**Description**

This program seeks to promote a sustained commitment to youth activities despite political trends and burning issues. However, such trends and tensions will challenge the program to achieve those goals.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Case Study
- After Only (post program)
- Before-After (before and after program)

**Description**

1) We will utilize an on-line survey (Survey Monkey) collection process and satisfaction survey at the completion of each class.  
2) Both Youth Program Quality Intervention Study and 4-H Club Study will be evaluated pre and post with part of the survey receiving intervention programs. 3) Community partners will be interviewed for feedback on effectiveness of Community Design Teams process.4) There will be a case study of Intercultural Education Development (IED) effort and effect.

**2. Data Collection Methods**

- Case Study
- Mail
- Observation

**Description**

Participating programs and organizations will be surveyed to establish their progress over time.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Consumer Horticulture

**2. Brief summary about Planned Program**

Information flows from the University to horticulture consumers through several pathways. Research-based written materials and audio-visual materials are available to consumers through Extension and horticulture department web sites and the Extension distribution center. University faculty work with and provide education for green industry personnel who interact directly with consumers. The primary method -- face-to-face and direct response to consumer questions about home horticulture and environment -- is delivered through University-trained Master Gardener volunteers. The University is seen as a premier source for homeowner horticulture and environmental information, with a strong community-based presence as well as presence in the mass media. Faculty research is closely tied to this effort.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 102 10% Soil, Plant, Water, Nutrient Relationships
- 132 10% Weather and Climate
- 205 60% Plant Management Systems
- 211 10% Insects, Mites, and Other Arthropods Affecting Plants
- 213 10% Weeds Affecting Plants

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

The National Gardening Survey suggests that more than half of the citizens of the state of Minnesota are involved in some form of activity that is defined as horticultural. This means that some 2.5 million people are performing gardening and landscaping activities and are potential consumers of university-based horticulture information. Technological advances have increased both the number of sources of as well as the pathways to horticultural information. Consumers have many choices as to where and how they get their horticultural information. Therefore, multiple mediums for delivery of this information is the best way to reach the audiences we seek and who seek this research-based information. We focus our educational efforts in consumer horticulture in four areas:

answering consumer questions;

educating consumers on best practices in horticulture and plant health care;

addressing issues and practices specific to homeowners' impact on environmental issues of water quality; and,

using horticulture education activities to increase the engagement of youth and new audiences in Extension programs.

**2. Scope of the Program**

- Multistate Extension
- Integrated Research and Extension
- In-State Extension
- Multistate Integrated Research and Extension
- Multistate Research
- In-State Research

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Most consumers of horticulture information work from the paradigm of needing timely answers to questions. Other consumers want to build their basic knowledge in horticulture, and are willing to become expert disseminators of that information in their communities. Still others need to know critical information about horticulture and environmental practices that impact their lives and their communities.

**2. Ultimate goal(s) of this Program**

Our efficient, effective and customer-responsive delivery of research-based information will lead to adoption of sound home horticulture and environmental practices that enhance the quality of life for individuals and add value for the public good.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	2.1	0.0	8.4	0.0
2009	2.1	0.0	8.4	0.0
2010	2.1	0.0	8.4	0.0
2011	2.1	0.0	8.4	0.0
2012	2.1	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

MAES research activities that benefit consumers also benefit our commercial horticultural industry. The activities that will be conducted include development of hardy plants for the northern gardener as well as development of techniques and technologies to support gardening in Minnesota.

Consumer horticulture programs will be delivered in two ways. First, products and services will deliver time-sensitive, responsive information to consumers who want answers to questions. This includes the development and dissemination of written materials, audio-visual materials, web sites, and telephone answer desks. Second, products and services will build horticultural knowledge in communities through University-trained Master Gardeners. They will deliver this information through a variety of venues based on local needs and situations. The Master Gardener groups will collaborate and partner with other community and University groups (e.g., Research and Outreach Centers, Soil Conservation Districts, Community Garden Associations, etc.) in developing and delivering programs.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Education Class</li> <li>● Other 1 (Training of trainers)</li> <li>● Group Discussion</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Public Service Announcement</li> <li>● TV Media Programs</li> <li>● Newsletters</li> </ul>



**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :**26700                      **2009 :** 27230                      **2010 :** 27770                      **2011 :**28325                      **2012 :** 28890

**3. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships
- 132 - Weather and Climate
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 213 - Weeds Affecting Plants

**1. Outcome Target**

Minnesotans receiving answers to horticulture questions will act on university-based research they learned. (Target expressed as the number of direct person contacts who acted on or have made plans to act on information associated with their Extension learning.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :**7520                      **2009 :** 7670                      **2010 :** 7820                      **2011 :**7970                      **2012 :** 8130

**3. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships
- 132 - Weather and Climate
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 213 - Weeds Affecting Plants

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)
- Natural Disasters (drought,weather extremes,etc.)

**Description**

The content of Consumer Horticultural programs is responsive to current seasons, state of weather and climate. The program changes as these factors change. Population changes affect the type of outreach we do, focused on seeking audiences who reflect the diversity of our population.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Case Study
- Retrospective (post program)

**Description**

{NO DATA ENTERED}

**2. Data Collection Methods**

- Case Study
- Sampling
- Mail

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Environmental Science Education

**2. Brief summary about Planned Program**

The mission of the Environmental Science Education work team is to employ the unique resources of the University of Minnesota to protect and enhance Minnesota's unique natural resources and environment through improved environmental education. ESE targets natural resource professionals, teachers and citizens who are engaged in providing environmental science education. Three programs are core to the Environmental Science Education work: 1) The Master Naturalist Program reaches community volunteers and citizens who can disseminate environmental science education in their communities; 2) Best Practices in Field Days reaches natural resource professionals and teachers to improve the quality of their environmental science offerings; and 3) Educational Programming for Youth on the White Earth Reservation brings environmental science education directly to Native American youth.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 135 20% Aquatic and Terrestrial Wildlife
- 136 20% Conservation of Biological Diversity
- 903 60% Communication, Education, and Information Delivery

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

The State Plan for Environmental Education (Lederman 2000) outlines legislated goals of environmental science education, stating that citizens should 1) understand ecological systems, 2) understand cause and effect relationships between human attitudes and behavior and the environment, 3) be able to evaluate alternative responses to environmental issues before deciding on courses of action, and 4) understand the effects of multiple uses of the environment (Minn. Statute 115.073, 1998). To assess citizen's level of knowledge in these areas, the Minnesota Office of Environmental Assistance conducted a survey of adult environmental knowledge, attitudes and behavior (Murphy 2002, 2005). The major findings were that 65% of Minnesotans believe they are knowledgeable about the environment but 46% have less than average knowledge, compared to a national pool. The task of education that connects research-based information to citizens can happen in schools, in communities and in professional settings.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

1) Quality of environmental science education can be improved through connections between research-based information and key audiences. 2) The quantity of environmental science education can be increased by expanding the number of ambassadors for environmental education. 3) Environmental science education will lead to greater care and maintenance of Minnesota's ecosystems.

**2. Ultimate goal(s) of this Program**

The mission of the Environmental Science Education work team is to employ the unique resources of the University of Minnesota to protect and enhance Minnesota's unique natural resources and environment through improving environmental education.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	4.4	0.0	0.0	0.0
2009	4.4	0.0	0.0	0.0
2010	4.4	0.0	0.0	0.0
2011	4.4	0.0	0.0	0.0
2012	0.0	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Extension will improve the quality and increase the quantity of environmental science education by: 1) training teachers and field day leaders best practices for managing environmental science education programs; 2) training volunteers to deliver environmental science education in community settings; and, 3) training Native American Youth through culturally adapted summer programs.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> <li>● Education Class</li> <li>● Other 1 (Train the trainer)</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Newsletters</li> <li>● Other 2 (events / conferences)</li> <li>● Other 1 (electronic newsletter)</li> </ul>

**3. Description of targeted audience**

Environmental Science Education programs reach: 1) Concerned citizens and volunteers who are willing to be trained and serve in a variety of roles as citizen teachers and scientists. 2) Minnesota professionals from within Extension, the Minnesota Department of Natural Resources, Soil and Water Conservation Districts, US Fish and Wildlife Services, Health and Human Services Departments, Environmental Sciences, the public schools and others involved in environmental science education programs. 3) Youth on the White Earth Reservation in Northwest Minnesota, when funding allows.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	680	3150	210	4775
2009	710	3300	220	5000
2010	740	3450	230	5225
2011	770	3600	230	5225
2012	800	3900	230	5225

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	0	0
2009	0	1
2010	0	1
2011	0	1
2012	0	1

**V(H). State Defined Outputs**

**1. Output Target**

- Through training and other communications, volunteers, educators and natural resource professionals will be prepared to deliver research-based environmental science education programs. (Measure expressed as number of Minnesota Master Naturalist volunteers trained and supported.)

2008 :445                      2009 :500                      2010 :550                      2011 :600                      2012 :600

- White Earth Reservation youth will graduate from a four week summer program that includes environmental science education. (Target expressed as a percentage of students graduating.)

2008 :75                      2009 :75                      2010 :75                      2011 :75                      2012 :75

- Recruitment strategies for Environmental Science Education programs for adults will reach under-represented audiences. (Target expressed as a percentage of total audiences served.)

2008 :10                      2009 :10                      2010 :10                      2011 :10                      2012 :10

- All ESE modules and trainings will be developed, tested and finalized. (Target expressed as number of modules and trainings completed that year.)

2008 :2                      2009 :3                      2010 :0                      2011 :0                      2012 :0

**V(I). State Defined Outcome**

**1. Outcome Target**

Within a year of environmental science education instructor training (i.e., Master Naturalist and Best Practices for Field Day Trainings), educators and community-based instructors will use the research-based educational methods in environmental science education delivery. (Target expressed as a percentage of participants.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :140                      2009 : 140                      2010 : 140                      2011 :140                      2012 : 140

**3. Associated Knowledge Area(s)**

- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 903 - Communication, Education, and Information Delivery

**1. Outcome Target**

Minnesotans will have increased opportunities to participate in natural history learning activities. (Target measure reflects increases in number of events available.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :50                      2009 : 50                      2010 : 50                      2011 :50                      2012 : 50

**3. Associated Knowledge Area(s)**

- 903 - Communication, Education, and Information Delivery

**1. Outcome Target**

Master Naturalists will become more knowledgeable about natural history. (Measure expressed as a percentage of knowledge gain.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :20                      2009 : 20                      2010 : 20                      2011 :20                      2012 : 20

**3. Associated Knowledge Area(s)**

- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 903 - Communication, Education, and Information Delivery

**1. Outcome Target**

Native American youth will increase their academic performance on standardized achievement tests following the four week ESE program. (Target expressed as a percentage of increase.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :5                      2009 : 5                      2010 : 5                      2011 :5                      2012 : 5

**3. Associated Knowledge Area(s)**

- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Populations changes (immigration,new cultural groupings,etc.)
- Competing Public priorities
- Competing Programatic Challenges
- Public Policy changes

**Description**

Fundraising is being done to continue some elements of environmental science education. Field Days programs and White Earth Reservations programs are contingent on such funding, and additional evaluation can be done with that funding. A change in public policy and educational priorities may challenge Extension to find partners and volunteers. Demographic shifts may change where we target our participant marketing and whether we adapt the program to reach new cultures.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Retrospective (post program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants

**Description**

ESE evaluations will guide the direction of the projects and assess effectiveness in meeting objectives. Front-end evaluations helped to define audience and partners. Formative evaluation will be carried out during the development and early implementation phases of the programs (2006 - 2010) and results will inform and refine programs. The dominant features of our evaluations are: 1) assessing participants' achievements, including potential to impact large numbers of people through volunteer and professional activities; 2) assessing impact on volunteers and professionals; 3) assessing the quality of materials. We will use a mixed-methods approach (Greene & Caracelli 2002) including surveys, observations, interviews and expert panels and including stakeholders at all levels.

**2. Data Collection Methods**

- Whole population
- Portfolio Reviews
- Tests
- Structured
- Case Study
- Observation

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Family Relations

**2. Brief summary about Planned Program**

The focus of Family Relations programming is the empowerment of people through research-based information to address the social challenges facing families. MAES research examines characteristics of family systems to identify impact of environment and decision-making on quality of marriage and family life. Specific research addresses positive family development, and effective services that aim at security for the individual and family unit.

The field of parenting education build the family strengths through better family communication, nurturing and respectful discipline practices, strong parent-child relationships and authoritative parenting skills. Extension's family relations programs deliver research-based parent education to parents, and improve the quality and quantity of parenting education through service to practitioners in the field of education, health, social services and law. Three program efforts are included in Extension's family development programs. 1) Parents Forever encourages parents to negotiate their divorce decisions so that children have the optimum opportunity for successful development. 2) Parent education offers parents effective parenting tools and strategies that benefit families of infants, school age children, and teenagers. 3) The Families with Teens program seeks to contribute to building family strengths through improving family communication and decision making, strengthening parent-teen relationships, and increasing parental satisfaction and confidence in their parenting role during adolescence.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 802 100% Human Development and Family Well-Being

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

One-third of Minnesota families have children under the age of eighteen. Families face critical periods of transition when their parenting decisions can support, enhance, or impede their child's development. Research at the University of Minnesota focuses on how parent behaviors regarding discipline, communication, co-parenting and relationship building can best support child development. Parents receive this information in a variety of ways, depending on their learning styles, the support systems they tap in their communities, and their tendency to seek help. Therefore, finding a variety of conduits for releasing relevant information is important.

**2. Scope of the Program**

- Multistate Integrated Research and Extension
- Multistate Extension
- In-State Extension
- In-State Research
- Multistate Research
- Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

The family is the first intimate setting for the child with the family's role being to equip children with the skills and ways of understanding who he or she is. We can reasonably expect that the child will take those skills, values and understandings and apply them outside of the family.

Parents play a central role in their children's development, and educational efforts (i.e., additional information and support) can

enhance or facilitate parent behaviors that influence positive developmental outcomes in children. Individuals in families influence each other over time and that influence runs from parent to child and from child to parent. The context within which children develop in addition to family (neighborhoods, faith organizations, historical and social events, culture, race, ethnicity, etc.) is critical to shaping assumptions. Positive parental behavior leads to healthy outcomes for youth and that results in positive outcomes for the larger community.

**2. Ultimate goal(s) of this Program**

The ultimate goal of our family relations programs is to see children of parents in our program grow to the optimum developmental outcomes possible. In order to reach that goal, we aspire to create health, human service and education systems where professionals are prepared to work successfully with parents.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	9.2	0.0	5.7	0.0
2009	9.2	0.0	5.7	0.0
2010	9.2	0.0	5.7	0.0
2011	9.2	0.0	5.7	0.0
2012	9.2	0.0	5.7	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research will examine characteristics of family systems to identify the impact of environment and decision-making on quality of marriage and family life. Specific research will address positive family development, and effective services that aim at security for the individual and family unit. Research efforts include study of processes and patterns of community adaptation, acceptance of youth and frail elders and various minority groups in Minnesota, i.e. Latino/a, Hmong, Vietnamese, Native American and Somalian.

Curriculum, training and research updates will be made available to professionals in the field. Parenting education programs will be delivered through regional educators and trained partners. Research will be disseminated through publications, on-line resources, media and other resources.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Other 1 (web instruction)</li> <li>● Education Class</li> <li>● Group Discussion</li> <li>● Workshop</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Newsletters</li> <li>● TV Media Programs</li> <li>● Public Service Announcement</li> <li>● Other 1 (Publications)</li> </ul>

**3. Description of targeted audience**

The program serves professionals in collaborating agencies such as mental health professionals, parent educators, schools, courts, family service agencies, health care settings and others. The program ultimately reaches parents who are divorcing, parents of adolescents and parents of pre-school and school-aged children.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	3000	1200	50	0
2009	3000	1200	50	0
2010	3000	1200	50	0
2011	3000	1200	50	0
2012	3000	1200	50	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	22	2
2009	22	2
2010	22	2
2011	22	2
2012	22	2

**V(H). State Defined Outputs**

**1. Output Target**

- Publications will be distributed.

2008 :25000                      2009 :25000                      2010 :25000                      2011 :25000                      2012 :25000

- Professionals will be trained.

2008 :300                      2009 :300                      2010 :300                      2011 :300                      2012 :500

- Parents will participate in Extension trainings.

2008 :2700                      2009 :2700                      2010 :2700                      2011 :2700                      2012 :2700

**V(I). State Defined Outcome**

**1. Outcome Target**

Professionals who work with parents and families will increase their knowledge regarding up-to-date research on parenting practices, positive child development and family functioning and well-being. (Target expressed as a percentage of participants

who report knowledge gain.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :80                      2009 : 80                      2010 : 80                      2011 :80                      2012 : 80**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**1. Outcome Target**

Parents will increase their knowledge regarding up-to-date research on parenting practices, positive child development and family functioning and well-being. (Target expressed as a percentage of participants who reported knowledge gain.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :80                      2009 : 80                      2010 : 80                      2011 :80                      2012 : 80**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**1. Outcome Target**

Professionals who work with parents and families will improve their skills in working with parents and families (e.g., utilizing best practices for improving parenting skills). (Target expressed as a percentage of participants who report improving skills.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :60                      2009 : 60                      2010 : 60                      2011 :60                      2012 : 60**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**1. Outcome Target**

Parents will improve their parenting skills. (Target expressed as percentage reporting improvement.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :60                      2009 : 60                      2010 : 60                      2011 :60                      2012 : 60**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**1. Outcome Target**

Parents who are mandated to participate in Parents Forever because of contentious divorce situations will reduce conflict in front of their children following divorce. (Target expressed as percentage of parents who report reducing conflict.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :75                      2009 : 75                      2010 : 75                      2011 :75                      2012 : 75**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**1. Outcome Target**

Parents mandated to participate in Parents Forever because of contentious divorce situations will increase their children's access to both parents following divorce. (The lower percentage reflects that these cases often occur where having access to both parents is not in the best interest of the children.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :35                      2009 : 35                      2010 : 35                      2011 :35                      2012 : 35**

**3. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

## **V(J). Planned Program (External Factors)**

### **1. External Factors which may affect Outcomes**

- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)

#### **Description**

Currently, a statute exists which makes divorce education mandatory for parents in conflict who are divorcing. If that policy changes, there would be less demand for Parents Forever, the Divorce Education program. Legislation also impacts the staffing and funding of family relations programming. An increase and decrease in staffing and funding may occur if legislative support for parent education changes. Influxes of new immigrants are affecting cultural adaptations of the program that need to be made. For example, in 2006 Extension was contacted by Hmong elders because the divorce rate in Minnesota's Hmong population was increasing.

## **V(K). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Other (Cost-benefit study)
- Retrospective (post program)
- Comparisons between program participants (individuals,group,organizations) and non-participants
- After Only (post program)

#### **Description**

The Family Relations program is a multi-faceted effort utilizing existing curricula, designing and implementing new curricula, providing web-based educational opportunities and other trainings to impact parents and families directly, and also to impact the delivery of services to parents and families. Thus, the evaluation efforts must be multi-faceted as well. Depending on the life-course or the stage of program efforts, multiple outcome evaluation studies will be conducted to: 1) explore the effectiveness of achieving specific program objectives, and 2) to aggregate the results across the evaluation studies to speak to the broader impact of Family Relations programming.

### **2. Data Collection Methods**

- Observation
- Mail
- On-Site
- Structured
- Other (Internet-based surveys)
- Unstructured
- Telephone

#### **Description**

The multi-faceted nature of our program calls for a multi-method approach to data collection. The method we use will depend upon the aspect of the program being studied and the questions being addressed.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Family Resource Management

**2. Brief summary about Planned Program**

Family Resource Management provides Extension education on subjects such as: managing a budget, credit and debt, family business, preparation for retirement, culture and money, and teaching children about money. Sound money management is important for people of all income levels and all ages. Three programs make up the Family Resource Management area of expertise: 1) Financial Security in Later Life is a series of workplace trainings that employers can bring to their employees. 2) Resource Management for Daily Life is training for professionals and consumers to develop financial management skills in order to achieve a sense of security and financial stability. 3) Youth and Money provides education for teachers that teach teens about budgeting, income, spending, credit, debt, insurance, and the time value of money.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 801 90% Individual and Family Resource Management
- 806 10% Youth Development

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

According to the National Council on Economic Education: "Americans are experiencing a major change in the way our economy works -- marked by fundamental changes in the marketplace -- outsourcing, global competition, technological change in the workplace, the uncertain future of pensions and social security. Our nation's workforce and citizenry is expected to take on increasing responsibility for their own financial future ... Financial security begins with building skills and developing practices that foster decision-making to create financial security and stability." There is evidence that the population needs more education to make its financial decisions.

In the 2006 JumpStart survey of high school seniors, the average knowledge of personal finance questions reported a dismal 52.4% correct. With this poor understanding of personal finance, young adults enter adulthood making poorly informed choices in the areas of credit use, lending and consumer purchases. Undergraduates carry an average of three credit cards and have an average credit card debt of \$2,327.

More than 50% of working Americans have never even tried to determine how much money they need to save for retirement. The U.S. savings rate for the first time ever has a negative balance.

The number of personal bankruptcies in the U.S. increased in 2005. New bankruptcy legislation in 2006 impacted the ease of reducing debt responsibility through personal bankruptcy. The impact of this new legislation, for individuals and households, is yet to be determined.

There has been a dramatic increase of housing foreclosures in Minnesota. In Hennepin County alone in 2006, sheriff's foreclosure sales increased 62% from the same period a year ago.

**2. Scope of the Program**

- Integrated Research and Extension
- Multistate Research
- Multistate Extension
- In-State Extension
- In-State Research
- Multistate Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Partnerships with local nonprofits, educational organizations, social service programs and financial institutions can expand the outcomes of financial literacy programming.

Some populations in need of financial literacy may be reluctant to take advantage of traditional classroom settings; therefore, creative outreach and partnership strategies should be used.

Financial literacy must be translated for language and culture so that immigrant and non-english speaking residents can take advantage of it.

Workplace education creates the potential for dual outcomes. It can meet the employer's need for productivity and the workers' need for retirement savings knowledge.

**2. Ultimate goal(s) of this Program**

The ultimate goal is that families and individuals increase their wealth and financial security by making sound decisions about consumption, debt, retirement, and daily finances.

To support this goal, specific MAES research addresses families' ability to cope with financial strain and at the same time, cope with the reduction of programs and support for families. Research addresses effective services that aim at security for the individual and family unit, as well as relationships between the viability of rural family businesses and family functioning.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	12.1	0.0	3.1	0.0
2009	12.1	0.0	3.1	0.0
2010	12.1	0.0	3.1	0.0
2011	12.1	0.0	3.1	0.0
2012	12.1	0.0	3.1	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Practitioner workshops will be held to help partnering organizations deliver education.

Workshops and trainings will be held in community-based settings for each of the financial literacy topics.

Worksite workshops will be taught.

Publications will support programming.

Media will be used to disseminate timely research and information.

Curricula will be developed and adapted for language and culture as needed.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● One-on-One Intervention</li> <li>● Other 1 (Training of trainers)</li> <li>● Other 2 (webcast and other multi-media)</li> <li>● Demonstrations</li> <li>● Education Class</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 2 (Publications)</li> <li>● Other 1 (Radio programs, newspaper articl)</li> </ul>

● Workshop	
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**3. Description of targeted audience**

Our audiences include the following: For youth and money: adolescents moving into independent living; teachers k-12, professional staff-credit union representatives, college staff and faculty, college students and youth. For financial security in later life: employees at worksites; some community non-profit groups and individuals who utilize on-line website resources and self-study modules. For resource management for daily life programs: the general public; individuals and families who seek knowledge and skills by choice or mandate; professionals seeking to enhance knowledge; public and private agencies, organizations and businesses seeking training to enhance their delivery of resource management programs.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	6000	6000	75	2050
2009	6000	6000	75	3000
2010	6000	6000	75	3025
2011	6000	6000	75	3050
2012	6000	6000	75	3075

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	15	12
2009	15	12
2010	15	12
2011	15	12
2012	15	12

**V(H). State Defined Outputs**

**1. Output Target**

- Training will be held for trainers in other organizations so that they can deliver education to their constituents. (Target expressed as the number of events delivered.)

2008 :100                      2009 :100                      2010 :100                      2011 :100                      2012 :100

- Community-based workshops will be held for individuals and families. (Target expressed as the number of events delivered.)

2008 :150                      2009 :150                      2010 :150                      2011 :150                      2012 :150

- Curricula and guides will be distributed to practitioners.

2008 :2000                      2009 :2000                      2010 :2000                      2011 :2000                      2012 :2000

- Outreach efforts will educate employers about financial security needs of employees and provide opportunities for on-site workshops. (Target expressed as number of employing businesses reached.)

2008 :175                      2009 :150                      2010 :125                      2011 :100                      2012 :75

**V(I). State Defined Outcome**

**1. Outcome Target**

Individuals, families and employees who participate in Resource Management programming will report they have increased knowledge related to the targeted financial management goals. (Target expressed as a percentage of participants who report increasing knowledge.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :60                      2009 : 60                      2010 : 60                      2011 :60                      2012 : 60

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 806 - Youth Development

**1. Outcome Target**

Individuals, families and employees who participate in Resource Management programming will report they have increased confidence (increased efficacy) in financial management, decision-making and planning for later life. (Target expressed as a percentage of participants who report increasing efficacy.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :70                      2009 : 70                      2010 : 70                      2011 :70                      2012 : 70

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 806 - Youth Development

**1. Outcome Target**

Individuals, families and employees who participate in Resource Management programming will report they have used the knowledge/materials gained from the program to change behaviors related to targeted financial management goals. (Target expressed as a percentage of participants who reported making behavior change.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :50                      2009 : 50                      2010 : 50                      2011 :50                      2012 : 50

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 806 - Youth Development

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Competing Public priorities
- Economy
- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations
- Competing Programatic Challenges

**Description**

Greater economic challenges create more of a challenge to financial literacy. (e.g., health care costs and availability, unemployment rates, costs of child care, cost of energy, cost of housing, war and rising interest rates.) Greater competition for attention to other issues in community-based institutions could decrease the amount of financial literacy training that exists. As new populations come to Minnesota, new adaptations of financial literacy program will be developed.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)

**Description**

Surveys for resource management for daily life will assess strengths, skills and needs of clients, recognition of effects of culture on resource management, promotion of money management skill building and sharing of best practices in financial management behavior. This data will be gathered immediately following train-the-trainer programs, within 12 months following or as an end-user summary. Youth and money programs will use end-of-event evaluation, as well as longitudinal evaluations utilizing web-based surveys.

**2. Data Collection Methods**

- On-Site
- Other (email, web surveys & focus groups)
- Structured
- Mail

**Description**

Onsite data collection is used to measure retrospective knowledge/skill gain. Web-based (Survey Monkey) surveys will collect post-event information. Focus group interviews will be conducted to assess cultural appropriateness of curriculum adaptations.

## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Food Safety Education

### 2. Brief summary about Planned Program

The mission of Food Safety education is to provide research-based food safety education to Minnesota food service establishments, non-profit community events, schools, processing facilities, care facilities, homes and home-based businesses and to increase the safety of food products grown, caught, prepared or preserved in Minnesota. This is being accomplished through: 1) Food Safety Certification programs for Food Services; 2) Food Safety Training for food handlers; 3) Food Safety Education through distributed materials to the general public and 4) Development and coordination of training and inspection for food industry personnel.

Research to support these outreach programs investigate food production and processing practices, food safety and food quality issues.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

- 501 40% New and Improved Food Processing Technologies
- 503 30% Quality Maintenance in Storing and Marketing Food Products
- 504 30% Home and Commercial Food Service

## V(C). Planned Program (Situation and Scope)

### 1. Situation and priorities

An average of 39 foodborne outbreaks occur every year in Minnesota, involving more than 600 persons. Fifty percent of the food dollar is spent on meals prepared by the food service industry. The majority of foodborne outbreaks in Minnesota is related to improper handling in these food service situations. Emerging trends to which the food service industry must adapt include food allergies, food irradiation and foodborne illness. In community based and care settings, similar concerns arise with less professional resources available for trainings and standards for food preparation.

### 2. Scope of the Program

- In-State Extension
- Multistate Integrated Research and Extension
- Multistate Extension
- Multistate Research
- In-State Research
- Integrated Research and Extension

## V(D). Planned Program (Assumptions and Goals)

### 1. Assumptions made for the Program

Interventions in public food service settings will control the conditions under which food borne illnesses occur. For-profit and non-profit food service settings benefit from becoming trained in food service because the reputations of their institutions and industry will be strengthened. The general public seeks information about food safety from timely, responsive mediums rather than workshop or certification settings.

### 2. Ultimate goal(s) of this Program

The ultimate goal is to prevent foodborne illnesses and assure the safety of food preparation in food service settings.

Research goals include:

Create the basic knowledge to permit the food industry to develop safe and flavorful food products  
 Reduce incidence of pathogens by incorporating natural anit-microbials in ready-to-consume foods  
 Reduce food spoilage by using naturally occurring chemicals from edible plants.  
 Optimize product quality by evaluating food component interactions  
 Increase understanding of the structural characteristics that proteins bring to food products.  
 Develop a polymer science approach to study lipid replacement in cereal-based systems.  
 Evaluate the farm to table movement of food and determine where contamination may occur.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	9.2	0.0	5.6	0.0
2009	9.2	0.0	5.6	0.0
2010	9.2	0.0	5.6	0.0
2011	9.2	0.0	5.6	0.0
2012	9.2	0.0	5.6	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research will be conducted to meet the applied and basic research goals outlined under "Ultimate Goals." Research into the development of new products, processes and storage conditions is included under this program.  
 Food Safety for Food Service: Face-to-face and on-line courses will be delivered, resulting in examination and certification of food service workers. In 2006, Extension reported that cultural and language adaptations had made certification of Spanish-speaking food service workers more successful. Renewals of this certification will be offered and the course will continue to be offered in Spanish. In the coming years, cultural adaptation for other immigrant groups are likely. Food Safety Employee and Volunteer training: Face-to-face education in food service settings and community settings will deliver food safety training to those who handle food. The public will have education available about food safety in the home through media campaigns, phone answering services, the web, fact sheets and workshops. A train the trainer format will also be offered, especially to those local community organizations that can reach high risk audiences with food safety information. The Inspection Division Project: A contract for services will provide a 3/4 time educator to develop and coordinate training for inspection and food industry personnel.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Other 1 (Train-the-trainer)</li> <li>● Education Class</li> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● TV Media Programs</li> <li>● Other 2 (CDDVDs)</li> <li>● Newsletters</li> <li>● Other 1 (answering lines)</li> <li>● Public Service Announcement</li> </ul>

**3. Description of targeted audience**

Research supports the food development industry and food processing industry, while the direct audiences of the outreach efforts are food service workers through relationships with the National Restaurant Association, food handlers in community locations, fishermen and farmers, and high-risk audiences through the organizations they trust.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	2900	7400	0	0
2009	2950	7400	0	0
2010	3000	7400	0	0
2011	3050	7400	0	0
2012	3100	7400	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	12	3
2009	12	3
2010	12	3
2011	12	3
2012	13	2

**V(H). State Defined Outputs**

**1. Output Target**

- On-line and face-to-face classes will be delivered for food service workers in English. (Target expressed as number of courses offered.)

2008 :65                      2009 :67                      2010 :69                      2011 :70                      2012 :72

- Content for food service professionals will be translated into Spanish and adapted for Latino culture participants. (Target indicates number of courses available in Spanish.)

2008 :3                      2009 :4                      2010 :5                      2011 :6                      2012 :6

- New materials and training adaptations will be made for additional immigrant groups.

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :1

**V(I). State Defined Outcome**

**1. Outcome Target**

At the completion of each teaching session, participants will show increased knowledge of food safety as measured on the Life

Skills evaluation. (Target expressed as a percentage of participants.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :70                      2009 : 70                      2010 : 70                      2011 :70                      2012 : 70**

**3. Associated Knowledge Area(s)**

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 504 - Home and Commercial Food Service

**1. Outcome Target**

At the completion of each teaching session, participants will identify behaviors they intend to change and follow up evaluations will determine whether these behaviors change. (Target expressed as number of behaviors changed / participant.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :2                      2009 : 2                      2010 : 2                      2011 :2                      2012 : 2**

**3. Associated Knowledge Area(s)**

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 504 - Home and Commercial Food Service

**1. Outcome Target**

The MN Dept. of Health reports an 18-20% decrease in inspection critical violations in establishments that employ a Certified Food Manager. Food Safety Education programs will certify food managers. (Target expressed as % of pass rates.)

**2. Outcome Type :** Change in Condition Outcome Measure

**2008 :95                      2009 : 95                      2010 : 95                      2011 :95                      2012 : 95**

**3. Associated Knowledge Area(s)**

- 501 - New and Improved Food Processing Technologies
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 504 - Home and Commercial Food Service

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations

**Description**

If regulations become lax for foodservice establishments, incentive to engage in certification may decrease. As population demographic change the "where and how" of public food service situations may need adjustment in program planning.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Other (Inspection documents)
- Comparison between locales where the program operates and sites without program intervention
- After Only (post program)
- Retrospective (post program)

**Description**

Besides data collection, we plan to study program adaptations for new audiences to determine the cultural appropriateness of our program adaptations. Once program interventions are considered effective because of post-program evaluation, their outcomes will be measured through means similar to data collection for other programs.

## 2. Data Collection Methods

- Tests
- Mail
- Other (Inspection documents)

### Description

The Life Skills evaluation system is used. Questions are selected from the groupings developed by the Extension Service. Analysis of material learned and behaviors changed is measured by pre- and post-class evaluations. For certification programs, a follow-up evaluation is sent to participants to determine the continuing influence of materials presented. Evaluation of facilities by MDH or MDA inspectors will be collected from inspection scores, which are public domain. Data primarily will be searched for changes in compliance at inspections done after facility personnel have completed training. Improved inspection scores, fewer violations and a decrease particularly in critical violations would be measures of success. Data are also collected from Certified Food Managers renewing their certification through Serve it Up Safely in the classroom setting. The percentage making significant changes to decrease the incidence of foodborne illness outbreaks is tabulated, along with specific practices put in place. These evaluations will determine whether Food Safety Education programs are making a difference.

## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Housing Technology

### 2. Brief summary about Planned Program

The Housing Technology Program of the University of Minnesota Extension Service delivers courses and provides the tools that secure good air quality in new homes, or mitigates problems in existing homes. Educational partners come from government, industry and non-profit organizations. Together, these courses identify the extent and cause of the major structural and environmental problems in housing. This serves housing professionals so that they can ensure the quality of new and existing homes to their customers. This also helps the housing consumer/investor be better informed on home-buying decisions. MAES research supporting outreach education on housing in developing new knowledge and understanding of building systems.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

- 804 100% Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

## V(C). Planned Program (Situation and Scope)

### 1. Situation and priorities

A host of home air pollutants can impair the health of residents, creating asthma, allergies, bronchitis, carbon monoxide poisoning, lead poisoning, and more. Examples of harmful housing substances include asbestos, biological contaminants, chemicals, combustion pollutants, lead, mold, and radon. Maintaining and building durable, healthy and affordable housing requires knowledgeable housing professionals and conscientious home buyers.

### 2. Scope of the Program

- Integrated Research and Extension
- Multistate Extension
- In-State Research
- In-State Extension

## V(D). Planned Program (Assumptions and Goals)

### 1. Assumptions made for the Program

Public policy alone cannot assure indoor air quality. Creating a culture of conscientiousness about air quality among both buyers and sellers will improve the quality of Minnesota's housing stock.

### 2. Ultimate goal(s) of this Program

To mitigate health risks through the reduction of indoor environmental risks, while improving the quality and durability of Minnesota's housing stock.

## V(E). Planned Program (Inputs)

### 1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	1.3	0.0	2.6	0.0
2009	1.3	0.0	2.6	0.0
2010	1.3	0.0	2.6	0.0
2011	1.3	0.0	2.6	0.0
2012	1.3	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Courses will be offered in Minnesota and across the United States in partnership with the building industry and its constituents. Ongoing research will continue to increase the quality and quantity of these educational opportunities. The following topics are core to our Housing Technology Programs: Indoor Air Quality in Residential Settings; Moisture Control and Mold; Radon Measurement, Radon Mitigation, and custom courses on new and emerging subjects.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Other 1 (certifications)</li> <li>● Education Class</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Newsletters</li> </ul>

**3. Description of targeted audience**

The overall target audience for this information is builders, remodelers, contractors, mitigators and others involved with avoiding and resolving problems in homes.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	914	5700	0	0
2009	956	5700	0	0
2010	998	5700	0	0
2011	1040	5700	0	0
2012	1040	5700	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	0	1
2009	0	1
2010	0	1
2011	0	1
2012	0	1

**V(H). State Defined Outputs**

**1. Output Target**

- Educational courses will be delivered to the target audiences.

2008 :65                      2009 :65                      2010 :65                      2011 :65                      2012 :65

- New research will result in the development of new and revised educational materials. (Target expressed as the number of new or revised curriculum materials.)

2008 :1                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**V(I). State Defined Outcome**

**1. Outcome Target**

Improve the durability of new homes by working with builders. (Target expressed as the number of new homes affected.)

**2. Outcome Type :** Change in Condition Outcome Measure

2008 :1000                      2009 : 1000                      2010 : 1000                      2011 :1000                      2012 : 1000

**3. Associated Knowledge Area(s)**

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

**1. Outcome Target**

Improve the availability of healthy and affordable housing through the mitigation of indoor environmental risks. (Target expressed as number of homes affected.)

**2. Outcome Type :** Change in Condition Outcome Measure

2008 :1000                      2009 : 1000                      2010 : 1000                      2011 :1000                      2012 : 1000

**3. Associated Knowledge Area(s)**

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Government Regulations
- Competing Public priorities
- Natural Disasters (drought,weather extremes,etc.)
- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)

**Description**

Natural disasters could increase or change the amount of content that needs to be provided. If government regulations no longer support the program in giving incentive to builders to make homes safe, the market for the program could decrease. Population changes will generate a demand for programming in additional languages.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)

**Description**

Evaluation of program is done collaboratively with the housing industry, which indicates whether standards are being addressed and that they are in compliance with government regulation as a result of educational inputs.

**2. Data Collection Methods**

- Case Study
- Telephone
- Unstructured
- Journals
- Tests
- Whole population
- Sampling
- Observation
- Structured
- Mail
- Portfolio Reviews
- On-Site

**Description**

Evaluation of program is done collaboratively with the housing industry, which indicates whether standards are being addressed and that they are in compliance with government regulation as a result of educational inputs.

## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Leadership and Civic Engagement

### 2. Brief summary about Planned Program

The primary goal of leadership and civic engagement programs is to improve the quality of community-based leadership and democratic processes. With the power of effective democracies, communities can choose a future and adapt to change. Leadership and civic engagement programs have a strong track record in building leadership capacity and helping communities manage their processes. In the coming five years, the primary goals are: 1) to ensure that regional development efforts integrate Leadership and Civic Engagement programming; 2) to further strengthen evaluation processes; 3) to develop viable curricula that assure the replicability of sound program delivery; and, 4) to maintain and strengthen the research connections of the work. Three programs currently are aligned with the leadership and civic engagement area of expertise. 1) The U-Lead program creates stronger leadership in communities. 2) The U-Facilitate program offers local residents, staff and leaders skills and experiences to enhance community-based decision-making; and 3) The U-Connect program helps communities design and implement public participation processes and become intentional in building bonds within and across communities.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

- 608 50% Community Resource Planning and Development
- 803 50% Sociological and Technological Change Affecting Individuals, Families and Communities

## V(C). Planned Program (Situation and Scope)

### 1. Situation and priorities

According to a study of community leadership done by Cornell University and the Heartland Institute in 2002, community leaders face a number of specific and complex challenges in modern times, including:

Doing more with less

Mandates from above

The currents of change and unexpected events

Complexity of issues

Economic realities

Social and cultural unrest

Loss of confidence in institutions

Fear of personal "assassination" as the populace scrutinizes public leadership more harshly.

How can communities address these challenges? Case study examination shows that communities succeed when they realize that, "ultimately, we have to do it ourselves." While support from state government and other outside sources can affect the lives and outcomes of community life, the primary ingredient for success is a communities' ability to make decisions -- to act together.

This requires the leadership of an effective democracy.

### 2. Scope of the Program

- In-State Research
- In-State Extension
- Multistate Extension

## V(D). Planned Program (Assumptions and Goals)

### 1. Assumptions made for the Program

Leadership education is known to provide time for personal and community development as potential leaders decide what they can contribute. Providing leadership education will increase the quality and quantity of leadership in communities.

Research-based facilitation design, delivery and education will positively change the process and product of structured gatherings in communities.

Through training and modeling, community decision-makers can learn how to improve the quality and quantity of their engagement with those who have a stake in public decisions.

Community-based assessments can provide revealing information that guide communities towards appropriate actions.

**2. Ultimate goal(s) of this Program**

The ultimate goal is to strengthen leadership and civic engagement systems that address problems, create positive visions, engage a wide spectrum of community members and enhance the quality of life in communities.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	11.1	0.0	0.0	0.0
2009	11.1	0.0	0.0	0.0
2010	11.1	0.0	0.0	0.0
2011	11.1	0.0	0.0	0.0
2012	11.1	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

The U-Lead, U-Facilitate and U-Connect programs will use multiple interventions to improve the quality of leadership, structured gatherings and public participation processes, specifically: 1) community-based assessments, 2) workshops, 3) consultation, and 4) long-term cohort groups.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Workshop</li> <li>● Other 1 (Community Coaching)</li> <li>● Other 2 (Community Assessments)</li> <li>● Group Discussion</li> <li>● Education Class</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Other 2 (Materials dissemination)</li> <li>● Web sites</li> <li>● Other 1 (Radio programs, newspaper articl)</li> </ul>

**3. Description of targeted audience**

Leadership and Civic Engagement programs reach out to five primary audiences:

- local government agencies, employees and leaders
- nonprofit organizations and collaborative associations
- foundations and their grantees
- the natural resources sector
- the agricultural sector

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	4500	4500	0	0
2009	4725	4500	0	0
2010	4960	4500	0	0
2011	5208	4500	0	0
2012	5468	4500	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	0	1
2009	0	1
2010	0	1
2011	0	2
2012	0	2

**V(H). State Defined Outputs**

**1. Output Target**

- Community cohort groups will meet to develop leadership skills and create civic connections. (Target expressed as number of cohort groups convened.)

2008 :19                      2009 :20                      2010 :21                      2011 :22                      2012 :22

- Community assessments and research projects will help communities understand their strengths related to civic leadership and social capital. (Target expressed as number of local assessments conducted.)

2008 :8                      2009 :10                      2010 :10                      2011 :10                      2012 :11

- Workshops and other structured gatherings will provide communities with increased skills, knowledge and behaviors related to leadership and civic engagement. (Target expressed as number of events.)

2008 :200                      2009 :200                      2010 :200                      2011 :200                      2012 :200

**V(I). State Defined Outcome**

**1. Outcome Target**

Community leadership cohort members will increase the intensity of their leadership. (Target expressed as the percentage of

cohort group members who change their level of organizational involvement from "inactive" to "active" or "leader" positions.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :45                      2009 : 47                      2010 : 50                      2011 :52                      2012 : 55**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**1. Outcome Target**

U-Lead cohort members will increase leadership skills and knowledge. (Target expressed as percentage of U-Lead participants reporting pre-to-post improvement in civic engagement, community commitment, community knowledge, personal growth and self-efficacy and shared future and purpose.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2008 :85                      2009 : 87                      2010 : 89                      2011 :90                      2012 : 90**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

**1. Outcome Target**

Structured community gatherings are more productive. (Target expressed as percentage of participants who report in follow-up surveys that participation in LCE programming led to improvements in the process and product of structured community gatherings.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :55                      2009 : 57                      2010 : 59                      2011 :61                      2012 : 63**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

**1. Outcome Target**

Findings generated from community-based social capital assessments guide communities to informed action. (Target expressed as percentage of participants who report in follow-up surveys that social capital assessment led to actions designed to strengthen trust, networks or civic engagement.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :35                      2009 : 38                      2010 : 41                      2011 :45                      2012 : 50**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

**1. Outcome Target**

Community decision-makers improve the quality and quantity of engagement with those who have a stake in public decisions. (Target expressed as percentage of participants who report in follow-up surveys that collective decision-making has effectively engaged relevant stakeholders.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :35                      2009 : 38                      2010 : 41                      2011 :45                      2012 : 50**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

## **V(J). Planned Program (External Factors)**

### **1. External Factors which may affect Outcomes**

- Other (Cultural Adaptation)
- Competing Programatic Challenges
- Public Policy changes
- Competing Public priorities

#### **Description**

Greater emphasis on local control and required public participation tied to government funding positively impacts demand for this programming. The LCE program teams want to create cultural adaptations of its programs to reach more Minnesota immigrants and other underserved audiences. Our evaluation targets may change in order to be more culturally appropriate.

## **V(K). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Case Study
- After Only (post program)
- Before-After (before and after program)
- Retrospective (post program)
- Other (Educator and community reports.)

#### **Description**

Post program assessments (six months or more) will be utilized using the Community Leadership Program Survey developed by the University of Missouri. Organizations and communities who sponsor programs will be assessed through case studies and interviews.

### **2. Data Collection Methods**

- Unstructured
- Other (surveys and assessments)
- Observation
- Case Study
- Structured

#### **Description**

The Community Leadership Program Survey is an evaluation tool administered to U-Lead cohort group members after the ending of the cohort group is finished. This survey will collect data about the number of communities impacted by our leadership education and the number of skill enhancements achieved through the program. Community planning assessments will be collected through communication and observation by the intervening Extension Educator.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Livestock

**2. Brief summary about Planned Program**

This program includes a wide range of programming related to beef, swine, poultry, dairy cow and horse. It also includes work on animal facilities, pasture and manure management.

Animal production strategies, research development and niche markets are rapidly changing. In response, research and extension programming related to this planned program is flexible, applicable and adapts to audiences needs. The livestock industry is in the midst of major structural changes. Issues such as animal identification, disease surveillance, biosecurity, profitability, food safety and quality and the impacts of international markets are identified throughout all facets of the industry. This program is focusing on inclusion of new partnerships in educational delivery, regionalization and multi-state efforts to provide new resources and opportunities.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 301 10% Reproductive Performance of Animals
- 302 15% Nutrient Utilization in Animals
- 304 5% Animal Genome
- 305 10% Animal Physiological Processes
- 306 5% Environmental Stress in Animals
- 307 30% Animal Management Systems
- 311 20% Animal Diseases
- 315 5% Animal Welfare/Well-Being and Protection

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Minnesota livestock producers are challenged with integrating knowledge from diverse disciplines into production practices suitable for their individual operation. Research and education on animal production systems must address the interactions between nutrition, genetics, reproduction, physiology, microbiology, immunology, and molecular biology, and also related effects on animal health, productivity, and impacts to the environment. In Minnesota, large amounts of land (including 2,000,000 acres of conservation reserve land) are suited for beef cow/calf operations, but the cost of production is high due to feed costs and inefficient use of available forage. Research is needed to develop grazing and forage systems to reduce feed costs and improve profitability. Minnesota is the nation's sixth largest milk-producing state and has the largest turkey industry in the nation.

**2. Scope of the Program**

- Multistate Extension
- In-State Research
- Multistate Integrated Research and Extension
- Integrated Research and Extension
- Multistate Research
- In-State Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

The major livestock categories--poultry, swine, beef, and dairy cows--share similar challenges. All face the challenge of minimizing production costs while supplying high quality product to consumer markets. Consumers are indicating a preference for high protein meat, lower fat products, convenience, product variety and high quality taste. Livestock producers must respond to these demands. One recent survey indicated producers prefer easily accessible information, such as short publications and internet/web based offerings. Local programs were preferred over travel to other locations. Disease/health remains a high priority topic.

**2. Ultimate goal(s) of this Program**

The ultimate goal is to assure a thriving livestock industry. To accomplish this:

Research goals are:

To improve production efficiency.

To increase research on lean growth and alternative animal products for consumer driven markets.

To evaluate alternative feeds and feeding and management strategies to improve economic efficiency.

To determine nutrient requirements to enhance economic and environmentally sustainable animal products. To improve definition of dietary nutrient needs for food animals.

To identify major animal genes that affect growth and development, reproductive performance, lactation, and disease resistance characteristics.

To identify biotechnology that would assist producers in their efforts to accelerate the genetic improvement of animals.

Extension goals are:

To reduce economic loss related to animal disease, environmental factors, and stress

To educate consumers and youth regarding animal production and products

To develop animal feeding strategies considering nutrient use and alternative ingredients

To increase understanding of animal management and disease.

To complete applied research to support extension efforts in animal nutrition, production, health, processing and food safety.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	10.2	0.0	44.9	0.0
2009	10.2	0.0	44.9	0.0
2010	10.2	0.0	44.9	0.0
2011	10.2	0.0	44.9	0.0
2012	10.2	0.0	44.9	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

MAES research will be conducted to achieve the goals outlined under "Ultimate Goals.

Extension activities will:

Provide direct education via regional and local programs.

Offer train the trainer opportunities.

Use media, websites, on-line educational delivery systems, listserves, audio-conferencing and other technologies to offer extension education to a diverse audience.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Workshop</li> <li>● Other 2 (listservs, Breeze Live-web)</li> <li>● Demonstrations</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Other 1 (train the trainer)</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (MN Farm Information Line)</li> <li>● Web sites</li> <li>● Newsletters</li> </ul>

**3. Description of targeted audience**

Minnesota dairy producers, pork producers, poultry producers, beef producers, veterinarians, consumers, Minnesota feed industry. Forage growers and feeders, and commercial hay producers.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	19000	3800	0	0
2009	18620	3800	0	0
2010	18230	3800	0	0
2011	17840	3800	0	0
2012	17450	3800	0	0

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :1                      2009 :1                      2010 :1                      2011 :1                      2012 :1

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	80	10
2009	80	10
2010	80	10
2011	80	10
2012	80	10

**V(H). State Defined Outputs**

**1. Output Target**

- Through demonstration projects, provide ideas and solutions to producers on such topics as milk house waste, manure rate application on fields, and on-farm demonstrations of forage topics such as alfalfa brown root rot variety screening, and alfalfa fall cutting. (Target expressed as number of demonstration projects.)

2008 :20                      2009 :20                      2010 : 20                      2011 :20                      2012 :20

- Provide workshops, training sessions, schools, and other processor specific events. (Target expressed as number of events.)

2008 :250                      2009 :245                      2010 : 240                      2011 :235                      2012 :230

- The Quality Count\$ initiative will sustain its cooperative partnerships with regulatory, association and production groups that assist in addressing the issue of somatic cell count. (Target expressed as the minimum number of groups involved.)

2008 :25                      2009 :25                      2010 : 25                      2011 :25                      2012 :25

**V(I). State Defined Outcome**

**1. Outcome Target**

Through the Quality Count\$ program, the average bulk tank somatic cell count in Minnesota dairy operations will be maintained at a low level, and move downward over time through changed attitudes and improved consistency of dairy producers. (Target expressed as the somatic cell count under which Minnesota's dairy industry will stay.)

**2. Outcome Type :** Change in Condition Outcome Measure

2008 :300000                      2009 : 280000                      2010 : 250000                      2011 :250000                      2012 : 250000

**3. Associated Knowledge Area(s)**

- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases
- 315 - Animal Welfare/Well-Being and Protection

**1. Outcome Target**

Participants will gain knowledge in research-based practices related to beef, dairy, horse, poultry, swine management and manure related management. (Target expressed as the number of direct person contacts reporting new knowledge.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :6800                      2009 : 6650                      2010 : 6500                      2011 :6350                      2012 : 6200

**3. Associated Knowledge Area(s)**

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases
- 315 - Animal Welfare/Well-Being and Protection

**1. Outcome Target**

Participants will act upon university-based research learned. (Target expressed as the number of direct person contacts who acted on or have made plans to act upon information associated with their Extension learning.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008 :**1900

**2009 :** 1860

**2010 :** 1820

**2011 :**1780

**2012 :** 1740

**3. Associated Knowledge Area(s)**

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases
- 315 - Animal Welfare/Well-Being and Protection

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Appropriations changes
- Government Regulations
- Competing Public priorities
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Public Policy changes
- Other (Changing consumer preferences)
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Programatic Challenges

**Description**

Pressures on this industry include shifts in consumer quality demands, biosecurity threats, increasing regulations on producers related to environmental concerns, urban and suburban development creating land use issues, energy expenses and global economics.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Time series (multiple points before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- After Only (post program)
- Before-After (before and after program)

**Description**

Many evaluation components of this planned program include immediate evaluations to get feedback on events. For example, workshops are evaluated through end of session questionnaires but have also included follow up questionnaires mailed out at some interval after the workshop. Some specific areas have data bases that give evaluative information. For example the Dairy Herd Improvement Association provides somatic cell count summary reports of association member dairy herds. From that monthly data can be determine whether there are changes occurring in the industry. Similar cumulative data is available for milk plants.

**2. Data Collection Methods**

- Case Study
- On-Site
- Tests
- Observation
- Sampling
- Mail
- Whole population

**Description**

see above

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Natural Resources Management and Utilization

**2. Brief summary about Planned Program**

Research in natural resources sponsored by MAES is carried out in forest resources, fisheries and wildlife and conservation biology. Other departments addressing natural resources issues include entomology; plant pathology; horticulture; plant biology; soil, water and climate; and applied economics.

Extension programs in Natural Resource and Management Utilization (NRMU) help citizens, landowners and natural resource professionals make well-informed decisions that affect the economic, social and ecological sustainability of their natural resources now and for future generations. NRMU programs address issues on forested, agricultural and urban landscapes. Educational programs are delivered through workshops, demonstration sites, publications, citizen-to-citizen training, and the Internet.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 123 50% Management and Sustainability of Forest Resources
- 124 25% Urban Forestry
- 125 15% Agroforestry
- 133 10% Pollution Prevention and Mitigation

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Minnesota's 17 million forested acres provide timber, wildlife, recreation, wilderness, watershed protection, and biological diversity to the state. Through the forest products and tourism industries, those forests contribute substantially to the state's economy. About one-half of the commercial forest land is privately owned. Policy makers, forest landowners, loggers, natural resource managers, farmers and urban dwellers make decisions every day that directly affect the use, management and protection of Minnesota's trees and forests. Accurate, authoritative, scientific and technical information should be the basis for their decisions. Emerging priorities include: sustainable forest management on family forest lands; expanding agroforestry opportunities; production of biofuels; control of exotic, invasive pests; wildfire damage reduction; tree planting and maintenance on urban lands and farmsteads for energy conservation and environmental benefits; and extending the useful life of wood products in service.

**2. Scope of the Program**

- Multistate Integrated Research and Extension
- Multistate Research
- In-State Research
- Integrated Research and Extension
- In-State Extension
- Multistate Extension

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

Broad adoption of innovative, research-based strategies is necessary to address the priority issues. Engaged citizens can both inform the process and implement strategies that address priority issues. Private lands change ownership frequently, requiring continual education of new landowners.

**2. Ultimate goal(s) of this Program**

Extension goals:

The goals of Natural Resource and Management Utilization programs are that future generations have full access to healthy and abundant natural resources. This will be accomplished by working toward the following Extension goals:

Family forests will be managed sustainably.

Landowners will diversify and increase income from agroforestry crops and biofuels.

The spread rate and ecological impact of exotic, invasive pests will be reduced.

Greater energy conservation and increased environmental benefits will be achieved on urban lands and farmsteads.

Wood products will be chosen and used by consumers and builders to maximize their useful life.

Research goals:

Improve understanding of factors affecting forest composition, diversity and function

Improve understanding of northern Minnesota forest ecosystems and develop improved management techniques

Investigate the biology and control of forest microbes and determine their importance to forest health and sustainable ecosystem functioning

Better understand the decisions that affect the integrity and biological diversity of the ecosystem, and linkages between biosphere, microclimate and global climate

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	7.1	0.0	75.0	0.0
2009	7.1	0.0	75.0	0.0
2010	7.1	0.0	75.0	0.0
2011	7.1	0.0	75.0	0.0
2012	7.1	0.0	75.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

MAEs research, including field and laboratory studies and computer modeling, will be conducted to achieve the research goals described earlier.

New research and education will be delivered to key audiences through face-to-face workshops, master volunteer programs, print and digital publications, multi-media, newsletters, conferences, community events and the Internet. Extension NRMU program business plans will address the issues of forest, agricultural and urban landscapes. NRMU programs cover a wide range of topics including forest ecology, silviculture, invasive species, timber harvesting, timber and nontimber forest products, wildlife management, recreation, urban forestry, windbreak and shelterbelt development.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● One-on-One Intervention</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● Education Class</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 2 (dvds and cd-roms)</li> <li>● Other 1 (publications)</li> </ul>



**V(I). State Defined Outcome**

**1. Outcome Target**

Landowners will implement new forestry, agroforestry and urban forestry management practices. (Target expressed as number of acres on which new land management was improved.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008** :300                      **2009** : 300                      **2010** : 300                      **2011** :300                      **2012** : 300

**3. Associated Knowledge Area(s)**

- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 133 - Pollution Prevention and Mitigation

**1. Outcome Target**

Landowners that implement new management practices will improve management of a significant number of acres. (Target expressed as number of acres on which management was improved.)

**2. Outcome Type :** Change in Action Outcome Measure

**2008** :18000                      **2009** : 18000                      **2010** : 18000                      **2011** :18000                      **2012** : 18000

**3. Associated Knowledge Area(s)**

- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 133 - Pollution Prevention and Mitigation

**1. Outcome Target**

Natural resource-based businesses will become more profitable. (Target expressed as dollars earned or saved by natural resources enterprises.)

**2. Outcome Type :** Change in Condition Outcome Measure

**2008** :30000                      **2009** : 30000                      **2010** : 30000                      **2011** :30000                      **2012** : 30000

**3. Associated Knowledge Area(s)**

- 125 - Agroforestry

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Economy
- Appropriations changes
- Government Regulations
- Natural Disasters (drought,weather extremes,etc.)

**Description**

Changes from natural disasters, economy or government regulations could affect the content of educational programs we offer. Changes in appropriations affect staffing and funding levels necessary to conduct educational programs.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)

### **Description**

We will conduct after-program evaluations, pre-and-post tests, and surveys of program participants several months after certain events. Depending on the program, we will count numbers of program participants that increase their awareness, number of participants who gain knowledge, number of landowners that implemented at least one new land management practice, numbers of acres on which management was improved, and dollars earned or saved in natural resource enterprises.

## **2. Data Collection Methods**

- On-Site
- Unstructured
- Tests
- Observation
- Sampling
- Telephone
- Mail

### **Description**

We will: count direct contacts in programs to measure awareness; use pre-and post-tests or after program evaluations to determine the number of participants that gained knowledge; survey a sample of participants by mail or telephone several months after an event to document management practices implemented, acreage impacted and dollars earned or saved.

**V(A). Planned Program (Summary)****1. Name of the Planned Program**

Nutrition Education Program

**2. Brief summary about Planned Program**

The Extension Nutrition Education Program (NEP) provides nutrition education to audiences of low-income persons and professionals who serve low-income persons. Extension's NEP program includes the Food Stamp NEP (FSNE), the Expanded Food and Nutrition Education Program (EFNEP), and a University funded program. The FSNE and EFNEP programs focus on diet quality, food safety, food resources management and food security. These have been designed to reach specific target populations ranging from children in Head Start to elders. Through the University of Minnesota Extension Service, the FSNE and EFNEP programs directly reach individuals in 85 of Minnesota's 87 counties. Educational programs are designed and delivered to youth, adults and seniors. Programs developed for adults and seniors focus on changing learned behaviors related to food purchase and consumption. Youth programs are based on the premise that learning healthful eating habits during childhood will play a role in the prevention of nutrition-related disease, the program not only works to change individuals' knowledge and/or behaviors, but are designed to support systemic change. The University supports a related program for school food service workers and managers to improve the healthfulness of food service programs in Minnesota public schools. All three aspects of Minnesota's NEP are based on research on the impact of the education provided to children and the impact of the education provided to children and the impact of access to food on the healthful eating of families.

Minnesota Agricultural Experiment Station research focuses on issues of food consumption for optimal health, food chemicals in processing and storage, and product characteristics of foods grown in the midwest. Dietary research focuses on the relationship between cholesterol oxidation and its protection against heart disease, diabetes and cancer, on measuring the physiological effects of dietary fiber, investigating foods that help in the treatment for diabetes, the potential of phyto-estrogens as cancer preventatives, developing new sources of dietary antioxidants and fibers, understanding the link between fat, salt and hypertension, and on a variety of dietary influences of colon cancer.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

- 501 5% New and Improved Food Processing Technologies
- 701 25% Nutrient Composition of Food
- 703 60% Nutrition Education and Behavior
- 704 10% Nutrition and Hunger in the Population

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Nutrition and optimal food intake is a fundamental physical building block and important to the well being of Minnesotans. Research has established the link between adequate nutrition in the early years and adult productivity, between adequate nutrition and risks of disease and disability, and between adequate nutrition education and nutritional intake.

In the U.S., \$92.6 billion annual costs are related directly to obesity-related health concerns. One-half of these costs are covered directly by tax dollars via Medicare and Medicaid. More than half of all Minnesotans are considered to be obese or overweight (61%), putting them at risk for heart disease, stroke, certain cancers and type two diabetes, all of which are among the leading causes of death. For Minnesota, the cost of obesity is \$1.3 billion dollars with \$227 million of this going into Medicaid population care. A comprehensive approach addresses not only individual behavior change, but environmental and systemic change as well. According to the Centers for Disease Control, during the past twenty years, obesity among adults and children has risen significantly, resulting in a host of poor health conditions. In 2004, in excess of 260,000 Minnesotans are certified as eligible for Food Stamps. Assuming 61% have weight problems, over 150,000 Food Stamp participants need nutrition education for this alone.

**2. Scope of the Program**

- Integrated Research and Extension
- Multistate Extension
- Multistate Integrated Research and Extension
- In-State Research
- Multistate Research
- In-State Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Healthful eating habits in childhood play a role in the prevention of chronic under-nutrition and acute nutrition problems throughout their lives. The development of healthful eating habits as a child can serve as a basis for adult dietary behaviors. Consumers will increase their healthful behaviors through adequate information, tools and motivation. Individuals benefit from an environment that reinforces changes to more healthful food selections and more nutritious food choices. In Minnesota, 16 percent of the population is estimated to lack adequate food each day.

**2. Ultimate goal(s) of this Program**

Through a comprehensive approach to change individual level decisions and environmental change, Minnesotans will make decisions that will enhance their health and well-being.

Research goals to support these decisions include:

- Determining optimal food consumption for health of colon, reducing cardiovascular disease, cancer and diabetes,
- Determining the physiological effects of various dietary fibers, and
- Analyzing the loss of food chemicals in processing and storage.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	17.5	0.0	23.4	0.0
2009	17.5	0.0	23.4	0.0
2010	17.5	0.0	23.4	0.0
2011	17.5	0.0	23.4	0.0
2012	17.5	0.0	23.4	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Efforts will include:

Educational programs with individuals in group or one-to-one settings regarding diet quality, food safety, food resource management and food security;

Development and implementation of a series of trainings for school food service personnel throughout Minnesota;

Research on the impact of nutrition education on children and the impact of access of food on families.

In addition, a series of research projects will explore: the impact of nutrition education on children and the impact of access of food on families; impact of healthy beverage consumption, and the food shopping behavior of low-income families. In addition, MAES research will be conducted to develop better understanding of the nutritional content and health benefits of various foods, as well as developing methods to help the food processing industry provide healthy food.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● TV Media Programs</li> <li>● Web sites</li> <li>● Public Service Announcement</li> </ul>

**3. Description of targeted audience**

Children, parents and other adults from low-income families.  
 Professionals who work with low-income families.  
 Consumers lacking adequate information, tools or motivation to make informed health behavioral choices regarding healthy eating and improving physical activity levels.  
 School food service workers and managers seeking assistance in implementing federal regulations and improving healthful food choices of children.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	22330	1428000	29500	68300
2009	22330	1456600	29500	69700
2010	22330	1485691	29500	71100
2011	22330	1515400	29500	72500
2012	22330	1515400	29500	72500

**2. (Standard Research Target) Number of Patents**

**Expected Patents**

2008 :0                      2009 :0                      2010 :0                      2011 :0                      2012 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target
2008	27	3
2009	27	3
2010	27	3
2011	27	3
2012	27	3

**V(H). State Defined Outputs**

**1. Output Target**

- Classes will be provided in individual and group settings that teach about quality, food safety, food resource management and food security. (Target expressed as number of workshops/classes taught.)

2008 :3050                      2009 :3075                      2010 : 3075                      2011 :3075                      2012 :3075

- School Food Service Institutes will be held for school food service workers and managers so that they implement healthy food service programs for Minnesota's public schools. (Target expressed as number of institutes held each year.)

2008 :8                              2009 :12                              2010 : 12                              2011 :12                              2012 : 12

**V(I). State Defined Outcome**

**1. Outcome Target**

An increased number of individuals will use research-based information from Extension to improve their intake of healthful foods. (Target expressed as percentage of participants who self-report change.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :50                              2009 : 50                              2010 : 50                              2011 :50                              2012 : 50

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**1. Outcome Target**

Food service personnel will use research-based information from Extension to improve students' healthy eating. (Target expressed as percentage of workshop participants reporting use of materials.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :60                              2009 : 60                              2010 : 60                              2011 :60                              2012 : 60

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**1. Outcome Target**

Program participants will increase human nutrition knowledge. (Target expressed as percentage of participants who report knowledge change.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :75                              2009 : 75                              2010 : 75                              2011 :75                              2012 : 75

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**1. Outcome Target**

Program participants will increase their skills in selecting and buying food that satisfies nutritional needs, managing food budgets and preparing affordable foods within the food groups. (Target expressed as percentage of participants who reported learning these skills.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :50                              2009 : 50                              2010 : 50                              2011 :50                              2012 : 50

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

## **V(J). Planned Program (External Factors)**

### **1. External Factors which may affect Outcomes**

- Competing Programatic Challenges
- Competing Public priorities
- Government Regulations
- Economy
- Public Policy changes
- Appropriations changes
- Populations changes (immigration,new cultural groupings,etc.)

#### **Description**

Changes in the economic status of families and institutions, such as schools, can positively or negatively affect how much an individual or institution can invest in behavior change. Greater or lesser emphasis on health and nutrition can enhance or decrease the effectiveness of our approach. Changes in population can affect who is targeted by the program and whether cultural adaptations may be needed.

## **V(K). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Before-After (before and after program)
- Retrospective (post program)
- Time series (multiple points before and after program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

#### **Description**

We have invested in a new evaluation specialist to conduct both formative and summative evaluations for the Nutrition Education program. In addition to continuing to assess post workshop knowledge gain and intent to utilize program knowledge and materials, we will be designing and implementing a control group study to explore the impact of the Nutrition Education Program.

### **2. Data Collection Methods**

- Unstructured
- On-Site
- Mail
- Telephone
- Structured
- Sampling

#### **Description**

Multi-method approaches will be used to collect data. The specific methods will depend upon the aspect of the program being studied and the questions to be addressed. Typically, onsite surveys and structured interviews will be utilized to collect the data.

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

Water Resource Management and Policy

**2. Brief summary about Planned Program**

MAES research is designed to develop a systematic, comprehensive and scientific approach for addressing agricultural profitability and non-point source pollution reduction in the Minnesota River basin.

Extension water resource management programs deliver education and consultation with community members, professionals and local institutions so that they are better stewards of Minnesota's water. Water Resource Management programs include three core programs:

The stormwater education program assists local government in protecting and improving water resources by improving urban land use decision-making, improving stormwater practices and educating residents about new clean water practices.

The Shoreland Education program provides information, practical experience and resources for people interested in implementing or promoting shoreland stewardship so that they can improve shoreland water quality; and

The Onsite Sewage Treatment Program actively promotes the use of decentralized sewage treatment methods to provide wastewater treatment for rural areas and small communities.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** Yes

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

- 111 25% Conservation and Efficient Use of Water
- 133 30% Pollution Prevention and Mitigation
- 403 25% Waste Disposal, Recycling, and Reuse
- 605 20% Natural Resource and Environmental Economics

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

Minnesota waters are part of the state's identity, pride, and a focal point of much of its tourism industry. Research and education focuses on the agricultural impacts on our lakes and rivers, and addressing other threats and challenges such as invasive species. The Minnesota River, for example, is considered one of the 20 most endangered waterways in America.

Pollution from controllable human-made sources are an obstacle to keeping Minnesota's waters fishable and swimmable. The pressure on water resources is growing, as the number of homes on Minnesota lakes grew 74% from 1967 to 1982. After assessing 14% of the state's lakes and 8% of the state's rivers, the Minnesota Pollution Control Agency's Impaired Waters Program found 37% of the lakes and 40% of the rivers to be impaired. The State of Minnesota has responded with requirements that, for example, local units of government reduce stormwater pollution and control how sewage treatment is done and maintained. However important this legislation is, it is the decisions that homeowners, landowners and small communities make that will improve the quality of water. Additionally, since 1997 the US EPA has been actively promoting the use of decentralized sewage treatment methods to provide wastewater treatment for rural areas and small communities. Communities and individuals can use research-based education and consultation as they make the decisions that will create safer water in Minnesota.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension
- In-State Research
- Multistate Research
- Multistate Integrated Research and Extension
- Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Pollution prevention requires an educational process in which those who manage land learn new methods and approaches. Property owners care about the quality of the water around them and want to maintain a pollution-free community. Changing the norms, rules and behavior of community members will have an effect on pollution control. Professionals need high-quality education in order to be updated in new research about their work.

**2. Ultimate goal(s) of this Program**

To maintain and improve the quality of Minnesota's waters and the health of Minnesota residents.

Research goals:

Develop a framework for describing and taking inventory of characteristics of the Minnesota River basin that affect non-point source pollution, agricultural management practices and their potential for reducing non-point source pollution.

Develop an inventory for research on the risk associated with adopting crop management practices that can reduce non-point source pollution.

Develop agroforestry practices that mitigate non-point pollution problems.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2008	9.7	0.0	8.9	0.0
2009	9.7	0.0	8.9	0.0
2010	9.7	0.0	8.9	0.0
2011	9.7	0.0	8.9	0.0
2012	9.7	0.0	8.9	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research will be conducted and best practices developed in order to be able to:

Provide land management / water quality education, stormwater management practice assessment, and local government stormwater education and support.

Provide education and consultation for professionals, small communities and homeowners about how to provide and maintain sewage treatment.

Provide education, practical experience and resources about how to protect and improve the shoreland, environment and lake/stream water quality.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Demonstrations</li> <li>● Education Class</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Other 1 (consultations)</li> </ul>	<ul style="list-style-type: none"> <li>● Web sites</li> <li>● Other 1 (Publications)</li> <li>● Other 2 (DVDs)</li> <li>● Newsletters</li> </ul>



expressed as number of events.)

2008 :125                      2009 :125                      2010 : 125                      2011 :125                      2012 :125

- Provide workshops on water quality, stormwater issues and shoreland management, revegetation and use of plants to maintain shoreland structures. (Target expressed as number of events.)

2008 :30                      2009 :30                      2010 : 30                      2011 :30                      2012 :30

- Coordinate shoreline demonstration projects that provide hands-on learning opportunities and add to educational goals.

2008 :8                      2009 :8                      2010 : 8                      2011 :8                      2012 :8

**V(I). State Defined Outcome**

**1. Outcome Target**

Residents will know: 1) Where stormwater goes; 2) Major stormwater pollutants and their impact and 3) Three things they can personally do to prevent pollution. (Measure expressed as percentage of residents in targeted communities.)

**2. Outcome Type :** Change in Knowledge Outcome Measure

2008 :80                      2009 : 80                      2010 : 80                      2011 :80                      2012 : 80

**3. Associated Knowledge Area(s)**

- 111 - Conservation and Efficient Use of Water
- 133 - Pollution Prevention and Mitigation

**1. Outcome Target**

Workshop participants will use information from shoreland education programming to provide education to 25 additional people, creating a multiplier effect. (Target expressed as a percentage of workshop participants.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :50                      2009 : 50                      2010 : 50                      2011 :50                      2012 : 50

**3. Associated Knowledge Area(s)**

- 111 - Conservation and Efficient Use of Water
- 133 - Pollution Prevention and Mitigation

**1. Outcome Target**

Shoreland education workshop participants will practice one or more of five lake/river friendly landscaping behaviors. (Target expressed as a percentage of workshop participants.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :50                      2009 : 50                      2010 : 50                      2011 :50                      2012 : 50

**3. Associated Knowledge Area(s)**

- 111 - Conservation and Efficient Use of Water
- 133 - Pollution Prevention and Mitigation

**1. Outcome Target**

Homeowners will modify or change their habits regarding home water and product use to better protect their onsite septic systems. (Measure expressed as a percentage of those evaluated.)

**2. Outcome Type :** Change in Action Outcome Measure

2008 :60                      2009 : 60                      2010 : 60                      2011 :60                      2012 : 60

**3. Associated Knowledge Area(s)**

- 403 - Waste Disposal, Recycling, and Reuse
- 605 - Natural Resource and Environmental Economics

### 1. Outcome Target

Small communities will develop a viable plan for onsite sewage treatment--plans that are affordable and address onsite sewage treatment. (Target expressed as number of communities per year.)

### 2. Outcome Type : Change in Action Outcome Measure

2008 :3

2009 : 3

2010 : 3

2011 :3

2012 : 3

### 3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse
- 605 - Natural Resource and Environmental Economics

## V(J). Planned Program (External Factors)

### 1. External Factors which may affect Outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Public priorities
- Government Regulations

#### Description

If the regulations that mandate planning and education for stormwater runoff and onsite treatment change, communities will no longer have an incentive to engage in this programming. As population changes happen in communities, the types of education delivered requires cultural and language relevance. Weather extremes may change the program priorities when they influence lakes and streams.

## V(K). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- After Only (post program)
- Case Study
- Retrospective (post program)

#### Description

Evaluation will be at two levels: awareness surveys made of residents to see if program goals were met, and direct interviews with local government staff to see if the water resource programs provided are useful and effective.

### 2. Data Collection Methods

- Telephone
- Sampling
- Mail
- Unstructured

#### Description

Shoreland education evaluation will use self-assessment on surveys six - nine months after workshop delivery. The On-site Sewage Treatment Program will conduct follow-up evaluations 3 - 6 months after a program to assess changes made by participants, retention of learning and community progress.