

2009 University of Massachusetts Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

Our Mission

The mission of UMass Extension is to improve the health, well-being and security of youth, families and communities; conserve and enhance natural resources; and strengthen agriculture and food systems. We fulfill our mission by utilizing the research and teaching capacity of the University of Massachusetts Amherst to generate and communicate knowledge while creating approaches, methods, and tools for solving problems. UMass Extension links the Massachusetts land grant university with a larger community of people in collaborative partnerships to address issues of fundamental importance to the people of Massachusetts, New England, and the nation.

UMass Extension Critical Issues

Programs offered by UMass Extension are organized according to seven critical issues. These issues serve as a framework to measure the impact of what we do and communicate the value of our work in ways that are meaningful to a wide variety of internal and external clients and partners. The critical issues for our five year plan were determined by an extensive process that was designed to assess the priorities and perspectives of a broad range of citizens and public stakeholders in ways that are relevant to both USDA Emphasis Areas and the teaching and research capacity of the University of Massachusetts Amherst. It should also be noted that our seven critical issues overlap considerably, and that many of our specific projects and initiative will address multiple issues. Additional details and information on this process are provided in the stakeholder engagement section of this plan.

- Ecosystem Management, Protection And Restoration
- Food Production
- Land Use Management
- Natural Resource-Based Economic Development
- Nutrition and Health
- Water Resource Protection
- Youth Development and Engagement

Program Goals

Staff teams with expertise in our seven Critical Issue areas developed the planned programs that are included in this five year plan of work. Within these planned programs each team identified a set of outcomes for the audiences that our programs will target. These proximal outcomes are related to a set of 4 broad long-term goals that have been specified at the organizational level.

Stronger Agriculture and Food Systems - Develop and expand systems for environmentally sound and economically viable food production, distribution, access and utilization.

Improved Human Health and Well-Being - Diverse youth, families, and communities will achieve greater physical and social well-being.

Enhanced Health and Productivity of Natural Resources and Ecosystems - The quality of land, water, plant, animal, and biodiversity resources will be protected and enhanced, and healthy self-sustaining ecosystems maintained.

Stronger Local Economies - Natural and human resources will be managed or cultivated in ways that support strong local economies

Our Unique Role Utilizing the resources of UMass Amherst and the United States Department of Agriculture's national network of Extension programs, UMass Extension advances its organizational goals by: Extension employs these methods to achieve specific impacts that have been defined within our planned programs for specific target audiences. Most Extension programs however are also designed to expand the public knowledge base and general awareness of our issues and elevate the level of public discourse. Extension programs educate a wide variety of citizens, including individuals who make (or have the power to influence) decisions with public consequences. Extension programs seek to promote an understanding of the consequences of various alternatives and to encourage well-informed policy decisions that better serve the public interest.

UMass Extension has the unique capability of bringing the University of Massachusetts Amherst's depth and breadth of knowledge and its academic resources to bear in identifying and solving problems. Our research and teaching programs link different departments and facilitate mutually beneficial collaborations between the University and external organizations, individuals, and businesses. In so doing, UMass Extension makes a vital contribution to the public and to the educational experiences and research opportunities of the university.

Engaging university faculty and outside partners in the identification of critical issues and priorities for research and education;

Conducting integrated research and education programs as sustained efforts to address critical issues, resulting in tangible outcomes;

Facilitating interdepartmental and interdisciplinary research and education programs that address critical issues;

Contributing to the undergraduate and graduate student experience by providing opportunities for community service learning and applied research;

Serving as a clearinghouse for the dissemination of research-based knowledge, ideas, information and techniques;

Pioneering innovative educational approaches and technologies;

Strengthening the ability of university departments and units to meet their outreach goals by forging partnerships and providing support.

Scope of Program and FTE's

FTE's reported in this plan of work include faculty and professional staff supported by Smith Lever 3-d funds and the Family Nutrition Program (FNS Food Stamp Nutrition Education Program), as well as contracts, fees and gifts. Specifically, FTE's devoted to EFNEP and FNP represent, in FY07, approximately 36% of total FTE in this plan, working primarily in the Nutrition and Health planned program area.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	111.0	0.0	0.0	0.0
Actual	103.0	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External Non-University Panel

2. Brief Explanation

Internal University Panel

UMass Extension collaborates with department heads from the College of Natural Resources and the Environment and the School of Public Health and Health Sciences on the development of our Plan of Work. The Director of the Agricultural Experiment Station and Vice Provost for University Outreach also participate in this annual review.

External Non-University Panel:

The Massachusetts legislature established a Board of Public Overseers to provide advice and oversight to UMass Extension. This 15 member board, comprised of representatives of constituent organizations, meets quarterly to review and advise UMass Extension and the Chancellor the UMass Amherst. Review of the Plan of Work and Annual Report is a major function of this board. Our annual project plans and reports are posted on line to facilitate review by the Board of Public Overseers and other constituents and stakeholders.

External University Panel

Massachusetts entered into a formal partnership with Cooperative Extension in Maine, New Hampshire, and Vermont in 2004 to develop and implement a web-based planning and reporting system. As a result of this very successful (and unique) partnership we share a planning and reporting system that allows each of use to view plans and reports of the other states. We have also agreed to provide Merit Review for each other on a rotating basis so that each state in the partnership gets a thorough, expert-review of their state plan of work every four years. In addition to providing feedback to one another, this rotation asks staff to volunteer to be reviewers to look carefully at plans from other states with similar goals and outcomes to their own. For example, 4-H youth development staff in ME, VT, and MA volunteered to review the 4-H youth development plans for NH in 2007 and Agriculture staff reviewed Agriculture plans. This system not only provided New Hampshire with valuable expert-review, but also increased the level of awareness of potential shared programs in neighboring states and helped the reviewers to reflect more critically on their own plans. New Hampshire was the first state to undergo review in 2007; Vermont was reviewed this year. The review for Maine was planned, but did not occur in 2009. It appears that the scheduled review for the Massachusetts plan by the other three New England states could be delayed until 2011.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder individuals
- Survey of the general public

Brief explanation.

For our 2007-2011 Plan of Work, UMass Extension initiated an ambitious process to obtain input from a variety of stakeholders and citizens who are interested in and value the work that Extension does. Our Stakeholder Engagement process has helped us to plan and implement programs that are responsive to state and local needs. Stakeholder Engagement involved a variety of activities that are still reflected in our current Plan of Work. These include:

- Web-based stakeholder survey
- Public Forums
- Assessment of UMass Faculty Interests
- Focus Group with State Advisory Board

2(A). A brief statement of the process that was 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 Advisory Committees
- Use Internal Focus Groups
- Open Listening Sessions
- Use Surveys
- Other (Hired Independent Consultants)

Brief explanation.

Internal professional staff members and our advisory boards identified a list of 768 stakeholders who received surveys and were invited to public forum. A team of consultants identified existing and potential faculty partners.

2(B). A brief statement of the process that was 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

- Survey of traditional Stakeholder individuals
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public

Brief explanation.

Web-based Stakeholder Survey

In March 2006, UMass Extension administered a web-based survey to a broad range of citizens and stakeholders in preparation for the development of a 5-year Plan of Work. The goal of the survey was to obtain information to help Extension plan and implement programs that are responsive to state and local needs. Extension administrators and program leaders identified 8 primary topic areas for the stakeholder survey that were based upon our USDA mission, research and teaching interests of UMass faculty and Extension staff capacity. Extension professional staff, state and federal agency representatives, and members of our state advisory board were asked to provide email contact information for individuals they work with or know of, who possess comprehensive knowledge and a broad perspective in these eight areas. Seven hundred sixty-eight (768) individuals were contacted via email. A total of 378 surveys were returned, yielding a (conservative estimated) response rate of 41.2%. These individuals were subsequently sent email messages that directed them to a page on our website where the results from the survey were posted.

Public Forums

UMass Extension sponsored two Public Forums in April 2006 to obtain input for our 5-year Plan of Work. At each forum we solicited comments from citizens we work with, or who are interested in and value our work, to help us plan and implement programs that are responsive to state and local needs. At each event we briefly reviewed our Plan of Work development process and presented results from our online stakeholder survey. Individuals were given up to 5 minutes to deliver comments and also asked to submit copies of their comments in writing. Only six individuals attended these forums and submitted comments, which were directed to our planning teams.

Assessment of UMass Faculty Interests

A consulting team was hired by UMass Extension to conduct the initial part of this assessment. The consultants first reviewed 11 Emphasis Areas specified by the US Department of Agriculture and then conducted a web-scan of university departments and faculty websites. Consultants identified a list of faculty whose interests fit within the USDA areas. Twenty-six interviews were conducted to understand the applied research interests of each faculty member. Faculty who we were not able to interview were sent, via email, a request to complete a brief survey which asked them about their work that engages individuals, communities and groups outside the university. Sixty-seven faculty were contacted and responses were received from twenty-five. A report was issued to summarize information obtained through interviews and surveys of faculty interests. This document has served primarily as an internal resource to UMass Extension planning teams as they developed broad 5-year plans that address critical issues in Massachusetts.

Focus Group

In March 2007, UMass Extension conducted a professionally facilitated focus group with our governor-appointed state advisory board (Board of Public Overseers) to deepen our understanding of our stakeholder priorities and the appropriate roles and methods for UMass Extension.

3. A statement of how the input will be considered

- To Identify Emerging Issues
- In the Action Plans
- To Set Priorities

Brief explanation.

Extension Planning Teams were established with knowledge and expertise in our seven (7) Critical Issue areas. Team consisted primarily of professional program staff, with some participation by extension administrators and academic faculty. Each team considered the information obtained through the various elements of the Extension Stakeholder Engagement Process as they developed a broad organizational plan (Issue Plan). These

Issue Plans were used as the basis for our planned programs in this report. As such, they identify priorities or key focus areas within each issue. Once priorities were established, teams identified outcomes related to these priorities. Outcomes are the changes in behavior or knowledge that should occur if the projects that address this issue are to be effective.

Brief Explanation of what you learned from your Stakeholders

In addition to providing a framework and background for identification of our seven critical issues, stakeholder feedback helped us to identify changing statewide trends in Food production and the emergence of Massachusetts as a potential national leader in this area.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2565713	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	2323722	0	0	0
Actual Matching	2420758	0	0	0
Actual All Other	9502555	0	0	0
Total Actual Expended	14247035	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from				
Carryover				
	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Ecosystem Management, Protection And Restoration
2	Nutrition and Health
3	Land Use Management
4	Natural Resource-Based Economic Development
5	Water Resource Protection
6	Youth Development and Engagement
7	Food Production
8	Administration and Organizational Development (Administrative Plan)

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Ecosystem Management, Protection And Restoration

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	20%			
131	Alternative Uses of Land	20%			
133	Pollution Prevention and Mitigation	20%			
135	Aquatic and Terrestrial Wildlife	20%			
136	Conservation of Biological Diversity	20%			
Total		100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	4.5	0.0	0.0	0.0
Actual	10.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
99272	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
465970	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
972476	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Diagnostic Services

Website

Workshop Series or Educational Course

Facilitated Group Meetings and Conferences

Single Day Workshop, Class or Event

2. Brief description of the target audience

Natural Resource Agencies Regional Planning Authorities Development and Planning Agencies Municipalities
 Conservation Organizations Landowners and Land Managers Business/Industry (Natural resource based businesses, development industry, environmental consultants)

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	6950	17503	0	1500
Actual	6009	76644	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	3	0	
Actual	2	0	0

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Diagnostic Services

Year	Target	Actual
2009	3400	17700

Output #2**Output Measure**

- Facilitated Group Meetings and Conferences

Year	Target	Actual
2009	5	14

Output #3**Output Measure**

- Single day workshops, classes or events

Year	Target	Actual
2009	5	52

Output #4**Output Measure**

- Websites
Not reporting on this Output for this Annual Report

Output #5**Output Measure**

- Workshop Series or educational course

Year	Target	Actual
2009	1	6

Output #6**Output Measure**

- Analytic tools and techniques

Year	Target	Actual
2009	{No Data Entered}	4

Output #7**Output Measure**

- Printed Materials

Year	Target	Actual
2009	{No Data Entered}	11

Output #8

Output Measure

- Survey or needs assessment

Year	Target	Actual
2009	{No Data Entered}	1

Output #9

Output Measure

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	34

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participants adopt land management practices that protect and enhance water, other natural resources and ecosystems
2	Participants develop the knowledge and skills to adopt land management practices that protect and enhance water, other natural resources and ecosystems
3	Participants adopt practices that minimize the impact of development projects on ecosystems, water and other natural resources
4	Participants develop the knowledge and skills to minimize the impact of development projects on ecosystems, water and other natural resources
5	Participants adopt practices that reduce risk of exotic pests, diseases and invasive species
6	Participants acquire the knowledge, skills and motivation to adopt practices that reduce risk of exotic pests, diseases and invasive species.
7	Participants effectively address water and other natural resource issues during project review and permitting.
8	Participants have the knowledge and skills to effectively address water and other natural resource issues during project review and permitting.
9	Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
10	Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
11	Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources
12	Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

Outcome #1

1. Outcome Measures

Participants adopt land management practices that protect and enhance water, other natural resources and ecosystems

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Participants develop the knowledge and skills to adopt land management practices that protect and enhance water, other natural resources and ecosystems

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Participants adopt practices that minimize the impact of development projects on ecosystems, water and other natural resources

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	40

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Massachusetts citizens, government and municipal officials, land and business owners have a shared interest in preserving natural resources and ecosystems

What has been done

Information and tools for preserving ecosystems, water and other natural resources were provided to citizens, business owners, and government regulators.

Results

Massachusetts agencies (Department of Conservation and Recreation and the Department of Transportation) use these tools to assess ecosystem continuity and integrity, regulate development projects and set priorities for environmental restoration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #4

1. Outcome Measures

Participants develop the knowledge and skills to minimize the impact of development projects on ecosystems, water and other natural resources

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	274

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Massachusetts citizens, government and municipal officials, land and business owners have a shared interest in preserving natural resources and ecosystems

What has been done

Information and tools for preserving ecosystems, water and other natural resources were provided to citizens, business owners, and government regulators.

Results

Massachusetts agencies (Department of Conservation and Recreation and the Department of Transportation) use these tools to assess ecosystem continuity and integrity, regulate development projects and set priorities for environmental restoration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #5

1. Outcome Measures

Participants adopt practices that reduce risk of exotic pests, diseases and invasive species

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Participants acquire the knowledge, skills and motivation to adopt practices that reduce risk of exotic pests, diseases and invasive species.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Participants effectively address water and other natural resource issues during project review and permitting.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Participants have the knowledge and skills to effectively address water and other natural resource issues during project review and permitting.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	384

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Developers, regulators and citizens share a concern to understand and anticipate the potential immediate and long-term impacts of development projects prior to their initiation.

What has been done

Resources and education for evaluating the environmental impacts of development projects were provided to regulators, municipal officials and private citizens.

Results

Addressing environmental issues during the review and permitting phase saves time and resources. Anticipating and avoiding problems can spare ecosystems from potentially devastating effects and can help developers and communities to avoid costly remediation measures.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #9

1. Outcome Measures

Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	1000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Citizens and business owners share an interest in the development and implementation of sustainable and environmentally sound practices for operating natural resource-based businesses.

What has been done

Education and resources that promote environmentally sustainable management practices have been provided to farmers, turf and greenhouse managers, and nursery and landscape professionals.

Results

Farmers, turf and greenhouse managers, and nursery and landscape professionals have learned about and implemented practices for operating their businesses in ways that protect resources and the environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife

Outcome #10

1. Outcome Measures

Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	1910

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Citizens and business owners share an interest in the development and implementation of sustainable and environmentally sound practices for operating natural resource-based businesses.

What has been done

Education and resources that promote environmentally sustainable management practices have been provided to farmers, turf and greenhouse managers, and nursery and landscape professionals.

Results

Farmers, turf and greenhouse managers, and nursery and landscape professionals have learned about and implemented practices for operating their businesses in ways that protect resources and the environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #11

1. Outcome Measures

Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	276

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

All Massachusetts residents share an interest in strategic land conservation that preserves renewable resources, maintains the viability and ecological integrity of ecosystems and ensures the aesthetic quality and character of the Massachusetts landscape for subsequent generations.

What has been done

Identified and educated forest owners and community leaders who have a significant impact on their communities. Created peer learning programs where landowners can ask questions and get answers from other landowners with knowledge and experience as well as from resource professionals. Developed a network of citizens able to inform the decisions of their friends and neighbors and maintained a website to inform two of the most common and critical landowner decisions that arise.

Results

Established peer networks that delivered locally relevant information to support informed decision making by Massachusetts forest landowners. Volunteers devoted tens of thousands of hours this year to educate citizens in their communities and they made thousand of referrals to professional foresters, land trusts, and other informational sources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Nutrition and Health

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	35%			
704	Nutrition and Hunger in the Population	5%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	20%			
723	Hazards to Human Health and Safety	5%			
724	Healthy Lifestyle	35%			
Total		100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	36.5	0.0	0.0	0.0
Actual	45.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
49157	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
5658525	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Facilitated Group Meeting and Conferences

Demonstrations

Workshop Series or Educational Course

Displays

Printed Materials

Single Day Workshop, Class or Event

Scholarly Printed Materials

Curricula

Other Computer or Web-based Delivery

2. Brief description of the target audience

Adults Youth Women Minority and underserved populations Health educators and providers Teachers UMass faculty, students and administration State and local agencies State legislators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	8967	42487	59002	27780
Actual	16828	80042	72181	1500

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	1	0	
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Demonstrations

Year	Target	Actual
2009	21	50

Output #2

Output Measure

- Display/Exhibits

Year	Target	Actual
2009	367	1911

Output #3

Output Measure

- Single day workshops, classes or events

Year	Target	Actual
2009	472	911

Output #4

Output Measure

- Workshop series or educational courses

Year	Target	Actual
2009	2257	2529

Output #5

Output Measure

- Facilitated Group Meetings and Conferences
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Printed Materials

Year	Target	Actual
2009	23	4

Output #7

Output Measure

- Scholarly Printed Materials

Year	Target	Actual
2009	1	3

Output #8

Output Measure

- Curricula
Not reporting on this Output for this Annual Report

Output #9

Output Measure

- Other Computer or Web-based Delivery
Not reporting on this Output for this Annual Report

Output #10

Output Measure

- Published Articles (News, Professional and Trade)

Year	Target	Actual
2009	{No Data Entered}	25

Output #11

Output Measure

- Survey or needs assessment

Year	Target	Actual
2009	{No Data Entered}	3

Output #12

Output Measure

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Consumers, especially those at an increased risk for foodborne illness and the caregivers of this subpopulation will handle foods more safely.
2	Consumers and caregivers of at-risk consumers will increase their knowledge about safe food handling practices. Caregivers will become better informed that the persons they care for have extra risks with respect to foodborne illness.
3	Food producers will practice Good Agricultural Practices (GAPs) and adopt safe food handling behaviors.
4	Food producers will increase knowledge of food safety issues and Good Agricultural Practices (GAPs).
5	Participants will develop, implement, and follow HACCP plans and adopt Good Manufacturing Practices (GMPs).
6	Participants will increase knowledge of HACCP planning and Good Manufacturing Practices (GMPs).
7	Participants will improve food handling behaviors to control food safety risks and hazards in all steps from food purchasing to food consumption.
8	Participants will increase their knowledge and skills to effectively control food safety risks and hazards in all steps from food purchasing to food consumption.
9	Target audiences will avoid foods that cause them to have allergic reactions.
10	Target audiences will increase their knowledge about food allergies and common food allergens.
11	Target audiences will improve behaviors to prevent diet-and physical activity-related diseases such as heart disease, stroke, hypertension, diabetes, and diet-related cancers.
12	Target audiences will increase knowledge to prevent diet- and physical activity-related diseases, such as heart disease, stroke, hypertension, diabetes, and diet-related cancers.
13	Target audiences will improve behaviors to prevent diseases related to women's health, such as obesity, inadequate physical activity, cardiovascular disease, diabetes, breast cancer, reproductive health and life-cycle changes (pregnancy, menopause)
14	Target audiences will increase knowledge to address women's health issues, such as obesity, inadequate physical activity, cardiovascular disease, diabetes, breast cancer, reproductive health and life-cycle changes (pregnancy, menopause)
15	Target audiences will improve diet and physical activity behaviors, to prevent overweight and obesity.
16	Target audiences will increase knowledge of healthful diets and physical activity, to prevent overweight and obesity.
17	Teachers will teach principles of food safety to their students.
18	Teachers will increase their knowledge, skills and motivation to teach principles of food safety to their students.

19	Participants improve dietary behaviors
20	Participants improve physical activity behaviors
21	Participants gain knowledge and skill to improve food resource management behaviors

Outcome #1

1. Outcome Measures

Consumers, especially those at an increased risk for foodborne illness and the caregivers of this subpopulation will handle foods more safely.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Consumers and caregivers of at-risk consumers will increase their knowledge about safe food handling practices. Caregivers will become better informed that the persons they care for have extra risks with respect to foodborne illness.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Food producers will practice Good Agricultural Practices (GAPs) and adopt safe food handling behaviors.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Food producers will increase knowledge of food safety issues and Good Agricultural Practices (GAPs).

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Participants will develop, implement, and follow HACCP plans and adopt Good Manufacturing Practices (GMPs).

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Participants will increase knowledge of HACCP planning and Good Manufacturing Practices (GMPs).

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Participants will improve food handling behaviors to control food safety risks and hazards in all steps from food purchasing to food consumption.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	354

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food borne illnesses continue to pose significant risks to the health and well-being of Massachusetts residents, especially young children, adults with weakened immune systems, older adults, and pregnant women. Citizens, businesses and residential facilities, (day care center, elder care facilities) benefit from programs that help ensure the safety of food, produced, processed, prepared and consumed in Massachusetts

What has been done

Training was provided to fruit and vegetable growers, foodservice workers from schools, restaurants and residential institutions focused on the prevention of food borne illness; worked with food processors to develop and implement safe food management plans.

Results

Fruit and vegetable growers kept accurate records, limited bare hand contact, tested water regularly, properly washed and sanitized containers and food contact surfaces. Individuals effectively prepared for food safety certification, handled food and equipment more safely and created and implemented safe management systems throughout the flow of food in their establishments.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #8

1. Outcome Measures

Participants will increase their knowledge and skills to effectively control food safety risks and hazards in all steps from food purchasing to food consumption.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	402

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food borne illnesses continue to pose significant risks to the health and well-being of Massachusetts residents, especially young children, adults with weakened immune systems, older adults, and pregnant women. Citizens, businesses and residential facilities, (day care center, elder care facilities) benefit from programs that help ensure the safety of food, produced, processed, prepared and consumed in Massachusetts.

What has been done

Training was provided to fruit and vegetable growers, foodservice workers from schools, restaurants and residential institutions focused on the prevention of food borne illness; worked with food processors to develop and implement safe food management plans.

Results

Participants learned about safe food handling practices and maintaining proper safety standards, while reducing the risk from food borne illnesses.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #9

1. Outcome Measures

Target audiences will avoid foods that cause them to have allergic reactions.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Target audiences will increase their knowledge about food allergies and common food allergens.

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Target audiences will improve behaviors to prevent diet-and physical activity-related diseases such as heart disease, stroke, hypertension, diabetes, and diet-related cancers.

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Target audiences will increase knowledge to prevent diet- and physical activity-related diseases, such as heart disease, stroke, hypertension, diabetes, and diet-related cancers.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Target audiences will improve behaviors to prevent diseases related to women's health, such as obesity, inadequate physical activity, cardiovascular disease, diabetes, breast cancer, reproductive health and life-cycle changes (pregnancy, menopause)

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

Target audiences will increase knowledge to address women's health issues, such as obesity, inadequate physical activity, cardiovascular disease, diabetes, breast cancer, reproductive health and life-cycle changes (pregnancy, menopause)

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

Target audiences will improve diet and physical activity behaviors, to prevent overweight and obesity.

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Target audiences will increase knowledge of healthful diets and physical activity, to prevent overweight and obesity.

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

Teachers will teach principles of food safety to their students.

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

Teachers will increase their knowledge, skills and motivation to teach principles of food safety to their students.

Not Reporting on this Outcome Measure

Outcome #19

1. Outcome Measures

Participants improve dietary behaviors

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	980

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many of the chronic health problems associated with unhealthy lifestyles are largely preventable. Families, especially those with limited resources, need effective strategies to help children be more active and choose healthy foods at home and in school.

What has been done

Nutrition education was delivered to small groups of low-income families with educators recruited from the target communities that are served.

Results

Participants showed improvement in one or more nutrition practices related to planning meals: making healthy food choices, preparing foods without added salt, reading nutrition labels, and having children in the family eat breakfast.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

Outcome #20

1. Outcome Measures

Participants improve physical activity behaviors

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	398

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many of the chronic health problems associated with unhealthy lifestyles are largely preventable. Families, especially those with limited resources, need effective strategies to help children be more active and choose healthy foods at home and in school.

What has been done

Nutrition education was delivered to small groups of low-income families with educators recruited from the target communities that are served.

Results

Participants showed an increase in the level of physical activity as reflected in data obtained from EFNEP Summary Reports.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #21

1. Outcome Measures

Participants gain knowledge and skill to improve food resource management behaviors

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	977

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Low-income populations frequently turn to calorie-dense but low-nutrient foods when their food resources are limited. These tend to be inexpensive but satisfying. Families need guidance to get the most nutrition from their limited resources in order for their children to grow and thrive successfully.

What has been done

Nutrition education was delivered to small groups of low-income families with educators recruited from the target communities that are served.

Results

EFNEP participants will show improvement in one or more food resource management practices related to planning meals: comparing prices, not running out of food, and using a grocery shopping list

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Other (Focus group)

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Land Use Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	30%			
605	Natural Resource and Environmental Economics	20%			
608	Community Resource Planning and Development	30%			
610	Domestic Policy Analysis	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	7.5	0.0	0.0	0.0
Actual	1.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
99495	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
39135	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
75307	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Printed Materials

Workshop Series or Educational Course

Facilitated Group Meetings and Conferences

Websites

Single Day Workshop, Class or Event

Journal Article

Printed Scholarly Materials

2. Brief description of the target audience

- Local government officials
- State and Federal legislators
- State and Federal agencies/commissions
- Working landscape stakeholders
- Development and design communities
- Large landowners
- Non-profit conservation, land use planning and community development organizations and interested professional organizations
- Educators and outreach professionals and trainers
- Consultants and professional practitioners in land use, community planning, natural and cultural resource preservation, community development
- Regional organizations
- Other stakeholders, private citizens, students, schools

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	2275	18325	0	0
Actual	1451	3950	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	1	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Facilitated Group Meetings and Conferences

Year	Target	Actual
2009	4	19

Output #2

Output Measure

- Single day workshops, classes or events

Year	Target	Actual
2009	46	33

Output #3

Output Measure

- Workshop series or educational courses

Year	Target	Actual
2009	13	18

Output #4

Output Measure

- Websites
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Printed Scholarly Materials
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Printed Materials

Year	Target	Actual
2009	14	1

Output #7

Output Measure

- Published Articles (News, Professional and Trade)

Year	Target	Actual
2009	{No Data Entered}	2

Output #8

Output Measure

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	2

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participant decisions and practices adhere to principles of sustainability and smart growth.
2	Participants develop the knowledge and skills to adhere to principles of sustainability and smart growth
3	Participants effectively address water and other natural resource issues during project review and permitting.
4	Participants have the knowledge, skills to effectively address water and other natural resource issues during project review and permitting.
5	Participants produce legally sound land use decisions
6	Participants develop the knowledge and skills to produce legally sound land use decisions
7	Participants promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources
8	Participants acquire the knowledge and skills to promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources
9	Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources
10	Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

Outcome #1

1. Outcome Measures

Participant decisions and practices adhere to principles of sustainability and smart growth.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Participants develop the knowledge and skills to adhere to principles of sustainability and smart growth

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	300	240

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The principles of sustainability and smart growth, when used to guide local and regional planning decisions has long term benefits for communities, ecosystems and citizens.

What has been done

A variety of educational resources are provided for municipal officials who serve on town or regional planner boards and conservation commissions.

Results

Officials planning to update zoning laws and subdivision regulations incorporated a greater focus on smart growth and sustainability. Practitioners pursued new or expanded state and local programs and aid that promoted alternative, low impact and small scale economic development, as well as resource-based business and local entrepreneurship.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
610	Domestic Policy Analysis

Outcome #3

1. Outcome Measures

Participants effectively address water and other natural resource issues during project review and permitting.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Participants have the knowledge, skills to effectively address water and other natural resource issues during project review and permitting.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	300	240

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Municipal officials and citizens share a concern to understand and anticipate the potential immediate and long-term impacts of development projects prior to their initiation.

What has been done

A variety of educational resources are provided for municipal officials who serve on town or regional planner boards and conservation commissions.

Results

Planning board members and other municipal officials increased knowledge and skill in reviewing development plans, environmental assessments and permit applications.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
610	Domestic Policy Analysis

Outcome #5

1. Outcome Measures

Participants produce legally sound land use decisions

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Participants develop the knowledge and skills to produce legally sound land use decisions

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	125	341

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Town governance is slowed and public revenues and resources are wasted when land use decisions are subject to protracted legal challenges.

What has been done

A variety of educational resources are provided for municipal officials who serve on town or regional planner boards and conservation commissions.

Results

Municipal board members increased their knowledge of land use regulations and proper and supportable legal and procedural standards in their permitting processes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
610	Domestic Policy Analysis

Outcome #7

1. Outcome Measures

Participants promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Participants acquire the knowledge and skills to promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	250	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics

Outcome #9

1. Outcome Measures

Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	250	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 4****1. Name of the Planned Program**

Natural Resource-Based Economic Development

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
604	Marketing and Distribution Practices	40%			
605	Natural Resource and Environmental Economics	40%			
608	Community Resource Planning and Development	20%			
	Total	100%			

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	13.1	0.0	0.0	0.0
Actual	10.9	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
251210	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
683612	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
748375	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Workshop Series or Educational Course

Facilitated Group Meetings and Conferences

Displays

Printed Materials

Consultations and Site Visits

Websites

Single Day Workshop, Class or Event

Printed Scholarly Materials

Teaching - Lectures

Demonstrations

Other Computer or Web-based Delivery

2. Brief description of the target audience

Farmers Landowners Resource Managers Horticultural Green Industry businesses and personnel Professional Organizations and Industry Groups Natural Resource Agencies Municipalities Land Trusts and Conservation Groups

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	62505	1146100	0	0
Actual	33259	150398	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	3	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Demonstrations

Year	Target	Actual
2009	3	7

Output #2**Output Measure**

- Displays/Exhibits

Year	Target	Actual
2009	1	2

Output #3**Output Measure**

- Facilitated Group Meetings and Conferences

Year	Target	Actual
2009	29	70

Output #4**Output Measure**

- Consultations and Site Visits

Year	Target	Actual
2009	405	3146

Output #5**Output Measure**

- Single day workshops, classes or events

Year	Target	Actual
2009	3	35

Output #6**Output Measure**

- Workshop series or educational courses

Year	Target	Actual
2009	52	51

Output #7**Output Measure**

- Websites
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Teaching - Lectures
Not reporting on this Output for this Annual Report

Output #9

Output Measure

- Printed Materials

Year	Target	Actual
2009	24	43

Output #10

Output Measure

- Printed Scholarly Materials
Not reporting on this Output for this Annual Report

Output #11

Output Measure

- Other Computer or Web-based Delivery
Not reporting on this Output for this Annual Report

Output #12

Output Measure

- Published Articles (News, Professional and Trade)

Year	Target	Actual
2009	{No Data Entered}	3

Output #13

Output Measure

- Survey or needs assessment

Year	Target	Actual
2009	{No Data Entered}	2

Output #14

Output Measure

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	100

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participants adopt practices that ensure the economic viability of natural resource-based businesses.
2	Participants increase their knowledge and skill for practices that increase the economic viability of natural resource-based businesses
3	Participants develop and market locally generated products and services more effectively.
4	Participants increase their knowledge and skills to develop and market locally generated products and services more effectively
5	Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
6	Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
7	Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources
8	Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

Outcome #1

1. Outcome Measures

Participants adopt practices that ensure the economic viability of natural resource-based businesses.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Participants increase their knowledge and skill for practices that increase the economic viability of natural resource-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	800	1108

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Natural resource-based businesses contribute to the to economic vitality of towns and regions across the state. The long term viability of these businesses creates shared benefits for both citizens and business owners, especially when they are managed in sustainable ways that conserve resources and protect the environment.

What has been done

Applied research and public education provided to agricultural businesses, turf and greenhouse managers, and nursery and landscape professionals.

Results

Turf and greenhouse managers, nursery and landscape professionals learned techniques for managing their businesses in ways that increased short term profits and enhanced their long-term economic viability.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Participants develop and market locally generated products and services more effectively.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Participants increase their knowledge and skills to develop and market locally generated products and services more effectively

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	328

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Natural resource-based businesses contribute to the economic vitality of towns and regions across the state. The long term viability of these businesses creates shared benefits for both citizens and business owners, especially when they are managed in sustainable ways that conserve resources and protect the environment.

What has been done

Applied research and public education provided to agricultural businesses, turf and greenhouse managers, and nursery and landscape professionals.

Results

Turf and greenhouse managers, nursery and landscape professionals adopted techniques that conserve resources, and protect people and the environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development

Outcome #6

1. Outcome Measures

Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	800	1370

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Natural resource-based businesses contribute to the economic vitality of towns and regions across the state. The long term viability of these businesses creates shared benefits for both citizens and business owners, especially when they are managed in sustainable ways that conserve resources and protect the environment.

What has been done

Applied research and public education provided to agricultural businesses, turf and greenhouse managers, and nursery and landscape professionals.

Results

Turf and greenhouse managers, nursery and landscape professionals learned techniques for managing their businesses in ways that conserve resources, and protect people and the environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development

Outcome #7

1. Outcome Measures

Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Water Resource Protection

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	15%			
112	Watershed Protection and Management	40%			
133	Pollution Prevention and Mitigation	25%			
135	Aquatic and Terrestrial Wildlife	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	4.8	0.0	0.0	0.0
Actual	1.5	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
46431	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
81012	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
29971	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Facilitated Group Meetings and Conferences

Website

Demonstrations

Consultations and Site Visits

Single Day Workshop, Class or Event

Printed Materials

Printed Scholarly Materials

2. Brief description of the target audience

Farmers Horticultural Green Industry businesses and personnel (landscape, lawn care, golf, athletic field, public and private school and facilities, municipalities and other publicly owned properties) Land owners and Land Managers Natural Resource Farmers Natural Resource Agencies Municipalities Environmental Protection Groups and Organizations Professional Organizations and Industry Groups Business/Industry

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	591	4200	0	200
Actual	1551	4517	258	90

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	6	0	
Actual	2	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Demonstrations

Year	Target	Actual
2009	80	100

Output #2**Output Measure**

- Facilitated Group Meetings and Conferences

Year	Target	Actual
2009	3	29

Output #3**Output Measure**

- Single day workshops, classes or events

Year	Target	Actual
2009	5	13

Output #4**Output Measure**

- Websites

Not reporting on this Output for this Annual Report

Output #5**Output Measure**

- Consultations and Site Visits

Year	Target	Actual
2009	60	40

Output #6**Output Measure**

- Printed Materials

Year	Target	Actual
2009	3	53

Output #7**Output Measure**

- Printed Scholarly Materials

Year	Target	Actual
2009	6	2

Output #8**Output Measure**

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	2

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participants adopt land management practices that protect and enhance water, other natural resources and ecosystems
2	Participants develop the knowledge and skills to adopt land management practices that protect and enhance water, other natural resources and ecosystems
3	Participants adopt practices that minimize the impact of development projects on ecosystems, water and other natural resources
4	Participants develop the knowledge and skills to minimize the impact of development projects on ecosystems, water and other natural resources
5	Participants adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
6	Participants develop the knowledge and skills to adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
7	Participants effectively address water and other natural resource issues during project review and permitting.
8	Participants have the knowledge and skills to effectively address water and other natural resource issues during project review and permitting.
9	Participants promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources
10	Participants acquire the knowledge and skills to promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources
11	Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources
12	Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.
13	Participants will adopt practices to ensure adequate supplies of high quality drinking water
14	Participants acquire the knowledge and skills to ensure adequate supplies of high quality drinking water

Outcome #1

1. Outcome Measures

Participants adopt land management practices that protect and enhance water, other natural resources and ecosystems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	23

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Land management professionals, municipal officials, regulators, farmers and citizens share an interest in the dissemination of practices that protect and enhance water resources.

What has been done

Research, assessment tools and educational resources to monitor, preserve and protect water resources are provided to regulators, volunteer citizen groups, livestock and vegetable farmers.

Results

Dairy and livestock producers implemented intensive pasture management to reduce feed and fertilizer purchases and adopt practices to minimize non-point source pollution. Farmers planted cover crops to effectively reduce nitrogen leaching from manured soils.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife

Outcome #2

1. Outcome Measures

Participants develop the knowledge and skills to adopt land management practices that protect and enhance water, other natural resources and ecosystems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	535

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Land management professionals, municipal officials, regulators, farmers and citizens share an interest in the dissemination of practices that protect and enhance water resources.

What has been done

Research, assessment tools and educational resources to monitor, preserve and protect water resources are provided to regulators, volunteer citizen groups, livestock and vegetable farmers.

Results

Municipal officials, regulators and land use professionals learned to effectively address water resource issues during project review and permitting and minimize the impact of development projects water resources. Farmers and livestock producers learned to better manage nutrient systems.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife

Outcome #3

1. Outcome Measures

Participants adopt practices that minimize the impact of development projects on ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Participants develop the knowledge and skills to minimize the impact of development projects on ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Participants adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Participants develop the knowledge and skills to adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Participants effectively address water and other natural resource issues during project review and permitting.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Participants have the knowledge and skills to effectively address water and other natural resource issues during project review and permitting.

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Participants promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Participants acquire the knowledge and skills to promote, implement or adopt Land Use plans and programs that accommodate development in a manner that protects ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Participants promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Participants develop the knowledge and skills to promote, implement or participate in strategic land conservation programs that protect ecosystems, water and other natural resources.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Participants will adopt practices to ensure adequate supplies of high quality drinking water

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

Participants acquire the knowledge and skills to ensure adequate supplies of high quality drinking water

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	500	180

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Adequate supplies of high quality drinking water are essential for the health and welfare of all people and natural systems.

What has been done

Research, assessment tools and educational resources to monitor, preserve and protect water resources are provided to regulators, volunteer citizen groups, livestock and vegetable farmers.

Results

Diverse stakeholders identified data sets and data gaps, developed recommendations for water monitoring and modeling needs in New England, and created plans to respond to climate change impacts on water resources

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Youth Development and Engagement

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
724	Healthy Lifestyle	10%			
805	Community Institutions, Health, and Social Services	10%			
806	Youth Development	80%			
Total		100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	12.2	0.0	0.0	0.0
Actual	11.2	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
737056	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
180451	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
925863	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Single Day Workshop, Class or Event

Facilitated Group Meetings and Conferences

Curriculum Development

Workshop Series or Educational Courses

4H Clubs & Other 4H Events

Consultations and Site Visits

Website

4H Records

Printed Materials

Displays

2. Brief description of the target audience

Youth from all backgrounds Adults from all backgrounds (volunteers, parents, collaborating organization staff) Youth Serving Organizations and Programs from diverse communities (including K-12, Home Schooled youth, and Camps) Community Coalitions UMass Amherst Faculty Faculty from other colleges and universities

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	3236	95	1821	33850
Actual	2181	30004	21003	33954

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	1	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- 4H Clubs & Other 4H Events
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Displays/Exhibits
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Facilitated Group Meetings and Conferences

Year	Target	Actual
2009	136	10

Output #4

Output Measure

- Single day workshops, classes or events

Year	Target	Actual
2009	116	99

Output #5

Output Measure

- Workshop series or educational courses

Year	Target	Actual
2009	52	570

Output #6

Output Measure

- Websites

Year	Target	Actual
2009	24	1

Output #7

Output Measure

- Consultations and Site Visits
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Curricula

Year	Target	Actual
2009	2	3

Output #9

Output Measure

- 4H Records

Not reporting on this Output for this Annual Report

Output #10

Output Measure

- Printed Materials

Year	Target	Actual
2009	205	28

Output #11

Output Measure

- 4-H Clubs

Year	Target	Actual
2009	{No Data Entered}	350

Output #12

Output Measure

- Community Service Projects

Year	Target	Actual
2009	{No Data Entered}	11

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Program staff from youth-serving organizations make effective use of youth development best practices
2	Youth serving organizations and program staff increase their knowledge of the components that contribute to a successful youth development program.
3	Youth adopt behaviors that will help them succeed academically and in the workplace
4	Youth develop knowledge and skills that will help them succeed academically
5	Youth increase skills for acquiring and maintaining employment
6	Youth are effective in planning, organizing, resource management and record keeping
7	Youth develop the knowledge and skills to become better planners
8	Youth develop the knowledge and skills to keep records
9	Youth develop the knowledge and skills to manage their resources
10	Youth increase their organizational skills.
11	Youth are effective team members, communicators, and leaders
12	Youth increase their communication skills.
13	Youth increase their knowledge of the components of effective leadership
14	Youth increase their team membership skills.
15	Youth build successful partnerships with adults
16	Youth increase their ability to relate to and partner with adults
17	Youth engage in community service learning
18	Youth develop the knowledge and skill necessary to engage in community service learning

19	Youth practice competent, applied science
20	Youth develop the knowledge and skills needed to practice competent, applied science
21	Youth will work with, learn from and value others from diverse backgrounds
22	Youth increase their knowledge and ability to interact with others from diverse backgrounds.
23	Target audiences will improve diet and physical activity behaviors, to prevent overweight and obesity.
24	Target audiences will increase knowledge of healthful diets and physical activity, to prevent overweight and obesity.

Outcome #1

1. Outcome Measures

Program staff from youth-serving organizations make effective use of youth development best practices

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Youth serving organizations and program staff increase their knowledge of the components that contribute to a successful youth development program.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Youth adopt behaviors that will help them succeed academically and in the workplace

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Youth develop knowledge and skills that will help them succeed academically

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Youth increase skills for acquiring and maintaining employment

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Youth are effective in planning, organizing, resource management and record keeping

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Youth develop the knowledge and skills to become better planners

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Youth develop the knowledge and skills to keep records

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Youth develop the knowledge and skills to manage their resources

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Youth increase their organizational skills.

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Youth are effective team members, communicators, and leaders

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	886

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

For our society to remain strong we must prepare the next generation with the knowledge and skills necessary to become healthy contributing adults. Caring adults must help youth to cultivate critical skills in leadership, teamwork and communication.

What has been done

Youth competed in the statewide visual presentation program. Youth created public service announcements, posters and presentations in support of military families with deployed parents.

Results

Youth increased their organizational skills, their ability to function as effective team members and gained valuable experience in public speaking and presenting.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #12

1. Outcome Measures

Youth increase their communication skills.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Youth increase their knowledge of the components of effective leadership

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

Youth increase their team membership skills.

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

Youth build successful partnerships with adults

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Youth increase their ability to relate to and partner with adults

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

Youth engage in community service learning

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	2151

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Community service helps children , families and communities to obtain valuable support and services. Youth who participate in community service develop a sense of civic responsibility and enhance their intellectual and moral development.

What has been done

Youth participated in volunteer community service activities.

Results

17,000 pounds of food was collected and distributed to 100 pantries and shelters across the Commonwealth. "Hero Packs" were assembled a distributed to over 300 children. Children of military families felt increased well-being as a result of support from community members.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #18

1. Outcome Measures

Youth develop the knowledge and skill necessary to engage in community service learning

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	150	173

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

High school age young people need to develop the science literacy, citizen skills, and knowledge of routes to further education and careers that will allow them to participate responsibly and effectively in natural resource conservation and land use decisions in Massachusetts communities.

What has been done

A statewide environmental education program was delivered to high school age young people and their advisors. Activities focused primarily on providing curriculum and resources to the teachers who work with youth.

Results

Youth gained hands-on knowledge and experience of Massachusetts ecosystems; developed skills for investigating local environmental issues and participating in community decisions and action; test their

environmental knowledge and skills in a challenging competition; increased their commitment to stewardship of the environment and natural resources; and increased their awareness of career opportunities in the environmental field.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #19

1. Outcome Measures

Youth practice competent, applied science

Not Reporting on this Outcome Measure

Outcome #20

1. Outcome Measures

Youth develop the knowledge and skills needed to practice competent, applied science

Not Reporting on this Outcome Measure

Outcome #21

1. Outcome Measures

Youth will work with, learn from and value others from diverse backgrounds

Not Reporting on this Outcome Measure

Outcome #22

1. Outcome Measures

Youth increase their knowledge and ability to interact with others from diverse backgrounds.

Not Reporting on this Outcome Measure

Outcome #23

1. Outcome Measures

Target audiences will improve diet and physical activity behaviors, to prevent overweight and obesity.

Not Reporting on this Outcome Measure

Outcome #24

1. Outcome Measures

Target audiences will increase knowledge of healthful diets and physical activity, to prevent overweight and obesity.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Food Production

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	15%			
204	Plant Product Quality and Utility (Preharvest)	15%			
216	Integrated Pest Management Systems	20%			
601	Economics of Agricultural Production and Farm Management	20%			
604	Marketing and Distribution Practices	15%			
723	Hazards to Human Health and Safety	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	7.5	0.0	0.0	0.0
Actual	13.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
341930	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
650739	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
606722	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Printed Materials

Websites

Single Day Workshop, Class or Event

Consultations and Site Visits

Printed Scholarly Materials

Diagnostic Service

Workshop Series or Educational Course

Facilitated Group Meetings and Conferences

Demonstrations

2. Brief description of the target audience

The primary audience for this plan is food producers and food production organizations. This not only includes those that are well-established, but also those that are new, immigrant, and part-time. Both conventional and organic farmers are included. Others audiences include government agencies (including schools and institutions), non-profits, community based organizations such as food pantries and food banks that provide food to low-income families, and the public (including low income and urban).

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	4879	36110	0	0
Actual	3279	168536	30	50

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	4	0	
Actual	8	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Demonstrations

Year	Target	Actual
2009	26	32

Output #2

Output Measure

- Diagnostic Services

Year	Target	Actual
2009	3400	165

Output #3

Output Measure

- Single day workshops, classes or events

Year	Target	Actual
2009	19	50

Output #4

Output Measure

- Workshop series or educational courses

Year	Target	Actual
2009	10	5

Output #5

Output Measure

- Websites
- Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Printed Materials

Year	Target	Actual
2009	61	80

Output #7

Output Measure

- Consultations and Site Visits

Year	Target	Actual
2009	50	405

Output #8

Output Measure

- Printed Scholarly Materials

Year	Target	Actual
2009	4	8

Output #9

Output Measure

- Facilitated Group Meetings and Conferences
Not reporting on this Output for this Annual Report

Output #10

Output Measure

- Published articles (News, Professional and Trade)

Year	Target	Actual
2009	{No Data Entered}	1

Output #11

Output Measure

- Websites or other computer-based delivery

Year	Target	Actual
2009	{No Data Entered}	10

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participants adopt practices that ensure the economic viability of natural resource-based businesses.
2	Participants increase their knowledge and skill for practices that increase the economic viability of natural resource-based businesses
3	Participants develop and market locally generated products and services more effectively
4	Participants increase their knowledge and skills to develop and market locally generated products and services more effectively
5	Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
6	Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses
7	Participants will adopt practices that lower the risk from and exposure to pesticides and fertilizers
8	Participants will acquire the knowledge and skills to lower their risk from and exposure to pesticides and fertilizers
9	Participants will promote expanded access to and reliance on local foods by individuals, families and institutions.
10	Participants increase the knowledge and skills and motivation to expand access to and reliance on local foods by individuals, families and institutions
11	Participants adopt practices that ensure the economic viability of food production
12	Participants acquire knowledge and skill to adopt environmentally sustainable food production practices
13	Participants adopt environmentally sustainable food production practices

Outcome #1

1. Outcome Measures

Participants adopt practices that ensure the economic viability of natural resource-based businesses.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Participants increase their knowledge and skill for practices that increase the economic viability of natural resource-based businesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

Participants develop and market locally generated products and services more effectively

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Participants increase their knowledge and skills to develop and market locally generated products and services more effectively

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Participants promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Participants have the knowledge and skills to promote, implement or adopt sustainable resource management and environmental best management practices for operating Natural Resources-based businesses

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Participants will adopt practices that lower the risk from and exposure to pesticides and fertilizers

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Participants will acquire the knowledge and skills to lower their risk from and exposure to pesticides and fertilizers

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Participants will promote expanded access to and reliance on local foods by individuals, families and institutions.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Participants increase the knowledge and skills and motivation to expand access to and reliance on local foods by individuals, families and institutions

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Participants adopt practices that ensure the economic viability of food production

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	408

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers are primarily concerned with the economic viability of food production. The economic success of food production operations helps to ensure a sustainable supply of fresh, local food, preserves open space and maintains land for agricultural purposes, which extends benefits to all citizens.

What has been done

Applied research and public education provided to vegetable and livestock farmers, tree fruit and berry growers.

Results

Growers diversified their operations by adding new crops and value-added products, adopting new technology to improve production efficiencies and implementing innovative marketing strategies, to directly reach more consumers with locally produced food.

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #12

1. Outcome Measures

Participants acquire knowledge and skill to adopt environmentally sustainable food production practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	1255

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Citizens benefits when local farmers practice responsible environmental stewardship and produce food in way that conserve resources and protect people and the environment.

What has been done

Applied research and public education provided to vegetable and livestock farmers, tree fruit and berry growers.

Results

Growers acquired knowledge about environmental best management practices (as outlined in the New England Small Fruit Pest Management Guide, New England Small Fruit BMP manual, New England Crop Profiles and USDA Pest Management Strategic Plans.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
216	Integrated Pest Management Systems
723	Hazards to Human Health and Safety

Outcome #13

1. Outcome Measures

Participants adopt environmentally sustainable food production practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	983

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Citizens benefits when local farmers practice responsible environmental stewardship and produce food in way that conserve resources and protect people and the environment.

What has been done

Applied research and public education provided to vegetable and livestock farmers, tree fruit and berry growers.

Results

Growers incorporated the use of reduced-risk pesticides and used the lowest effective doses for pest management. Growers adopted new technology and minimized environmental impact by implementing environmental best management practices (as outlined in the New England Small Fruit Pest Management Guide, New England Small Fruit BMP manual, New England Crop Profiles and USDA Pest Management Strategic Plans.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
216	Integrated Pest Management Systems
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 8****1. Name of the Planned Program**

Administration and Organizational Development (Administrative Plan)

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
901	Program and Project Design, and Statistics	20%			
902	Administration of Projects and Programs	50%			
903	Communication, Education, and Information Delivery	30%			
	Total	100%			

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	11.0	0.0	0.0	0.0
Actual	8.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
699171	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
319839	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
485316	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Administrative systems and procedures include:

Financial Management: includes federal and state grants, gifts, accounts, program budgets, revenue generation/fees, trust accounts, salary administration, etc. in conjunction with the Outreach Business Services Center and the UMass Treasure's Office.

Human Resource Management: includes the hiring, supervision and evaluation of professional and clerical staff and faculty, administration and communication of University HR employment policies and procedures, including performance management, civil rights, grievance and salary administration.

Legal, Risk and Volunteer Management: includes legal, liability, and volunteer policy development and research; consultation with University attorneys, risk officers and state officials; communication and enforcement of University directives and policies; creation of binding agreements (MOA's), negotiations and mediations with collaborating non-profits and governmental agencies; emergency and incident reporting; Criminal History Systems Information (CORI) screening, authorization, and investigations for all Extension youth programs; ES-237 reporting; Volunteer advisory fiscal reporting, administrative systems design and delivery.

Internal and External Relations: includes conduct of public relations with University, state, federal officials, the legislature, the Board of Public Overseers, other state Extension programs within CSREES, stakeholders and collaborating organizations, internal and external audiences in the areas of advocating for strategic initiatives and program delivery.

Program Assessment and Evaluation: includes the design of program assessment instruments, surveys, impact analysis, studies, statistical reports pertaining to Extension programs' delivery, impacts and stakeholder issues.

Marketing and Communications: in conjunction with Outreach Marketing and Communications, includes the development of brochures, newsletters, media, publications, Book Store, web communications, and information systems and data management.

Fundraising and Grant Program Development: includes oversight and coordination of grants, internal and external partnerships and special fundraising programs, relations with Extension related program foundations, working where appropriate in conjunction with Outreach Development, Advancement, federal and state agencies and the appropriate University offices.

Planning, Evaluation and Reporting: includes general design and support for program planning, evaluation and reporting as well as comprehensive evaluation services for projects with substantial evaluation requirements from external sponsors and general advice and capacity building

Organizational Development systems and processes include:

Extension-wide Staff Development Plan: to identify the staffing levels, expectations, skill sets, conferences, on going courses of study, group training and development initiatives need to enhance staff and program unit capacity to meet issue plan goals and emerging needs of UMass Extension internal and external constituencies. This includes analysis of existing and new staff positions, diversity goals attainment in recruitment, hiring, promotion of staff, and regular needs assessment for each program unit. Measures will be established to evaluate the degree of progress toward issue plan impact indicator achievement.

Individual Development Plans: to identify individual work, skill sets and knowledge needs with each staff members job. IDP's help ensure that each program's staff has the necessary training to meet issue plan goals and delivery quality programs, information or research to its constituents. Such plans will integrate with the University's Performance Management goal setting and review system and will tie in with Extension promotion, merit and succession planning. The Individual Plan will reflect the overall strategy of the program area to meet its goals and mission and will include identification of conference opportunities and course work or credentializing opportunities.

Extension Staff Training and Development Series: will make available, through needs assessment and prioritization, a series of offerings available to all Extension staff, such as customized Equal Opportunity and Diversity sessions, technology, or work process re-design training. The series will more formally utilize the University's Workplace Learning and Development offerings,

and will be customized to meet each program's needs in a particular discipline or interest area.

Civil Rights Plan: formation, including administrative goals and action plans for programs, internal reviews, complaint procedures and assignment of EEO staffing responsibilities within Extension as reviewed in an evaluation plan.

Revised Public Notification Plans: including new statements on all program communications, brochures, media releases, printed information, contracts and web publications, updating of mailing lists data collection on minority collaborators, publication of policies in diverse public venues, etc.

Data Collection: by all Extension programs documenting outreach efforts to external constituencies to help ensure access by underserved, diverse communities and individuals in the state. This involves research into appropriate data collection methods (e.g., sampling, county audits;) review of marketing and programming materials, whole population analysis, observations (e.g., agendas, etc.); policy and procedure development on work with collaborators; and creation of a web data collection tool for use by Extension personnel state-wide.

Civil Rights Training Series: for staff, advisories, youth and collaborating organizations. This would include on-line formats such as Civil Rights self-assessment tools.

Access to all Equal Opportunity Policies, Directives and Offices: for staff and all constituencies via web based information sites and printed materials.

Review of Current Program Partnerships: with external groups to ensure EEO compliance, including advisory nominations, compositions, by-laws provisions.

Recruitment, Hiring, and Succession Planning: to ensure EEO considerations are met and integrated with Extension strategic and program issue plans.

Human Resource Policy and Procedures Review: to ensure promotion, separations/retention, recruitment and hiring strategies are aligned with University policies and federal requirements.

Extension-wide Strategic Plan: to align with the Outreach Strategic Plan, federal requirements and the CSREES Plan of Work for 2007-2011. This involves fiscal planning, examination, discussion and decision making on new cross-functional and adaptive program structures for Extension's current four programs. It may require re-definitions of priorities for Extension, new staffing assignments, organizational units and relationships with internal and external partners, faculty and audiences.

Extension Program Strategic Plans: to better define focus areas, revenue generation and resource development strategies, and staffing requirements. These plans will contribute to accountability for and alignment of programs with overall Extension, Outreach and University strategic plans.

Collaborative Outreach Administrative Department Plans: to better clarify the expectations, procedures, deliverables, costs and coordination efforts with Outreach units so that Extension top priorities are met, thus ensuring high quality program delivery to Extension constituencies. The three Outreach units include the Business Services Center, Marketing and Communication (including the Book Store and Information Technology,) and Outreach Development.

2. Brief description of the target audience

University Administrators
 Federal and County Extension Program Administrators (USDA/CSREES)
 UMass Extension Faculty and Staff
 Public Stakeholders

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	0	0	0	0
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009
 Plan: 0
 Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Administrative Systems and Procedures
 Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Massachusetts Extensions programs and staff are sustained and advanced, consistent with organizational expectations and stakeholder needs.

Outcome #1

1. Outcome Measures

Massachusetts Extensions programs and staff are sustained and advanced, consistent with organizational expectations and stakeholder needs.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

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

Evaluation Results

Key Items of Evaluation