

# 2009 University of Vermont Combined Research and Extension Plan of Work

**Status: Accepted**  
**Date Accepted: 05/13/08**

## I. Plan Overview

### 1. Brief Summary about Plan Of Work

Extension Faculty and staff at the University of Vermont Extension and Agricultural Experiment Station (VT-AES) are focused on meeting the needs of the state's citizens. These experienced and innovative professionals continually work to integrate higher education, research and outreach services to protect and enhance a quality of life characterized by a thriving natural environment, a strong sense of community, and a deeply rooted connection to agriculture. Though our research conclusions offer lessons nationwide, even globally, Extension and the VT-AES apply the results closer to home, in our own communities, helping people where they live, cultivating healthy communities.

Today, VT-AES and UVM Extension address issues ranging from farm profitability, water and soil quality, and dairy herd disease resistance and health, to global climate change, renewable energy, youth life skills education, community development and planning, and obesity, nutrition and health. Together we concentrate on relevant research that helps our diverse audience--including farmers, forest and land stewards, children and families, rural community members--improve business profitability, environment, economics, nutrition, food safety, and youth and adult life-skills development.

Our work is guided and evaluated by dedicated citizen advisors with whom we meet regularly to review priorities, spending, and program impact. We seek additional feedback from those attending Extension events, an annual state-wide poll, and we meet with university, local, state and national opinion leaders, and policymakers to review our research and outreach portfolio and direction. Research and outreach efforts are enhanced through active partnerships, and volunteer workers.

The goal of UVM Extension and VT-AES is to put our health, environment, and agricultural research into action resulting in improved agriculture and environmental sustainability, human health, community development and the personal and intellectual development of youth.

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

Year	Extension		Research	
	1862	1890	1862	1890
2009	34.8	0.0	13.8	0.0
2010	34.8	0.0	13.8	0.0
2011	34.8	0.0	13.8	0.0
2012	34.8	0.0	13.8	0.0
2013	34.8	0.0	13.8	0.0

## II. Merit Review Process

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

- External University Panel
- Expert Peer Review

### 2. Brief Explanation

The University of Vermont Extension and AES has entered into a formal agreement with Extension in Maine, New Hampshire,

and Massachusetts to develop and implement a four-state planning and reporting system. Working in collaboration with three other states in developing our system has also resulted in discussions around state and regional programs, opportunities for multistate work, sharing staff resources and a much better understanding of how each of our unique programs are similar and different than others in New England.

As a result, the four states have agreed to provide merit review for each state as part of our formal partnership. The new system provides access to each state plan of work for all four states, allowing for easy sharing of ideas and opportunities for further collaboration. Further, we've agreed to set up a rotating system of more comprehensive merit review by selecting a different state plan each year for in-depth review by Extension staff from the other three states. With this system, we will be sharing plans with one another continuously, and every four years every state's plan will go through a more rigorous review process by the other three states.

### III. Evaluation of Multis & Joint Activities

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

In Vermont, our issues of strategic importance include agricultural profitability and diversity; developing rural economics, niche product development; environmental quality, and a healthy and productive population.

We work to help people understand the range of programs we provide and our connection to the knowledge-base of UVM faculty. It is a priority to focus on addressing selected critical problems in Vermont, so VT-AES research and UVM Extension programs yield the greatest impact.

Citizens serve in advisory capacities to ensure that educational programming is targeted and relevant to areas that are important to Vermonters. Working collaboratively, and with other departments of the University, UVM Extension and AES strive to strengthen efforts to ensure that research results, and educational resources remain accessible and relevant to the state's citizens. Advisors are the organizations continual check-in to aid us in focusing our work on the relevant problems. Further input is garnered from program participants and other stakeholders giving immediate feedback to a projects focus.

Additionally, UVM's Centers of Excellence help to coordinate, conduct and promote much of the research that is supported by AES funds, competitive private and public grants, sponsorships, and donations. These centers also utilize citizen advisory boards to inform and guide a research and outreach agenda that is responsive to local, state, and national needs and priorities. The Centers of Excellence include:

- Center for Sustainable Agriculture—an interdisciplinary approach to integrating university and community expertise to promote sustainable farming systems throughout Vermont and the region.
- Center for Rural Studies—connecting information and technical expertise with communities, businesses and policy makers in researching rural issues and information dissemination.
- Proctor Maple Research Center—applied research in the production of maple sap and syrup.

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

Health: focuses on food security for limited resource children, families and seniors. Examples of programs follow:

- Community Farm Partners: enhance the amount of locally grown produce that is consumed by Vermonters with limited resources and sold by small scale Vermont producers
- EFNEP (Expanded Food and Nutrition Education Program): no longer included in the federal POW due to no funding from 3b&c dollars.
- Growing Connections: a program for at-risk youth that teaches nutrition, food safety, and food security issues through gardening
- Healthy Eating: targeted at increasing the amount of fruits and vegetable offered to toddlers by parents enrolled in WIC (Women, Infants, Children)
- Senior Farm Share Nutrition Programs: nutrition workshop for low-income seniors to increase their consumption of local, fresh produce by enhancing participants skills to prepare fresh fruits and vegetables and gain nutritional knowledge based on

the Dietary Guidelines

Youth & community development: addresses community strengths and challenges, focusing programs to build assets through its citizens who may be of limited resources, a community struggling to thrive, migrant workers and disabled workers wanting to stay in the workforce. Program examples follow:

- Migrant Education Recruitment Program (MEP): ensure that children of migrant farm workers, and qualifying youth under age 22, are aware of the educational support services available to them
- Vermont AgrAbility Project: make recommendations that can be used by farmers with disabilities to maintain employment, through development of accommodations in support of recommendations made
- Rural and Agricultural VocRehab Program: assist individuals with disabilities living in rural areas and those in agricultural professions or self-employment, by providing them with a variety of services tailored to their needs in order to maintain or obtain their selected employment outcome
- 4-H: delivers educational programs to all youth developing life skills, with extra effort in place to target urban cities and activities for the teen audience as well as limited resource families and youth who are at-risk

Agriculture & Environmental Sustainability: Agriculture is a struggling industry, its workers are at risk and entering into the business with needed supports can be a challenge especially for some audiences, especially women. Program examples follow:

- Women's Agricultural Network: provide educational and technical assistance to individuals starting or expanding agricultural businesses; targeted primarily at women
- Migrant Ed, Vermont AgrAbility, and Rural and Agricultural VocRehab: while focusing on building community capacity to meet these underserved populations, migrant workers and disabled farmers, they focus on the agriculture community.

In addition scholarships are available to those wishing to participate in Extension programs, but do not have necessary resources.

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

Planned programs are developed using the Logic Model, defining outcomes and impacts and the associated indicators of change. Outcomes are written to reflect the ultimate results desired, are achievable by the program, and will usually require multiple years to come to fruition. Intermediate indicators will serve as benchmarks of progress over the duration of the program, and will be reported annually.

In the ultimate goals section of One Solution the outcome statements for the Planned program are listed. Each of these has outcome indicators defined and associated within the Vermont on-line reporting system, Albert. These outcome indicators are listed as an Outcome Target in One Solution. In the Albert system each Output (output measure) has outcome indicators associated, tying the activity with the desired results.

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

Beginning with the identification of a situation and the clear articulation of a problem or issue that needs addressing, planned programs set a course of action. Through the use of both process and summative evaluation, the focus shifts from determining activities and inputs, to improving the learning environment and opportunities for our clientele, and measuring actual achievement of impacts. Tracking program costs will provide additional criterion in determining the efficiency of the program, enabling us to further promote programming that works.

Each planned program is built from organizationally defined outcomes and outcome indicators. In the 07-11 submission of the One Solution report, planned programs were completed using group level plans. Group level plans are logic models of the defined problems using the defined outcomes and outcome indicators and draft outlines of individual logic models which address the defined problems or group level plans. In 08-12 submission and subsequent submissions of the One Solution report, planned programs will be completed using individual logic models grouped by the problems defined in the group level plans. This results in programming being focused because it is problem driven and results focused as a result of clearly defined outcomes and measurable indicators which are used by all the individuals as they construct individual logic models. The One Solution report is reflective of the sum of the actual planned effort of individuals in the organization. This evolution of planning will refine the indicators and outputs, resulting in fewer indicators giving more focus to our evaluation efforts. In the 09-13 planning year, professional development activities focused on evaluation and program development. Outcome indicators at the lowest level, in most cases, have been removed as options for individuals to report to, requiring a higher level of effort to measure program results at the action level and to carefully plan the evaluation efforts as part of their programming.

## IV. Stakeholder Input

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

- Use of media to announce public meetings and listening sessions
- Targeted invitation to selected individuals from general public
- Survey of the general public
- Targeted invitation to traditional stakeholder individuals

#### **Brief explanation.**

UVM Extension has a new state advisory board with representatives from across the state. The members of this board were drawn from a cross section of disciplines and program areas in which the organization provides educational opportunities. The members of the board have the responsibility to work with the director to review programs, budget decisions and new initiatives within the organization. The board includes at least one youth member, currently the Vermont Agricultural Ambassador for the State of Vermont that is selected annually. The members represent UVM Extension and not the individual disciplines or program areas from which they were selected for board discussions.

The board members are given weekly updates on the actions of the director and are encouraged to provide feedback to the director on an on-going basis. In addition, the board members are contacted on an as needed basis, collectively or individually to help provide feedback to the director. The board has two regularly scheduled business meetings per year and participates in the annual legislative reception.

In addition to the state advisory board, regional and local focus groups, surveys, discussions with associations, agencies and non-governmental organizations by the director, associate directors, faculty and/or program staff are all used to gather information from clientele regarding programmatic needs.

The Center for Rural Studies conducts an annual Vermonter Poll, an phone survey of 600 Vermonters.

Faculty and staff work with many partners and program participants who offer input on present and future programming to address identified needs.

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

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

- Use Internal Focus Groups
- Use External Focus Groups
- Use Surveys
- Use Advisory Committees

#### **Brief explanation.**

UVM Extension has a state advisory board with representatives from across the state. The members of this board were drawn from a cross section of disciplines and program areas in which the organization provides educational opportunities.

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

#### **1. Methods for collecting Stakeholder Input**

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

**Brief explanation**

{NO DATA ENTERED}

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

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

**Brief explanation.**

{NO DATA ENTERED}

## V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Community Development and the Personal and Intellectual Development of Youth
2	Health
3	Agriculture and Environmental Sustainability

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

### Program #1

#### 1. Name of the Planned Program

Community Development and the Personal and Intellectual Development of Youth

#### 2. Brief summary about Planned Program

Extension and AES address community engagement, economic development, the identification of community assets and challenges to create sustainable and viable communities. Programming focuses on engaging youth in communities through service, building skills of business and community leaders, and building supports to meet the needs of the communities underserved or with at-risk populations. AES's work with rural communications, market development and public land management support Extension's programs with research based information.

The University of Vermont Extension 4-H program has been teaching youth leadership, citizenship and life skills, operating in all fourteen counties in Vermont through a variety of well-tested delivery modes. All programs are based on learning-by-doing approaches--the experiential model--that allow youth to experience mastery in subject matter, a sense of belonging to a group, a sense of generosity to those around them, and a sense of independence, with opportunities to take on leadership and make important decisions.

Projects under this planned program are designed to bring together people with diverse interests to share perceived problems, find common ground, and identify resources and tools for prioritizing and solving those problems through a cooperative, collaborative effort. The 4-H program is project-based curriculum focused on life skills education over 6-8 hours of sequential learning and perhaps years of contact with a trained leader.

Two-thirds of participants live in towns with fewer than 10,000 people, and an additional 12% live on farms, reflecting the rural and small-town audiences primarily served. Over half of all youth served live in racially and ethnically mixed communities. 4-H serves youth in both traditional 4-H subjects and in new and growing area of interests, such as technology as outlined with the S.E.T. initiative, through 4-H clubs, afterschool programs and other innovative venues.

3. Program existence : Mature (More than five years)

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

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

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

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

### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
124	Urban Forestry	4%		4%	
601	Economics of Agricultural Production and Farm Management	0%		1%	
603	Market Economics	0%		1%	
604	Marketing and Distribution Practices	0%		1%	
605	Natural Resource and Environmental Economics	0%		1%	
608	Community Resource Planning and Development	14%		5%	
609	Economic Theory and Methods	0%		1%	
723	Hazards to Human Health and Safety	7%		9%	
724	Healthy Lifestyle	0%		9%	
801	Individual and Family Resource Management	0%		1%	
802	Human Development and Family Well-Being	7%		0%	
805	Community Institutions, Health, and Social Services	13%		15%	
806	Youth Development	55%		50%	
903	Communication, Education, and Information Delivery	0%		2%	
	<b>Total</b>	100%		100%	

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

### 1. Situation and priorities

Vermont is largely comprised of small rural communities where infrastructure is limited and a relatively low level of technology is available. Process and manufacturing businesses are limited and leaving the state. Transportation is an issue, and costs of living and doing business are rising. There is a growing divide between economic classes. Each community, however defined, has a unique set of challenges to address, from participation in local and state governance, to land use to support for new populations, and engagement of our youth.

Vermont youth lack opportunities to gain mastery of life skills. 4-H programs bring the experiential learning model and project-based education—key strategies identified in *Critical Hours* (Miller)—to communities, offering traditional and non-traditional programming to reach as many youth as possible. In addition to the 4-H club program, special interest clubs and events, afterschool programs are growing in popularity and make a positive difference for youth participants. Effects of the youth programming are stronger "for those individuals who need the help most and have the fewest options (Miller, 2003 p.59)." The greatest benefit is for those who attend the most hours over the most years. Addressing Identified barriers to youth participation in such is essential to meeting the goal of this program area.

Studies indicate a number of problems ranging from declining levels of voter participation and public apathy toward elections to decreasing interest in volunteer activities and community groups. They also document the younger generation's apparent disinterest in public affairs and lack of knowledge about our political system. There is a decline in civic engagement. Paul Woodruff, in *First Democracy: The challenge of an ancient idea* (2005), presents significant challenges for our current educational system, which focuses on preparing our young people for jobs, but fails in teaching good citizenship. And there continues to be a need to serve children and youth who move with family member(s) or guardian(s) in search of temporary or seasonal work in agriculture or logging. A positive relationship between parents and school is essential to the success of their children's academic life.

Issues around land use are abundant, including our urban and community forests. These assets provide ecological services that benefit the environmental, economic and social conditions of Vermont communities. This resource, which includes trees in our backyards, along our streets, in parks and town greens and in municipal forests can directly enhance the atmosphere and transform the surrounding environment through atmospheric carbon dioxide (CO<sub>2</sub>) reduction and energy conservation, airborne pollutant absorption and interception, and microclimate modifications. They protect and enhance water quality and supply by filtering out pollutants, controlling storm water runoff, enabling water infiltration and reducing erosion. They can help offset the high costs of fossil fuel consumption by reducing dependence on summer air conditioning and winter heating. They improve the economic development through increases in property values, rental occupancy rates, consumer patronage and expenditure, and job market. When urban and community forests are well planned and managed, communities can begin to reap the many benefits they provide. While Vermont is approximately 78% forested, 38% of Vermont's residents live in urban areas and with the increasing urbanization of Vermont, up 22% from 1990, the canopy cover over Vermont communities is decreasing and in many cases the resource is in poor health. As the state continues to develop and we strive to keep our downtowns vibrant our urban and community forests become more important.

As we view our agricultural foundation and the people who live and work in Vermont, we find farm and rural residents with disabilities face challenges maintaining and securing employment. Agriculture, related industries, and rural residents of Vermont have a high rate of injuries and other disabling conditions. Individuals with disabilities experience a high rate of unemployment; however, individuals with disabilities can and want to work.

Problems being addressed:

- \* Lack of Community Engagement by Adults and Youth
- \* Farm and rural residents with disabilities face challenges
- \* Life Skills for Youth

**2. Scope of the Program**

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

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

**1. Assumptions made for the Program**

•Youth want to engage with community organizations and agencies to address issues of the youth population. It is believed that participants will gain leadership skills and develop successful projects that will enable them to move their communities forward •Individuals living in rural areas have difficulty accessing services •An aging population combined with an increase in youth leaving the state for jobs leaves community human assets strained •Home grown entrepreneurship and recruiting will attract businesses to the state •Vermont products seen as valued added, as are the communities in which they are produced •Community planning leads to a more desirable living environment •Vermont prides itself on a tradition of local control and relies heavily on volunteers to staff the hundreds of local boards, commissions, and committees that keep local municipalities running •Materials included in the 4-H National Curriculum address Life Skills education •More hours of programming with a caring adult carries a greater benefit •Youth in limited resources families have fewer options for opportunities to gain mastery of life skills •Much of the success will depend upon partnering and pooling resources with businesses and colleagues in SET related organizations.

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

A Larger and more diverse pool of youth are pursuing SET careers through post secondary education and improved SET literacy in the general population.

Improve personal and intellectual development of Vermont youth

•Youth gain mastery of life skills •Individuals and families have greater financial security •Increased literacy and interest (awareness, attitudes, understanding and aspirations) in science, engineering and technology (SET) among youth and improved related knowledge, skills, and abilities for use in their lives and future •Youth apply SET learning in their lives and demonstrate interests and aspirations toward SET careers

Improve community collaboration to address issues and build community assets

•Citizens of target communities actively participate in local government and/or community groups where policy decisions are made. •Community members will mobilize more effectively to better understand and solve community problems •Farm and rural residents with disabilities secure and maintain gainful employment •Youth are involved in communities as active, productive citizens •Economic development and maintenance of the state is improved •Local production and consumption are linked •Vermont communities are seen as desirable places to live and work

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

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

Year	Extension		Research	
	1862	1890	1862	1890
2009	10.3	0.0	1.6	0.0
2010	10.3	0.0	1.6	0.0
2011	10.3	0.0	1.6	0.0
2012	10.3	0.0	1.6	0.0
2013	10.3	0.0	1.6	0.0

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

### 1. Activity for the Program

•4-H Lifeskills Development Program: Help youth acquire Life Skills in the following areas: Decision Making; Critical Thinking; Problem-Solving; Communication; Goal-Setting; and Skills for Everyday Living to succeed as adults. Delivery Methods: 6-8 sequential learning hours using experiential learning techniques for in- school, afterschool, or out-of-school settings. •S.E.T. Activities: 4-H SET will begin to show how science and engineering issues affect youths' lives and prepare a future generation of scientists and engineers. The 4-H SET program will present 4-H with a new opportunity to connect to the LGU's SET research community and integrate with current youth workforce development initiatives. •Downtown Business District Analysis: This program provides the community with analytical techniques that can be put to work immediately in economic revitalization efforts. The process requires input from local residents so that recommendations reflect both market conditions as well as the preferences of the community.

Delivery Methods: Group meetings and discussion groups in community. •Community Leadership: Assessing, addressing and expanding community capacity through leadership and public policy education efforts including building--and education members and clientele of--coalitions and collaboratives. •EnviroQuest: Help youth acquire Life Skills in the following areas: Decision Making; Critical Thinking; Problem-Solving; Communication; Goal-Setting; and Skills for Everyday Living to succeed as adults.

Delivery Methods: 6-8 sequential learning hours using experiential learning techniques for in-school, afterschool, or out-of-school settings. •Extension Leadership Institute: The UVM Extension Leadership Institute was developed to address the need to empower individuals through development of knowledge and skills for engaging with communities and organizations. Studies indicate a number of problems ranging from declining levels of voter participation and public apathy toward elections to decreasing interest in volunteer activities and community groups. They also document the younger generation's apparent disinterest in public affairs and lack of knowledge about our political system. Robert Putnam has quantified this civic disengagement, documenting a 25-30 year decline in membership in civic-oriented organizations. •

Financial Literacy: 1) Project Name: Personal Financial Literacy

Purpose: Promote, teach and support personal financial literacy education for youth

Delivery Methods: Exhibit at professional development meetings and public events to promote and teach the use of the free curriculum and support materials from the

National Endowment for Financial Education (NEFE), Service and

teaching in partnership with the VT affiliate of the national Jumpstart Coalition, Personal finance information distributed through radio, electronic newsletters, team building and creation of unbiased information resource through eXtension Financial Security for AllCommunity of Practice (CoP)

Presentations and exhibits at national conferences.

Audience: Teachers, Extension and other organizations program staff, community

volunteers working with youth, and community leaders affecting educational policies. Youth in 4H and UVM Continuing Education Summer programs.

Duration: Long 3+ years (NEFE offers free curriculum materials and monetary support for expenses. eXtension CoP for Youth Financial Literacy contributes @ \$3,000.

2) Project Name: Youth Educator Support

Purpose: Collaboration with 4H Youth Development State Director and Regional YouthEducators and volunteer leaders in creating opportunities for youth to develop life skills suchas: decision making, critical thinking, solving problems, goal setting, communication, leadership and financial literacy.

Delivery Methods: Participation and presentations at Vermont Extension Youth Development training events, 4-H Youth Central Region events, VT State 4H Day, VT Teen Congress, etc. Exhibits at professional development meetings and public events in VT and at national Conferences. Electronic curriculum development and review. Audience: 4-H Youth Development Educators, volunteers and youth. Other organizations program staff, community volunteers and leaders affecting educational policies in Vermont and other states. Duration: medium 1-3 years

Growing Connections: supported by base and EFNEP funds, this youth focused program teaches that nutrition, food safety, and food security issues through gardening.

- Migrant Education Recruitment Program (MEP): To ensure that children of migrant farm workers, and qualifying youth under age 22, are aware of the educational support services available to them.

Delivery Methods: Outreach to schools, agricultural employers, and social service agencies throughout the state.

- Vermont AgrAbility Project: To make recommendations that can be used by farmers with disabilities to maintain employment, through development of accommodations.

Delivery Methods: Process involves recruitment of eligible individuals through referrals. Intake information is recorded on forms provided by the National AgrAbility Project. Site visits are the primary means of contact.

- Rural and Agricultural VocRehab Program: To assist individuals with disabilities living in rural areas and those in agricultural professions or self-employed by providing them with a variety of services tailored to their needs in order to maintain or obtain their selected employment outcome.

Delivery Methods: Process involves recruitment of eligible individuals through referrals, assessment, writing up a plan of action, and providing services for eligible individuals. Printed materials and individual technical assistance are offered to strengthen the capacity of individuals to maintain or to prepare for meaningful work.

- Take Charge(TC/RC): Helping community adult members to gain the skills necessary to be confident enough to take part in town government by ultimately competing for town government leadership positions.

Delivery Methods: Meetings, discussion groups.

- Town Officers Education Conference & Municipal Officers Management (TOEC/MOMS): Local town officers, decisionmakers and officials receive education and tools to improve job performance and management, addressing topics from new legislation to handling difficult customers.

Delivery methods: Each one-day conference is held annually, at multiple sites.

- Vermont Urban and Community Forestry program :A joint initiative between the University of Vermont Extension and the Department of Forests, Parks and Recreation. The mission of the program is to promote the stewardship of the urban and rural landscapes to enhance the quality of life in Vermont communities. The program provides educational, technical and financial assistance in the management of trees and forests, in and around the built landscape.

Delivery Methods: Classes, meetings, various media, community volunteer projects.

AES efforts:

- Community Development and planning
- On farm/community energy generation and secondary revenue generation
- Community and technology for rural community development
- Community market development and local foods distribution
- Communication methods and research studies for non-profit and profit organizations

- Agritourism
- Public land management
- Development of environmentally safe, non food product development (adhesives, plastics and road deicer) from whey
- Development of Artisan cheese markets
- Distinctiveness/marketing of regional foods
- Food by-product development
- Transportation initiatives

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● One-on-One Intervention</li> <li>● Other 1 (Train the Trainer)</li> <li>● Other 2 (4-H Afterschool, club)</li> <li>● Workshop</li> <li>● Group Discussion</li> </ul>	<ul style="list-style-type: none"> <li>● TV Media Programs</li> <li>● Other 1 (school enrichment)</li> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 2 (radio ed. spots)</li> </ul>

**3. Description of targeted audience**

•4-H: Adult Volunteers •4-H: Youth Volunteers •Adults •Age 19 - 24 Young Adult •Age 25 - 60 Adult •Agriculture: Farmers •Communities: Educators •Communities: Local Officials/Leaders •Communities: Non-Governmental Organizations •Community leaders and citizens •Extension: Faculty/Staff •Public: Families •Public: General •Public: Nonprofit Organizations •4-H: Youth •Age 13 - 18 Youth •Age 8 - 18 Youth •Youth

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

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2009	7000	0	2500	0
2010	7000	0	2500	0
2011	7000	0	2500	0
2012	7000	0	2500	0
2013	7000	0	2500	0

**2. (Standard Research Target) Number of Patent Applications Submitted**

**Expected Patent Applications**

2009 :3                      2010 :3                      2011 :3                      2012 :3                      2013 :3

## 3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2009	5	1	6
2010	5	1	6
2011	5	1	6
2012	5	1	6
2013	5	1	6

## V(H). State Defined Outputs

## 1. Output Target

## ● 4-H Afterschool

2009 :11                      2010 :11                      2011 :11                      2012 :11                      2013 :11

## ● 4-H Club

2009 :880                      2010 :880                      2011 :880                      2012 :880                      2013 :880

## ● 4-H Day Camp

2009 :2                      2010 :2                      2011 :2                      2012 :2                      2013 :2

## ● 4-H Overnight camp

2009 :1                      2010 :1                      2011 :1                      2012 :1                      2013 :1

## ● 4-H School enrichment

2009 :15                      2010 :15                      2011 :15                      2012 :15                      2013 :15

## ● 4-H Short-term/special interest

2009 :23                      2010 :23                      2011 :23                      2012 :23                      2013 :23

## ● Class/course

2009 :5                      2010 :5                      2011 :5                      2012 :5                      2013 :5

## ● Conference

2009 :6                      2010 :7                      2011 :6                      2012 :7                      2013 :6

## ● Consultations

2009 :240                      2010 :240                      2011 :240                      2012 :240                      2013 :240

## ● Discussion group

2009 :40                      2010 :40                      2011 :40                      2012 :40                      2013 :40

## ● Field site visit

	2009	2010	2011	2012	2013
	140	140	140	140	140
● Funding request					
	1	1	1	1	1
● Presentations					
	20	20	20	20	20
● Publication - fact sheet					
	3	3	3	3	3
● Publication - newsletter					
	5	5	5	5	5
● Publication - newsprint article					
	20	20	20	20	20
● Radio Spots/program (educational					
	6	6	6	6	6
● TV segment/ATF					
	3	3	3	3	3
● Train the Trainer sessions					
	60	60	60	60	60
● Web Page					
	1	1	1	1	1
● Workshop - series					
	1	1	1	1	1
● Workshop - single session					
	9	11	11	14	14

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

O. No	Outcome Name
1	85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students
2	Increase number of programs led or supported by trained volunteer Site Staff
3	Increase number of youth serving as Foundation trustees who indicate a positive experience
4	increase number of Take Charge/ReCharge participants are satisfied with the process used as a means meeting community planning needs
5	Increase number of communities establishing or expanding community tree program
6	increase in number of farm and rural residents with disabilities successfully served (ie case is closed) which is defined as having increased satisfaction with actual or potential employment and maintained or increased income
7	Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.
8	Increase in number of TOEC participants who report increased skills in leadership and decision making.
9	Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities
10	Increase student enrollment in the Vermont Migrant Education Program
11	Increase the number of committee members implementing or enhancing broad-based decision-making skills
12	Increase the number of program participants serving as leaders on Committees
13	Increase the number of schools that offer financial literacy education
14	Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development for youth
15	Increase the number of youth who set and reach goals identified at the beginning of the 4-H year
16	Increase the number of clubs doing at least 6 hours of community service
17	Youth have greater opportunities to access and learn financial planning skills
18	increase in number of youth reached with lifeskills development programming self-report an increase in mastery for targeted life skill area: Decision making: critical thinking; problem solving; communication; goal setting or skills for everyday living.
19	Increase in number of youths involved in Urban Community Forestry
20	Increase number of clubs with SET related projects
21	Number of individuals (youth and volunteers) increasing knowledge and/or skills in content and careers (across subject areas ranging from animal science to environmental science to technology)
22	Increase the number of apprentices who achieve preset professional development goals within 3 years
23	Increase the number of apprentices who plan and implement a program evaluation.
24	Increase the number of apprentices who report the results of their program evaluation.
25	Number of individuals applying science process skills, including incorporation of science learning in community service, enrollment in SET-related post-secondary education, and/or entrepreneurship/career success
26	Number of individuals demonstrating improved behavior in science learning, such as effective participation in school classes, independent study, career exploration, or volunteer experiences
27	increase the number of participants who self report increase of skills in leadership and decision making.
28	increasing number of elected/appointed village, town or city officials that use information gained at TOEC in leadership and decision making

**Outcome #1**

**1. Outcome Target**

85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students

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

**2009** 255                      **2010** : 255                      **2011** : 255                      **2012** 255                      **2013** :255

**3. Associated Institute Type(s)**

•1862 Extension

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

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

**Outcome #2**

**1. Outcome Target**

Increase number of programs led or supported by trained volunteer Site Staff

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

**2009** :12                      **2010** : 12                      **2011** : 12                      **2012** :12                      **2013** :12

**3. Associated Institute Type(s)**

•1862 Extension

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

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

**Outcome #3**

**1. Outcome Target**

Increase number of youth serving as Foundation trustees who indicate a positive experience

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

**2009** 30                      **2010** : 30                      **2011** : 30                      **2012** 30                      **2013** :30

**3. Associated Institute Type(s)**

•1862 Extension

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

- 806 - Youth Development

**Outcome #4**

**1. Outcome Target**

increase number of Take Charge/ReCharge participants are satisfied with the process used as a means meeting community planning needs

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

**2009** 54                      **2010** : 54                      **2011** : 54                      **2012** 54                      **2013** :54

**3. Associated Institute Type(s)**

•1862 Extension

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

- 608 - Community Resource Planning and Development

**Outcome #5**

**1. Outcome Target**

Increase number of communities establishing or expanding community tree program

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

2009 :10                      2010 : 10                      2011 : 10                      2012 :10                      2013 :10

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 124 - Urban Forestry
- 608 - Community Resource Planning and Development

**Outcome #6**

**1. Outcome Target**

increase in number of farm and rural residents with disabilities successfully served (ie case is closed) which is defined as having increased satisfaction with actual or potential employment and maintained or increased income

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

2009 :55                      2010 : 55                      2011 : 55                      2012 :55                      2013 :55

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 723 - Hazards to Human Health and Safety
- 802 - Human Development and Family Well-Being
- 805 - Community Institutions, Health, and Social Services

**Outcome #7**

**1. Outcome Target**

Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.

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

2009 :2                      2010 : 3                      2011 : 5                      2012 :5                      2013 :5

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #8**

**1. Outcome Target**

Increase in number of TOEC participants who report increased skills in leadership and decision making.

**2. Outcome Type :** Change in Knowledge Outcome Measure**2009** :350**2010** :400**2011** :400**2012** :400**2013** :400**3. Associated Institute Type(s)**

•1862 Extension

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

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

**Outcome #9****1. Outcome Target**

Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities

**2. Outcome Type :** Change in Action Outcome Measure**2009** :11**2010** :11**2011** :11**2012** :11**2013** :11**3. Associated Institute Type(s)**

•1862 Extension

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

- 806 - Youth Development

**Outcome #10****1. Outcome Target**

Increase student enrollment in the Vermont Migrant Education Program

**2. Outcome Type :** Change in Action Outcome Measure**2009** :35**2010** :35**2011** :35**2012** :35**2013** :35**3. Associated Institute Type(s)**

•1862 Extension

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

- 604 - Marketing and Distribution Practices
- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

**Outcome #11****1. Outcome Target**

Increase the number of committee members implementing or enhancing broad-based decision-making skills

**2. Outcome Type :** Change in Action Outcome Measure**2009** :27**2010** :27**2011** :27**2012** :27**2013** :27**3. Associated Institute Type(s)**

•1862 Extension

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

- 608 - Community Resource Planning and Development

- 903 - Communication, Education, and Information Delivery

**Outcome #12**

**1. Outcome Target**

Increase the number of program participants serving as leaders on Committees

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

**2009 :** 6                      **2010 :** 6                      **2011 :** 6                      **2012 :** 6                      **2013 :** 6

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

**Outcome #13**

**1. Outcome Target**

Increase the number of schools that offer financial literacy education

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

**2009 :** 25                      **2010 :** 25                      **2011 :** 25                      **2012 :** 25                      **2013 :** 25

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 801 - Individual and Family Resource Management
- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

**Outcome #14**

**1. Outcome Target**

Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development for youth

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

**2009 :** 670                      **2010 :** 670                      **2011 :** 670                      **2012 :** 670                      **2013 :** 670

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #15**

**1. Outcome Target**

Increase the number of youth who set and reach goals identified at the beginning of the 4-H year

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

**2009** :1200                      **2010** : 1200                      **2011** : 1200                      **2012** :1200                      **2013** :1200

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #16**

**1. Outcome Target**

Increase the number of clubs doing at least 6 hours of community service

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

**2009** :70                      **2010** : 70                      **2011** : 70                      **2012** :70                      **2013** :70

**3. Associated Institute Type(s)**

- 1862 Extension

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

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

**Outcome #17**

**1. Outcome Target**

Youth have greater opportunities to access and learn financial planning skills

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

**2009** :1000                      **2010** : 1000                      **2011** : 1000                      **2012** :1000                      **2013** :1000

**3. Associated Institute Type(s)**

- 1862 Extension

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

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

**Outcome #18**

**1. Outcome Target**

increase in number of youth reached with lifeskills development programming self-report an increase in mastery for targeted life skill area: Decision making; critical thinking; problem solving; communication;goal setting or skills for everyday living.

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

**2009** :1900                      **2010** : 1900                      **2011** : 1900                      **2012** :1900                      **2013** :1900

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #19**

**1. Outcome Target**

Increase in number of youths involved in Urban Community Forestry

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

**2009 :**10                      **2010 :** 10                      **2011 :** 10                      **2012 :**10                      **2013 :**10

**3. Associated Institute Type(s)**

•1862 Extension

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

- 124 - Urban Forestry
- 605 - Natural Resource and Environmental Economics
- 806 - Youth Development

**Outcome #20**

**1. Outcome Target**

Increase number of clubs with SET related projects

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

**2009 :**69                      **2010 :** 56                      **2011 :** 56                      **2012 :** 56                      **2013 :** 56

**3. Associated Institute Type(s)**

•1862 Extension

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

- 806 - Youth Development

**Outcome #21**

**1. Outcome Target**

Number of individuals (youth and volunteers) increasing knowledge and/or skills in content and careers (across subject areas ranging from animal science to environmental science to technology)

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

**2009 :**3000                      **2010 :** 3000                      **2011 :** 3000                      **2012 :** 3000                      **2013 :**3000

**3. Associated Institute Type(s)**

•1862 Extension

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

- 806 - Youth Development

**Outcome #22**

**1. Outcome Target**

Increase the number of apprentices who achieve preset professional development goals within 3 years

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

**2009 :** 5                      **2010 :** 4                      **2011 :** 1                      **2012 :** 0                      **2013 :** 0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

**Outcome #23**

**1. Outcome Target**

Increase the number of apprentices who plan and implement a program evaluation.

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

<b>2009</b> 4	<b>2010</b> : 0	<b>2011</b> : 0	<b>2012</b> 0	<b>2013</b> : 0
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**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

**Outcome #24**

**1. Outcome Target**

Increase the number of apprentices who report the results of their program evaluation.

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

<b>2009</b> 3	<b>2010</b> : 0	<b>2011</b> : 0	<b>2012</b> 0	<b>2013</b> : 0
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**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

**Outcome #25**

**1. Outcome Target**

Number of individuals applying science process skills, including incorporation of science learning in community service, enrollment in SET-related post-secondary education, and/or entrepreneurship/career success

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

<b>2009</b> 2880	<b>2010</b> : 2880	<b>2011</b> : 2880	<b>2012</b> 2880	<b>2013</b> : 2880
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**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #26**

**1. Outcome Target**

Number of individuals demonstrating improved behavior in science learning, such as effective participation in school classes, independent study, career exploration, or volunteer experiences

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

**2009** 2880                      **2010** :2880                      **2011** :2880                      **2012** 2880                      **2013** :2880

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #27**

**1. Outcome Target**

increase the number of participants who self report increase of skills in leadership and decision making.

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

**2009** 200                      **2010** :200                      **2011** :200                      **2012** 200                      **2013** :200

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 806 - Youth Development

**Outcome #28**

**1. Outcome Target**

increasing number of elected/appointed village, town or city officials that use information gained at TOEC in leadership and decision making

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

**2009** 320                      **2010** :350                      **2011** :400                      **2012** 400                      **2013** :400

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

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

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

- Competing Programmatic Challenges
- Appropriations changes
- Competing Public priorities
- Economy
- Public Policy changes

**Description**

•Transportation is often an issue for rural youth to participate in out of school hours programming    •Apathy is learned from community environment    •Transportation, time off from work for medical appointments, minimal to no services offered in rural areas, and lack of health insurance are some of the many barriers to employment that individuals with disabilities face every day  
 •Lack of expertise and experience in New England by public and private agencies to make site visits and recommendations of accommodations to continue employment of farmers with disabilities, represents major barriers for farmers in achieving vocational goals    •Youth financial literacy is not a required curriculum in Vermont public schools

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

### 1. Evaluation Studies Planned

- Retrospective (post program)
- Time series (multiple points before and after program)
- During (during program)
- Before-After (before and after program)
- Case Study
- After Only (post program)

#### Description

Evaluation Studies Planned per outcome indicator:

increased knowledge of forest ecosystems and initiation of management opportunities related to small acreage woodlands:

End of session evaluation and follow-up mailed evaluation in six months.

85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students: Program review by Dept. of Education

Increase in number of MOMS participants who report increased skills in leadership and decision making.: Post conference evaluations

Increase in number of TOEC participants who report increased skills in leadership and decision making.: Post conference evaluations

Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.: Record books

Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities.: interviews and survey

Increase student enrollment in the Vermont Migrant Education Program: Annual review of total student enrollment June 30th.

Increase the number of committee members implementing or enhancing broad-based decision-making skills.: Interviews with program committee members will take place at the end of the project (1 year)

Increase the number of hours contributed by trained adult volunteers Site Staff: Site records keep for Annual reporting of this indicator

Increase the number of program participants serving as leaders on Committees: Interviews with program committee members will take place at the end of the project (1 year) and reported by William McMaster at the end of the program year

Increase the number of programs led or supported by trained volunteers Site Staff: Site record keep for Annual reporting of this indicator

Increase the number of schools that offer financial literacy education.: Collecting data with the National Foundation for Financial Education (NEFE)

Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development opportunity for youth: End of event surveys will be used to collect feedback in ability increase or decrease

Increase the number of youth serving as Foundation trustees indicating a positive experience: Interviews and record books

Increase the number of youth who set and reach goals identified at the beginning of the 4-H year: Record books or recognition application.

Increase the number of 4-H club youth doing at least 6 hours of community service: Record books and club reports

Trainers self report increased confidence and efficacy in setting and achieving personal goals for health and financial security.: Pre-test and post test during course

### 2. Data Collection Methods

- Unstructured
- Sampling
- Structured
- Portfolio Reviews
- Observation
- Journals
- Other (record books, recognition applic)

#### Description

{NO DATA ENTERED}

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

**Program #2**

**1. Name of the Planned Program**

Health

**2. Brief summary about Planned Program**

The subject of health covers a myriad of topics from food and nutrition, physical activity, mental and emotional wellbeing, to interpersonal relationships, and social skills and responsibility. While all of these are valid areas for research and outreach, in Vermont we have chosen to focus our programming efforts around nutrition, obesity prevention, food safety, and health management as well as a small effort towards individuals and families with regard to social and interpersonal health with efforts in children in family transitions and understanding personal financial matters.

**3. Program existence :** Mature (More than five years)

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

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

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

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	1%		1%	
502	New and Improved Food Products	1%		1%	
503	Quality Maintenance in Storing and Marketing Food Products	2%		3%	
511	New and Improved Non-Food Products and Processes	0%		2%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	1%		1%	
607	Consumer Economics	1%		0%	
703	Nutrition Education and Behavior	71%		46%	
704	Nutrition and Hunger in the Population	3%		39%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.	2%		1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	2%		1%	
802	Human Development and Family Well-Being	16%		4%	
903	Communication, Education, and Information Delivery	0%		1%	
	<b>Total</b>	100%		100%	

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

#### 1. Situation and priorities

Overweight and sedentary lifestyles lead to or exacerbate many chronic diseases including cardiovascular disease, hypertension, diabetes, asthma, cancer, liver disease, and osteoporosis. The number of Vermont adults reporting chronic conditions increases with age; in a recent survey, 88 percent of those age 65 and older reported having one or more chronic conditions and 20 percent reported having four or more. One out of four Vermonters is believed to have diabetes or pre-diabetes and many cases of diabetes remain undiagnosed. Type 2 diabetes is increasing considerably in children and adolescents. Currently 56 percent of Vermont adults are overweight or obese with an increase in the rate of obesity among Vermont adults of

77 percent from 1990 to 2002. The prevalence of obesity among youth is high as well, with 24 percent of Vermont students in grades 8-12 overweight or at risk of becoming overweight as measured by age and gender specific body mass index. Overweight among young children is increasing at an alarming rate, more than doubling in the last 20 years. Currently, 29 percent of low-income children between two and five years of age in Vermont who are part of the Women Infants and Children (WIC) program are overweight or at risk of becoming overweight. By being overweight, children are at risk for chronic conditions at an earlier age.

Lifestyle changes that include more healthful eating (consumption of whole grains, vegetables, and fruits - especially those locally grown; portion control, fewer sweetened beverages), practicing good food safety skills, and increasing physical activity while reducing sedentary time can have a positive influence on reducing and managing chronic conditions to increase a person's chance for a longer life. These lifestyle changes are sometimes complicated by the greater, though not necessarily better, food choices for consumers, and heightened awareness about dieting, food safety, nutraceutical and functional foods that lead to complex and potentially less than healthy choices.

In January of 2005, a federal mandate was issued requiring school food authorities to implement food safety programs based on Hazard Analysis Critical Control Point (HACCP). Section 111 of the Child Nutrition and WIC reauthorization Act of 2004 amended section 9 of the Richard B. Russell National School Lunch Act by requiring school food authorities to implement a food safety program for the preparation and service of school meals served to children in the school year beginning July 1, 2005. The program must be based on HACCP principles and conform to guidance issued by the Department of Agriculture (USDA). Vermont School Food Service operations vary considerably in size and sophistication and production methods vary from "conventional" where ingredients are purchased fresh and products are made from scratch to "assembly service" where products are purchased already prepared. The physical plants range from full service commercial kitchens to very small kitchens that might lack commercial dishwashers, hand washing sinks, adequate storage areas, or commercial ovens. The educational level of staff ranges from college level to less than grade 8 and employee turnover is high.

When families under-go major transitions, parents benefit from ideas and strategies to lessen the impact of the changes on their children.

Problems being addressed:

•Food and Lifestyle Choices    •School compliance with food safety requirements    •Parents are not aware; do not have skills to address needs of children

## 2. Scope of the Program

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

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

### 1. Assumptions made for the Program

- 
- Preventing or managing chronic diseases can lower health care costs
- Most chronic diseases can be prevented or mitigated through better lifestyle choices
- Individuals practicing positive lifestyle changes will feel better about themselves, their families, and their communities and ultimately improve the quality of life of Vermonters
- Particular methods of nutrition education with the public will influence behavior
- Parental attitudes toward nutrition affect lifelong eating patterns of children
- We have a global food supply, leading to many choices and an increase risk of foodborne illness
- All HACCP programs are based on the assumption that the food service operation has in place a Food Safety and Sanitation program with all staff trained/certified
  - The county courts will continue to mandate parent participation in the COPE program

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

Improve individual and family health.

- Increase in the number of people who show an improvement in healthful eating practices
- Increase in number of people who have knowledge and skills for management of diabetes
- Increase production and/or access to safe, nutritious food
- Decrease in chronic illness and associated costs
- Child/adult care center managers are certified in food safety and sanitation
- Food safety 'best practices' are implemented in schools
- School food services implement HACCP plans
- Reduce or eliminate impact of foodborne illness incidents
- School food managers are certified in food safety and sanitation
- Families under transition lessen the impact of changes on their children.

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

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

Year	Extension		Research	
	1862	1890	1862	1890
2009	2.7	0.0	2.0	0.0
2010	2.7	0.0	2.0	0.0
2011	2.7	0.0	2.0	0.0
2012	2.7	0.0	2.0	0.0
2013	2.7	0.0	0.0	0.0

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

**1. Activity for the Program**

•Diabetes Education: Dining with Diabetes (DWD) This class, designed for diabetics or those preparing food for diabetics, provides practical nutrition information and skills development on how to prepare healthy foods.

Delivery methods: four-part series of classes, •Coping with Separation and Divorce (COPE): Parent education for parents of minor children who have filed for separation, divorce, dissolving of a civil union, parentage, changes in rights and responsibilities concerning their children. This is a court mandated program. •Community Farm Partners: To enhance the amount of locally grown produce that is consumed by Vermonters with limited resources and sold by small scale Vermont producers.

•EFNEP(Expanded Food and Nutrition Education Program): has been removed from our plan here because it is not supported by federal 3b&c dollars. •Food Safety and Sanitation Certification Program:Food safety and sanitation course targeted at institutional food service managers and workers with the goal to increase knowledge of food safety and improve food handling practices in school foodservice operations. This course is a prerequisite for Hazard Analysis Critical Control Point (HACCP) program implementation.

Delivery methods: Ten hour course with certification exam. •Food, Culture, and Reading (FCR): A train-the-trainer session for volunteers/teachers to implement the 6 lesson curriculum for pre-kindergarten through grade 2.

Delivery methods: 1 3 hour class. •Growing Connections: A program for youth that teaches nutrition, food safety, and food security issues through gardening.

Delivery methods: group workshops, individual instruction, various media, demonstrations, experiential learning. •GAP: Home owners good agricultural practices •Hazard Analysis Critical Control Point (HACCP): Training and Implementation Pilot, for Vermont School Food Service, statewide: Determine "best practices" and implementation strategies for successful HACCP programs used in school foodservice operations.

Delivery methods: Course, consultation. •Healthy Eating: Nutrition classes designed for a wide range of people, with an emphasis on national Dietary Guidelines. Participants learn the latest information about how to choose a healthy diet, practice food safety and incorporate physical activity into their day.

Delivery methods: Classes, ranging from one to six sessions. •Restaurant Food Labeling :To test the effect of labeling food (with nutrient analysis) in a dining hall on the choices of consumers (in this case, students) •Senior Farm Share Nutrition

: Nutrition education for low-income Senior Farm Share participants aimed at increasing their consumption of local, fresh produce by enhancing participants skills to prepare fresh fruits and vegetables and gain nutritional knowledge based on the Dietary Guidelines.

Delivey methods: Single or multi-session workshop. •Food Safety and Sanitation Certification: Food Safety and Sanitation Certification Program - A ten-hour food safety and sanitation course targeted to institutional food service managers and workers with the goal to increase knowledge of food safety and improve food handling practices in school foodservice operations. This course is a prerequisite for Hazard Analysis Critical Control Point (HACCP) program implementation.

AES efforts:

- Internet based and telecommunication methods for weight control
- Development and evaluation of web-based instructional material for college-level teaching and delivery of such for nutritional education/management
- Nutritional management: increasing fruit/vegetable consumption and enhancing understanding of consumer food choices
- Childhood nutrition and obesity control research
- Detection and elimination of Listeria monocytogenes, E. coli and other pathogens in dairy products including raw milk cheeses
- Production methods to eliminate pathogen risk in raw milk cheeses
- Elimination of lactate crystals and other flaws from cheese production
- Elimination of pathogens in food production systems

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Other 1 (Train the Trainer)</li> <li>● Education Class</li> <li>● Demonstrations</li> <li>● Workshop</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (radio - educational)</li> <li>● TV Media Programs</li> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 2 (professional pubs)</li> </ul>

**3. Description of targeted audience**

- Adults
- Age 25 - 60 Adult
- Age 46 - 65 Adult
- Age 60 - Senior
- Communities: Educators
- Communities: Schools



Year	Research Target	Extension Target	Total
2009	5	1	6
2010	5	1	6
2011	5	1	6
2012	5	1	6
2013	5	1	6

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

**1. Output Target**

- Class/course

2009 :3                      2010 :8                      2011 :8                      2012 :8                      2013 :8

- Consultations

2009 :70                      2010 :70                      2011 :70                      2012 :70                      2013 :70

- Consumer Publication

2009 :2                      2010 :2                      2011 :2                      2012 :2                      2013 :2

- Educational/evaluation instrument

2009 :2                      2010 :2                      2011 :2                      2012 :2                      2013 :2

- Field day/fair

2009 :2                      2010 :2                      2011 :2                      2012 :2                      2013 :2

- Field site visit

2009 :10                      2010 :10                      2011 :10                      2012 :10                      2013 :10

- Funding request

2009 :1                      2010 :1                      2011 :1                      2012 :1                      2013 :1

- Presentations

2009 :25                      2010 :25                      2011 :25                      2012 :25                      2013 :25

- Publication - curriculum

2009 :1                      2010 :1                      2011 :1                      2012 :1                      2013 :1

- Publication - newsprint article

2009 :65                      2010 :65                      2011 :65                      2012 :65                      2013 :65

- Radio Spots/program (educational)

2009 :2                      2010 :2                      2011 :2                      2012 :2                      2013 :2

- Train the Trainer

<b>2009</b> 3	<b>2010</b> 3	<b>2011</b> 3	<b>2012</b> 3	<b>2013</b> 3
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- Trainee delivered programming

<b>2009</b> :124	<b>2010</b> :124	<b>2011</b> :124	<b>2012</b> :124	<b>2013</b> :124
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- Workshop - series

<b>2009</b> 2	<b>2010</b> 2	<b>2011</b> 2	<b>2012</b> 2	<b>2013</b> 2
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- Workshop - single session

<b>2009</b> :15	<b>2010</b> :15	<b>2011</b> :15	<b>2012</b> :15	<b>2013</b> :15
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**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Increase the number of participants who increase the quality and/or quantity of fruits and vegetables
2	Increase in number of people who expand or change their preferences for or attitudes about healthy foods
3	Increase in number of people who improve food planning and shopping behaviors.
4	Increase in number of food managers certified in food safety and sanitation (Action)
5	Increase in number of school food service workers using food safety 'best practices' when receiving,
	storing, handling, preparing and serving food
6	Increase in number of schools implementing Hazard Analysis Critical Control Point based food safety
	programs
7	Increase in number of people who show an improvement in healthful eating practices.
8	Increase the number of people who show improvement in food safety and preservation practices.
9	A greater variety of produce available at home.
10	An increased preference for at least one fruit or vegetable
11	Increase the number of home gardeners who implement one or more good agricultural practices to
	minimize microbial food safety hazards such as using potable water and composted manure. (Action)
12	Increase the number of parents undergoing family transition through parentage, divorce or separation who
	understand the impact of these changes on their children.
13	Increase the number of parents who intend to apply knowledge and skills learned to influence their behavior
	with their children.
14	increase in number of food service workers using food safety 'best practices' when receiving, storing,
	handling, preparing and serving food
15	increase in number of food managers certified in food safety and sanitation

**Outcome #1****1. Outcome Target**

Increase the number of participants who increase the quality and/or quantity of fruits and vegetables

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

**2009** :560                      **2010** : 560                      **2011** : 560                      **2012** : 560                      **2013** :560

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #2****1. Outcome Target**

Increase in number of people who expand or change their preferences for or attitudes about healthy foods

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

**2009** :50                      **2010** : 50                      **2011** : 50                      **2012** : 50                      **2013** :50

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #3****1. Outcome Target**

Increase in number of people who improve food planning and shopping behaviors.

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

**2009** :57                      **2010** : 57                      **2011** : 57                      **2012** : 57                      **2013** :57

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #4****1. Outcome Target**

Increase in number of food managers certified in food safety and sanitation (Action)

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

**2009** :75                      **2010** : 75                      **2011** : 75                      **2012** : 75                      **2013** :75

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #5**

**1. Outcome Target**

Increase in number of school food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food

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

**2009** 50                      **2010** : 50                      **2011** : 50                      **2012** 50                      **2013** :50

**3. Associated Institute Type(s)**

•1862 Extension

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

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #6**

**1. Outcome Target**

Increase in number of schools implementing Hazard Analysis Critical Control Point based food safety programs

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

**2009** 2                      **2010** : 2                      **2011** : 2                      **2012** 2                      **2013** :2

**3. Associated Institute Type(s)**

•1862 Extension

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

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #7**

**1. Outcome Target**

Increase in number of people who show an improvement in healthful eating practices.

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

**2009** 299                      **2010** : 299                      **2011** : 299                      **2012** 299                      **2013** :299

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #8**

**1. Outcome Target**

Increase the number of people who show improvement in food safety and preservation practices.

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

**2009** :139                      **2010** : 139                      **2011** : 139                      **2012** :139                      **2013** :139

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #9**

**1. Outcome Target**

A greater variety of produce available at home.

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

**2009** #450                      **2010** : 450                      **2011** : 450                      **2012** #450                      **2013** :450

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #10**

**1. Outcome Target**

An increased preference for at least one fruit or vegetable

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

**2009** #400                      **2010** : 400                      **2011** : 400                      **2012** #400                      **2013** :400

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

**Outcome #11**

**1. Outcome Target**

Increase the number of home gardeners who implement one or more good agricultural practices to minimize microbial food safety hazards such as using potable water and composted manure. (Action)

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

**2009** 20                      **2010** : 20                      **2011** : 20                      **2012** 20                      **2013** :20

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #12****1. Outcome Target**

Increase the number of parents undergoing family transition through parentage, divorce or separation who understand the impact of these changes on their children.

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

**2009** :1560                      **2010** : 1560                      **2011** : 1560                      **2012** :1560                      **2013** :1560

**3. Associated Institute Type(s)**

•1862 Extension

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

- 802 - Human Development and Family Well-Being

**Outcome #13****1. Outcome Target**

Increase the number of parents who intend to apply knowledge and skills learned to influence their behavior with their children.

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

**2009** :1560                      **2010** : 1560                      **2011** : 1560                      **2012** :1560                      **2013** :1560

**3. Associated Institute Type(s)**

•1862 Extension

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

- 802 - Human Development and Family Well-Being

**Outcome #14****1. Outcome Target**

increase in number of food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food

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

**2009** :50                              **2010** : 50                              **2011** : 50                              **2012** :50                              **2013** :50

**3. Associated Institute Type(s)**

•1862 Extension

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

- 703 - Nutrition Education and Behavior
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**Outcome #15****1. Outcome Target**

increase in number of food managers certified in food safety and sanitation

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

**2009** :50                              **2010** : 50                              **2011** : 50                              **2012** :50                              **2013** :50

**3. Associated Institute Type(s)**

•1862 Extension

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

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

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

### 1. External Factors which may affect Outcomes

- Appropriations changes
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)
- Economy

#### Description

•Overweight and sedentary lifestyles lead to or exacerbate many chronic diseases including cardiovascular disease, hypertension, diabetes, asthma, cancer, liver disease, and osteoporosis •Vermont School Food Service operations vary considerably in size and sophistication, and the educational level of staff employed •Participants will have to repay debts that cannot be wiped out under the new bankruptcy law (600 declared bankruptcies in VT in 2005.) •Courts will continue to mandate COPE program

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

### 1. Evaluation Studies Planned

- Before-After (before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Time series (multiple points before and after program)
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Retrospective (post program)

#### Description

{NO DATA ENTERED}

### 2. Data Collection Methods

- Structured
- Tests
- Sampling
- Other (records)
- Observation

#### Description

{NO DATA ENTERED}

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

**Program #3**

**1. Name of the Planned Program**

Agriculture and Environmental Sustainability

**2. Brief summary about Planned Program**

Agriculture and Environmental Sustainability is a broad programmatic area which addresses various problems focusing on agricultural profitability; marketing and tourism opportunities; knowledge and skills to raise healthy animals; biosecurity issues; energy costs and stewardship of the environment. Identified by Extension and AES faculty, with stakeholder input, as basic to our research and outreach, it is the largest program area being addressed.

**3. Program existence :** Mature (More than five years)

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

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

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

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	4%		4%	
104	Protect Soil from Harmful Effects of Natural Elements	2%		2%	
112	Watershed Protection and Management	10%		10%	
133	Pollution Prevention and Mitigation	6%		6%	
201	Plant Genome, Genetics, and Genetic Mechanisms	2%		2%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	1%		1%	
204	Plant Product Quality and Utility (Preharvest)	4%		4%	
205	Plant Management Systems	2%		2%	
206	Basic Plant Biology	2%		2%	
216	Integrated Pest Management Systems	8%		8%	
301	Reproductive Performance of Animals	2%		2%	
302	Nutrient Utilization in Animals	2%		2%	
305	Animal Physiological Processes	2%		2%	
307	Animal Production Management Systems	7%		7%	
315	Animal Welfare, Well-Being and Protection	3%		3%	

601	Economics of Agricultural Production and Farm Management	18%		18%	
602	Business Management, Finance, and Taxation	14%		14%	
605	Natural Resource and Environmental Economics	3%		3%	
723	Hazards to Human Health and Safety	4%		4%	
801	Individual and Family Resource Management	4%		4%	
	<b>Total</b>	100%		100%	

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

### 1. Situation and priorities

For many decades, Vermont's landscape has been a strong allure to visitors and residents alike. In many ways, tourism and quality of community life have become inextricably tied to agriculture, particularly dairying.

Change within the agricultural sector creates opportunities for Extension to affect the present and future well-being of Vermont's farmers. As farms expand, diversify and/or consolidate, farmers must master new skills such as capital and human resource management.

Vermont's agriculture is dependent on the state's agricultural industry. The historical instability in farm milk prices has left Vermont's dairy farmers in a vulnerable position. Regardless of length of time or experience in farming, or the size of the farm, today's farmers are searching for opportunities to improve their income-producing capacity.

The traditional mainstay, dairy, is undergoing many changes as producers strive to compete in national and global markets and adjust to market-based raw milk pricing. Many farms have increased cow numbers in an attempt to realize economies of scale while others have gone out of business. Dairy cow numbers and milk production have declined and the number of dairy farms in Vermont continues to decline. The loss of farms has created concern about conversion of farmland to forest and development.

Farmers face many challenges; a primary challenge is their inability to clearly articulate their business idea to themselves and lenders or other sources of capital. Agricultural entrepreneurs may not be able to get a loan, may not be successful, and may be disenfranchised with Vermont agriculture. They often do not understand the financial limits (carrying loads) of their operations, are not able to communicate with lenders, or know how to read, understand, and interpret financial statements. Farmers who have not been saving for their retirement need to sell farm assets for retirement income.

Vermont farmers want to participate in the fastest growing area of dairy - organic milk production - but don't know if it's profitable, sustainable, or a viable option for them. There is a vacuum of any rigorous, quantified studies on the costs of producing organic milk in the United States despite growth and interest in the farming activity. The situation is particularly acute in the Northeast and upper Midwest where there is a small but rapidly growing organic dairy sector. Organic milk production has been the fastest growing agricultural sector in New England, with Vermont experiencing growth from just 2 certified organic farms in 1993 to more than 200 today.

Although the total number of farms in the U.S. declined by more than 86,000 between 1997 and 2002 the number of farms owned and operated by women increased by nearly 30,000 during that same period. Since the 1978 Census of Agriculture, when the gender of the operator was first recorded, until the most recent Census of Agriculture in 1997, the number of women farm owners/operators increased from 5.2% to 11.1% of total farm ownership (USDA 2002 Census data). The demographic, social, and economic factors contributing to this increase in woman-owned/operated farms suggest that this growth trend will persist, gaining momentum, in all regions of the country. Among non-white farmers, women represent 10% of the farm owners/operators. The profile of women-owned farms indicates that many are small, diversified and financially at-risk.

Other challenges face agricultural producers affecting their ability to reach their marketing and profit potential. Farmers must reduce surface water pollution while maintaining profitability. Intensive crop production has often resulted in soil degradation, contributing to reduced crop yield, increased production inputs and lower farm profitability. Growers need to

improve practices and/or maintain knowledge and skills related to IPM tools and methods, and the safe and judicious use of pesticides and alternatives, including organic options.

Federal and State Tax laws and regulations keep changing each year, making it difficult for tax practitioners to keep up with those changes. Errors in tax returns resulting in lost revenue and increased costs to practitioners, government, and taxpayers. The Vermont and Federal legislature change tax law on a yearly basis to address state and national issues as they develop. In addition, part-time and rural tax practitioners are not able to attend professional tax schools that are within a reasonable driving distance, reasonably priced, and which offer several certification programs.

Problems being addressed:

- Ag producers reaching their profit potential through marketing and management practices
- Community Water Quality
- Decrease in profitability on some organic dairy farms.
- IPM tools, methods and safe and judicious use of pesticides & alternatives
- Knowledge and skills to raise healthy animals
- Lack of understanding of biosecurity issues
- Price and supply of fuel poses economic risk to farmers.
- Reducing surface water pollution while maintaining profitability
- Soil degradation lowering farm profitability
- Tax preparers are challenged to maintain competency with tax laws
- Threatened financial security and business viability for farm and forest land owners
- Tourism's social & environmental impacts and economic benefits.

## 2. Scope of the Program

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

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

### 1. Assumptions made for the Program

- Differences between low-yielding and high-yielding sap collection systems can often be attributed to education
- A maple producer who may have purchased the necessary equipment often does not understand the steps necessary for its proper installation and maintenance
- The character of Vermont makes an ideal location to raise sheep and with the development of two lamb marketing organizations, there is now a reliable market available in which to sell lamb
- Education & research in organics will help farmers improve profitability
- There still is a trend and place in Vermont for large dairy farm operations annual conference
- Environmental regulations are only getting tighter, therefore making it increasingly difficult for all dairy operations
- Each year, there is a new wave of people that are interested in raising sheep. For the most part, these people have no farming experience
- Biosecurity training is required yet at this time few are actually trained
- Price of fuel will remain unstable in the future and will continue to pose an economic risk to farmers
- Economic advantages of on-farm biodiesel production will increase
- Citizens are concerned about poor water quality of Lake Champlain
- Farmer's can reduce pollution and still remain profitable especially at low milk prices
- The rate of adoption of dairy farm practice changes are influenced by farm profitability and personal beliefs in the value of any proposed changes in farm management
- State and federal tax laws and regulations will continue to change, and practitioners will continue to need good information that is reasonably-priced
- Usually farmers start-up with no business plan
- Continued funding from USDA/RMA, Farm Viability, and Andrew Sigler Foundation is needed to support certain projects as is continued need and demand from producers for Farm Advisory Boards and technical assistance with ag. engineering projects
- Extra mural funds are available to leverage federal allocation

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

- Improve agricultural and environmental sustainability (condition)
- Improve community collaboration to address issues and build community assets. (condition)
- Improve individual and family health. (condition)
- Community members determine feasible solutions to watershed problems (Action)
- Create on-farm vegetable oil and/or biodiesel production facilities (Action)
- Decrease in phosphorus from urban sources entering Lake Champlain (Action)
- Decrease in urban storm water runoff and associated non-point source pollution (Action)
- Improve coordination of Vermont agricultural agencies and organizations with regard to training, information dissemination and emergency preparedness. (Action)
- Improved access to private land (Action)
- Improved biosecurity and safety measures at fairs, field days and on farms. (Action)
- Improved profitability, stewardship, and/or management on Vermont farms (Action)
- Improved soil health (Action)
- Increase accuracy of tax returns (Action)
- Increase adoption of practices that improve economic status, stewardship and/or management practices for Vermont landowners. (Action)
- Increase adoption of practices that improve sap production and boiling efficiency. (Action)
- Increase the number of farms that implement one or more changes in nutrient management practices (Action)
- Increase the number of growers, facility managers and home gardeners who implement IPM strategies (Action)
- Increase the number of sheep producers who meet the market expectations for lean meat (Action)
- Increased application of management skills that optimize health, nutritional status, and productivity of animals. (Action)
- Increased profitability of businesses related directly to tourism.

(Action) •Increased successful production of organic grains in Vermont (Action) •Increased use of business analysis tools to improve agricultural business management decision-making. (Action) •Maintain healthy and productive forests (Action) •Maple producers meet Vermont quality standards (Action) •Successful farm and forest transfers (Action) •Increase knowledge of water shed and water quality among middle school and high school youth. (Learning)

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

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

Year	Extension		Research	
	1862	1890	1862	1890
2009	20.0	0.0	10.0	0.0
2010	20.0	0.0	10.0	0.0
2011	20.0	0.0	10.0	0.0
2012	20.0	0.0	10.0	0.0
2013	20.0	0.0	10.0	0.0

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

**1. Activity for the Program**

Project listed in bold followed by delivery methods:

•Ag Business Management. Conferences, courses, consultations and farm visits. •Agricultural safety. Courses, consultations and farm visits. •Beef Program. Conferences, workshops, discussion groups, individual consultations, articles, web site. •Bio-security Education. Workshops, discussion groups. •Calf and heifer program. Workshops, discussion groups. •Dairy Management. Conference. •Equine program. Annual equine event, publications, workshops. •Farm and Forest Transfers. Workshops, consultations, farm visits •Farm Viability. Farm visits, consultations. •Farming Alternatives. Workshops, consultations, farm visits. •Forage and Pasture Management Education. Conference, farm visits, consultations. •Germ City. Demonstration. •Maple Program. Conference, workshops, newsletter. •Nutrient Management Program. Farm visits, consultations. •Addison County Agriculture Legislative Farm Tour. Tour. •Farm Assessments. Develop assessments. •P-Reducing Slag Barriers. Publications, demonstrations. •Growing by Design. On-farm research and demonstration. •Farmer Nutrient Management. Training for dairy farmers, consultations. •On-farm vegetable and biodiesel. On farm demonstration sites. •Organic Grain Project. Demonstrations, data gathering. •Pest Management Education. IPM and Pesticide Education and Safety Program (PESP) training. •Pesticide Education and Safety. Course, consultations. •Sheep program. Hands-on workshop, applied research, newsletter. •Healthy soil. Workshops and various media. •UVM Extension emergency management plan. Personnel training via workshops, mock disaster drill. •Vegetable and Berry Growers. Consultations, farm visits, meetings, various media, presentations, website. •Vermont New Farmer Network. Conference, networking, consultations. •Vermont Pasture Network. Pasture walks, demonstrations and trials, conference, consultations, various media. •Vermont Tourism and Recreation. Research, conference. •Women’s Agricultural Network. Newsletters, website, classes, workshops, individual and small group consultations. •Master Gardener. Course, train the trainer •Private/commercial Landowner and Industry Professional Education: Consultations, media •Small Ruminant Dairy Project. Conference, newsletter, workshops, consultations •Sustainable Forests. Workshops, newsletter, consultations •Urban Watershed and Water Quality. Presentations, demonstrations, media, in-school program •Emergency Management Plan. Workshops, mock drill •UVM Tax School. conference, tax book •Watershed & Water Quality Education. In-school program, curriculum development, presentations  
AES efforts.

- Animal Manure Treatment Systems
- Storm and Wastewater Management Systems
- Perturbation of soil ecosystems by anthropomorphic interventions
- Soil nutrient effect on forest ecosystem productivity and lake water quality

- Soil fertility/chemistry/physical problems associated with waste disposal and bioremod faction
- Economics of organic dairy, crop management and alternative energy
- Heifer nutrition, rearing and management
- Dairy nutritional immunology
- Small ruminant production and management systems
- Development of strategies to address applied equine issues
- Biofuels from coconuts and other energy sources
- Identification of genetic traits that make species invasive
- Surveillance and prevention of spread of Asian Longhorned Beetle
- Management of thrips pests in forests and greenhouses
- Identification/control of fungal propagation
- Fungal biological plant protection, collection and management
- Explore microbial pesticides and fungal components as IPM strategies
- Innate immunity, DNA-based vaccines and mastitis prevention
- Hormonal regulation of glucose synthesis and milk production
- Functional genomics and photoperiod effects on hormonal cycles/milk production
- Explore ruminant lipid metabolism
- Impact of global climate change on forest species diversity
- Genetic diversity among new world ferns and geographic distribution
- Cold hardiness of horticultural perennials

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Other 2 (Presentation/field days)</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Publication- professional/peer)</li> <li>● Web sites</li> <li>● TV Media Programs</li> <li>● Newsletters</li> </ul>

- Other 1 (Train the Trainer)
- Education Class
- Workshop

**3. Description of targeted audience**

•Adults •Age 25 - 45 Adult •Age 25 - 60 Adult •Agriculture: Apple Growers •Agriculture: Beef Producers  
 •Agriculture: CCA & Crop Consultants •Agriculture: Crop Producers •Agriculture: Dairy Producers •Agriculture: Farm Families  
 •Agriculture: Farm Managers •Agriculture: Farmers •Agriculture: Goat & Sheep Producers •Agriculture: Greenhouse Ornamental Growers  
 •Agriculture: Home Gardeners •Agriculture: Industry Professionals •Agriculture: Maple Industry •Agriculture: Maple Sugar Producers  
 •Agriculture: Ornamentals Industry Professionals •Agriculture: Service Providers •Agriculture: Small Fruit & Vegetable Growers  
 •Agriculture: Veterinarians •Agriculture: Dairy Goat, Meat Goat and Dairy Sheep Producers •Agriculture: Government Agency Personnel •Communities: Cities and Towns •Communities: Educators  
 •Communities: Local Officials/Leaders •Communities: Non-Governmental Organizations •Communities: Schools •Communities: Town Health Officers  
 •Community leaders and citizens •Extension: Faculty/Staff •Forestry: Woodland Managers/Foresters •Forestry: Woodland Owners  
 •Master Gardeners •Policy Makers: Legislators •Public: College Students •Public: Families •Public: General  
 •Public: Homeowners •Public: Small Business Owners/Entrepreneurs •Public: Volunteers  
 •Train-the-Trainer recipients:adults •4-H: Youth •Age 13 - 18 Youth •Age 6 - 12 School Age •Age 8 - 18 Youth •Youth

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

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2009	65000	0	3000	0
2010	65000	0	3000	0
2011	65000	0	3000	0
2012	65000	0	3000	0
2013	65000	0	3000	0

**2. (Standard Research Target) Number of Patent Applications Submitted**

**Expected Patent Applications**

**2009 :3                      2010 :3                      2011 :3                      2012 :3                      2013 :3**

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2009	5	3	8
2010	5	3	8
2011	5	3	8
2012	5	3	8
2013	5	3	8

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

**1. Output Target**

● Class/course					
2009	8	2010	8	2011	:8
2012	8	2013	8		
● Conference					
2009	:11	2010	:11	2011	:11
2012	:11	2013	:11		
● Consultation					
2009	:1100	2010	:1100	2011	:1100
2012	:1100	2013	:1100		
● Consumer Publication					
2009	:1	2010	:1	2011	:1
2012	:1	2013	:1		
● Demonstration					
2009	:45	2010	:13	2011	:13
2012	:13	2013	:13		
● Discussion group					
2009	:20	2010	:15	2011	:15
2012	:15	2013	:15		
● Educational/evaluation instrument					
2009	:2	2010	:2	2011	:2
2012	:2	2013	:2		
● Electronic Communication/phone					
2009	:4600	2010	:4600	2011	:4600
2012	:4600	2013	:4600		
● Field day/fair					
2009	:6	2010	:2	2011	:2
2012	:2	2013	:2		
● Field site visit					
2009	:160	2010	:130	2011	:130
2012	:130	2013	:130		
● Funding request					
2009	:2	2010	:2	2011	:2
2012	:2	2013	:2		
● Presentation					
2009	:525	2010	:525	2011	:525
2012	:525	2013	:525		
● Publication - Peer Reviewed					
2009	:2	2010	:1	2011	:1
2012	:1	2013	:1		
● Publication - curriculum					
2009	:7	2010	:2	2011	:2
2012	:2	2013	:2		
● Publication - fact sheet					

	2009	2010	2011	2012	2013
● Publication - magazine article	10	5	:5	5	5
● Publication - manual	15	15	:15	:15	:15
● Publication - newsletter	1	1	:1	:1	:1
● Publication - newsprint article	28	25	:25	25	25
● Research project	3	3	:3	3	3
● TV segment/ATF	5	3	:3	3	3
● Technical Publication	11	11	:11	:11	:11
● Tour(s)	2	2	:2	2	2
● Train the Trainer trainings	12	12	:12	:12	:12
● Website development and updates	80	80	:80	80	80
● Workshop - series	50	50	:50	50	50
● Workshop - single session	80	70	:70	70	70

## V(I). State Defined Outcome

O. No	Outcome Name
1	extension employees will know what is expected from them in a disaster
2	Increase the number of farmers who will make a change by: growing oil seed crops, using local on-farm vegetable oil or biodiesel, and/or planning an individual or cooperative on-farm vegetable oil or biodiesel facility.
3	Increase in number of dairy farmers who adopt best management practices to improve their weak areas of the farming operation
4	Increase in number of farms completing Dairy Stewardship assessment who adopt at least two sustainable practices
5	Increase in number of maple producers who adopt recommended practices that increase overall system efficiency and syrup quality
6	Increase in number of sheep producers who report a reduced parasite load in animals
7	Increase in number of sheep farms who report decreased lamb mortality
8	Increase in the number of vegetable and berry growers implement changes in production, pest control, and/or management practice resulting in the desired outcome
9	Increase the number of growers implementing IPM practices reducing reliance on pesticides
10	Increase the number of commercial applicators implementing IPM practices
11	Increase the number of farm and forest landowners who implement their estate plan and/or transfer plan
12	Increase the number of farmers who implement at least one cropping practice to improve productivity, forage quality and profitability
13	Increase the number of maple producers adopting a recommended practice increasing their sap yields by 5%
14	Increase the number of maple producers making use of research findings to better estimate best tapping date
15	Increase the number of participants passing the required applicators licensing test
16	Increase the number of maple producers adopting most effective sap collection techniques
17	Increase the number of forest owners who plan for woodlands in their estates
18	Participants will begin growing organic grains as a part of their farming operation
19	Acres of forest land will be opened for tourism and recreation access
20	equine facilities incorporate biosecurity, safety and preventative measures
21	Increase in collaboration with agency and industry personnel to address farm safety
22	Increase in number of Growing Places graduates who make an intentional, informed decision not to start a business after completing the course
23	Increase in number of Growing Places graduates who go on to start a business within 18 months of course completion
24	Increase in number of fair, field days or event attendees who demonstrate an increased understanding of the health risks associated with the failure to wash hands by using safeguards provided (such as hand sanitation stations)
25	Increase in number of farmers who create and implement business plans
26	Increase in number of program participants who make informed decisions about crop insurance
27	Increase in number of tax school participants stating improved accuracy of tax reporting for their clients
28	Increase in number of tax schools participants understanding federal and state tax laws and requirements
29	Increase in number of farmers who use financial reports with another person for business purposes
30	Increase in number of farmers who implement a practice that improves soil quality resulting in improved crop yield and quality
31	Increase the number of businesses who report increases in profitability directly related to tourism
32	Increase in number of farmers that develop a nutrient management plan for their farm
33	Increase the number of farmers who implement at least one change in nutrient management plan practices
34	Increase the number of farmers who implement grazing plans
35	Increase the number of legislators and key decision makers who increase understanding of current local agricultural issues
36	Increase the number of school facilities that implement IPM strategies

- |    |   |
|----|---|
| 37 | Increase the number of sheep producers who supply lamb to Vermont Quality Meats   |
| 38 | Decrease in number of days of beach closures in pilot areas.  |
| 39 | Increase the number of farmers who will make a change by learning how to: grow oil seed crops, harvest oil seed crops, process oil seed crops into oil, produce biofuel, and plan a cooperative on-farm biofuel facility  |
| 40 | Increase the number of growers who report cost savings from more cost effective and less toxic pest control due to easy access to pest control information sites.   |
| 41 | Increase in the number of Watershed Alliance (WSA) interns who report increased knowledge and skills related to environmental education and watersheds.   |
| 42 | Increase in number of farms that implement business plans resulting in increased profitability.   |
| 43 | Increase number of gardeners and growers who select and grow new crops based on relevant information on climate tolerance, performance and overwintering of perennials  |
| 44 | Increase number of towns using stormwater management and non-point source pollution prevention best management practices.   |
| 45 | Increase the number of growers implementing Integrated Pest Management (IPM) practices reducing reliance on pesticides.   |
| 46 | Increase the number of participants (who average 8 hours each in seminars) who will change a business practice(s)   |
| 47 | Increased delivery of organic dairy information to dairy farmers across the nation that is accessible, reliable, credible and up-to-date.   |
| 48 | Increase the number of local retail lawn and garden centers that are sources of information about low input lawn care options   |
| 49 | Increase in number of Master Gardener participants earning certification  |
| 50 | Increase in number of community watershed organizations developing pollution prevention outreach effort   |
| 51 | Increase in number of educators in Watershed Alliance Program increasing knowledge and use of new teaching tools and techniques   |
| 52 | Increase in number of households adopting low input lawn/garden care practices  |
| 53 | Increase in number of participants who report making a change in on-farm production, marketing, financial management, legal or human resource aspects of their business   |
| 54 | Increase in number of schools that continue to participate in Watershed Alliance (WSA) Program in subsequent years  |
| 55 | Increase in number of students demonstrating increased knowledge of watersheds  |
| 56 | Increase in number of towns adopting residential domestic NPS surveys to develop pollution prevention education   |
| 57 | Increase in the number of farmers who improve pasture management practices  |
| 58 | Increase in the number of student led community service watershed/water quality outreach projects   |
| 59 | Increase or maintain the number of growers who make informed decisions regarding best integrated pest management (IPM) options to reduce economic, health and/or environmental risks                                      |
| 60 | Increase the number of commercial properties reducing landscape inputs  |
| 61 | Increase the number of home gardeners who increase their knowledge of Integrated Pest Management (IPM) practices  |
| 62 | Increase the number of people who show improvement in food safety and preservation practices  |
| 63 | Increase the number of student interns teaching backyard composting   |
| 64 | Increase in number of Vermont Dairy Herd Improvement Association members that use their records to make herd management decisions that will improve business profitability  |
| 65 | Increase in number of equine owners who use information to change behaviors in land and manure management of business practices to improve safety, animal health, and/or profitability of equine businesses and clientele |
| 66 | Increase in number of farmers who implement a practice that improves pasture health and soil quality for improved forage yields and quality   |
| 67 | Increase number of 4-H dairy youth project members and 4-H dairy adult leaders who use the Vermont 4-H Dairy Project Manual   |
| 68 | Increase number of dairy producers that make a facility change(s) to improve either herd health, herd productivity, the environment, community relations, labor efficiency, and/or crop quality/quantity                  |
| 69 | Increase the number of agricultural service providers who will make at least one change to their program and/or the way they work with beginning farmers to address stakeholder needs                                     |
| 70 | Increase the number of farmers who implement cover cropping on their farm   |
| 71 | Increase in number of forest owners, managers and users who make better decisions about forests using stumpage data   |

72	Increase in the number of forest owners saving money through use of written contracts for timber sales
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**Outcome #1**

**1. Outcome Target**

extension employees will know what is expected from them in a disaster

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

**2009** 95                      **2010** : 96                      **2011** : 95                      **2012** 95                      **2013** :0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 723 - Hazards to Human Health and Safety

**Outcome #2**

**1. Outcome Target**

Increase the number of farmers who will make a change by: growing oil seed crops, using local on-farm vegetable oil or biodiesel, and/or planning an individual or cooperative on-farm vegetable oil or biodiesel facility.

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

**2009** 30                      **2010** : 0                      **2011** : 0                      **2012** 0                      **2013** :0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #3**

**1. Outcome Target**

Increase in number of dairy farmers who adopt best management practices to improve their weak areas of the farming operation

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

**2009** :100                      **2010** : 100                      **2011** : 100                      **2012** :100                      **2013** :100

**3. Associated Institute Type(s)**

•1862 Extension

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

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #4**

**1. Outcome Target**

Increase in number of farms completing Dairy Stewardship assessment who adopt at least two sustainable practices

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

**2009** :28                      **2010** :28                      **2011** :28                      **2012** :28                      **2013** :28

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #5**

**1. Outcome Target**

Increase in number of maple producers who adopt recommended practices that increase overall system efficiency and syrup quality

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

**2009** :420                      **2010** :420                      **2011** :420                      **2012** :420                      **2013** :420

**3. Associated Institute Type(s)**

•1862 Extension

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

- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #6**

**1. Outcome Target**

Increase in number of sheep producers who report a reduced parasite load in animals

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

**2009** :20                      **2010** :20                      **2011** :20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

•1862 Extension

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

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #7**

**1. Outcome Target**

Increase in number of sheep farms who report decreased lamb mortality

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

**2009** :15                      **2010** :15                      **2011** :15                      **2012** :15                      **2013** :15

**3. Associated Institute Type(s)**

•1862 Extension

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

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #8****1. Outcome Target**

Increase in the number of vegetable and berry growers implement changes in production, pest control, and/or management practice resulting in the desired outcome

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

2009 :200                      2010 : 200                      2011 : 200                      2012 :200                      2013 :200

**3. Associated Institute Type(s)**

•1862 Extension

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

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #9****1. Outcome Target**

Increase the number of growers implementing IPM practices reducing reliance on pesticides

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

2009 :160                      2010 : 160                      2011 : 160                      2012 :160                      2013 :160

**3. Associated Institute Type(s)**

•1862 Extension

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

- 133 - Pollution Prevention and Mitigation
- 216 - Integrated Pest Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #10****1. Outcome Target**

Increase the number of commercial applicators implementing IPM practices

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

2009 :50                      2010 : 50                      2011 : 50                      2012 :50                      2013 :50

**3. Associated Institute Type(s)**

•1862 Extension

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

- 216 - Integrated Pest Management Systems

**Outcome #11****1. Outcome Target**

Increase the number of farm and forest landowners who implement their estate plan and/or transfer plan

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

2009 :10                      2010 : 9                      2011 : 9                      2012 : 9                      2013 :0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #12**

**1. Outcome Target**

Increase the number of farmers who implement at least one cropping practice to improve productivity, forage quality and profitability

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

**2009** 88                      **2010** : 88                      **2011** : 88                      **2012** 88                      **2013** :88

**3. Associated Institute Type(s)**

•1862 Extension

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

- 133 - Pollution Prevention and Mitigation
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #13**

**1. Outcome Target**

Increase the number of maple producers adopting a recommended practice increasing their sap yields by 5%

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

**2009** 65                      **2010** : 65                      **2011** : 65                      **2012** 65                      **2013** :65

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #14**

**1. Outcome Target**

Increase the number of maple producers making use of research findings to better estimate best tapping date

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

**2009** 500                      **2010** : 500                      **2011** : 500                      **2012** 500                      **2013** :500

**3. Associated Institute Type(s)**

•1862 Extension

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

- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #15**

**1. Outcome Target**

Increase the number of participants passing the required applicators licensing test

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

<b>2009</b> :50	<b>2010</b> : 50	<b>2011</b> : 50	<b>2012</b> : 50	<b>2013</b> :50
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 216 - Integrated Pest Management Systems

**Outcome #16****1. Outcome Target**

Increase the number of maple producers adopting most effective sap collection techniques

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

<b>2009</b> :60	<b>2010</b> : 60	<b>2011</b> : 60	<b>2012</b> : 60	<b>2013</b> :60
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #17****1. Outcome Target**

Increase the number of forest owners who plan for woodlands in their estates

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

<b>2009</b> :0	<b>2010</b> : 2000	<b>2011</b> : 0	<b>2012</b> : 0	<b>2013</b> :0
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #18****1. Outcome Target**

Participants will begin growing organic grains as a part of their farming operation

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

<b>2009</b> :20	<b>2010</b> : 20	<b>2011</b> : 20	<b>2012</b> : 20	<b>2013</b> :20
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #19****1. Outcome Target**

Acres of forest land will be opened for tourism and recreation access

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

2009 :100000      2010 : 0      2011 : 0      2012 0      2013 :0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 605 - Natural Resource and Environmental Economics

**Outcome #20****1. Outcome Target**

equine facilities incorporate biosecurity, safety and preventative measures

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

2009 60      2010 : 100      2011 : 120      2012 :130      2013 :130

**3. Associated Institute Type(s)**

•1862 Extension

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

- 723 - Hazards to Human Health and Safety

**Outcome #21****1. Outcome Target**

Increase in collaboration with agency and industry personnel to address farm safety

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

2009 :10      2010 : 10      2011 : 10      2012 :10      2013 :10

**3. Associated Institute Type(s)**

•1862 Extension

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

- 723 - Hazards to Human Health and Safety

**Outcome #22****1. Outcome Target**

Increase in number of Growing Places graduates who make an intentional, informed decision not to start a business after completing the course

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

2009 8      2010 : 8      2011 : 8      2012 8      2013 :8

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #23**

**1. Outcome Target**

Increase in number of Growing Places graduates who go on to start a business within 18 months of course completion

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

**2009** :10                      **2010** : 10                      **2011** : 10                      **2012** :10                      **2013** :10

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #24**

**1. Outcome Target**

Increase in number of fair, field days or event attendees who demonstrate an increased understanding of the health risks associated with the failure to wash hands by using safeguards provided (such as hand sanitation stations)

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

**2009** :1039                      **2010** : 1039                      **2011** : 1039                      **2012** :1039                      **2013** :1039

**3. Associated Institute Type(s)**

•1862 Extension

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

- 723 - Hazards to Human Health and Safety

**Outcome #25**

**1. Outcome Target**

Increase in number of farmers who create and implement business plans

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

**2009** 8                      **2010** :9                      **2011** : 8                      **2012** 8                      **2013** :8

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #26**

**1. Outcome Target**

Increase in number of program participants who make informed decisions about crop insurance

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

**2009** :1700                      **2010** : 1700                      **2011** : 1700                      **2012** :1700                      **2013** :1700

**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management

- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

**Outcome #27**

**1. Outcome Target**

Increase in number of tax school participants stating improved accuracy of tax reporting for their clients

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

**2009** :260                      **2010** : 260                      **2011** : 260                      **2012** :260                      **2013** :260

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 602 - Business Management, Finance, and Taxation

**Outcome #28**

**1. Outcome Target**

Increase in number of tax schools participants understanding federal and state tax laws and requirements

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

**2009** :680                      **2010** : 680                      **2011** : 680                      **2012** :680                      **2013** :340

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 602 - Business Management, Finance, and Taxation

**Outcome #29**

**1. Outcome Target**

Increase in number of farmers who use financial reports with another person for business purposes

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

**2009** :15                      **2010** : 15                      **2011** : 15                      **2012** :15                      **2013** :15

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 602 - Business Management, Finance, and Taxation

**Outcome #30**

**1. Outcome Target**

Increase in number of farmers who implement a practice that improves soil quality resulting in improved crop yield and quality

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

**2009** :20                      **2010** : 20                      **2011** : 20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #31**

**1. Outcome Target**

Increase the number of businesses who report increases in profitability directly related to tourism

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

2009 0                      2010 : 70                      2011 : 0                      2012 0                      2013 : 0

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 605 - Natural Resource and Environmental Economics

**Outcome #32**

**1. Outcome Target**

Increase in number of farmers that develop a nutrient management plan for their farm

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

2009 8                      2010 : 8                      2011 : 8                      2012 8                      2013 : 8

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 133 - Pollution Prevention and Mitigation

**Outcome #33**

**1. Outcome Target**

Increase the number of farmers who implement at least one change in nutrient management plan practices

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

2009 6                      2010 : 6                      2011 : 6                      2012 6                      2013 : 6

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

**Outcome #34**

**1. Outcome Target**

Increase the number of farmers who implement grazing plans

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

**2009** :20                      **2010** :20                      **2011** :20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #35**

**1. Outcome Target**

Increase the number of legislators and key decision makers who increase understanding of current local agricultural issues

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

**2009** :50                      **2010** :50                      **2011** :50                      **2012** :50                      **2013** :50

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

**Outcome #36**

**1. Outcome Target**

Increase the number of school facilities that implement IPM strategies

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

**2009** :10                      **2010** :10                      **2011** :10                      **2012** :10                      **2013** :10

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 216 - Integrated Pest Management Systems

**Outcome #37**

**1. Outcome Target**

Increase the number of sheep producers who supply lamb to Vermont Quality Meats

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

**2009** :30                      **2010** :30                      **2011** :30                      **2012** :30                      **2013** :30

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #38****1. Outcome Target**

Decrease in number of days of beach closures in pilot areas.

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

**2009 :** 4                      **2010 :** 3                      **2011 :** 0                      **2012 :** 0                      **2013 :** 0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #39****1. Outcome Target**

Increase the number of farmers who will make a change by learning how to: grow oil seed crops, harvest oil seed crops, process oil seed crops into oil, produce biofuel, and plan a cooperative on-farm biofuel facility

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

**2009 :** 50                      **2010 :** 0                      **2011 :** 0                      **2012 :** 0                      **2013 :** 0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 204 - Plant Product Quality and Utility (Preharvest)
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #40****1. Outcome Target**

Increase the number of growers who report cost savings from more cost effective and less toxic pest control due to easy access to pest control information sites.

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

**2009 :** 100                      **2010 :** 100                      **2011 :** 100                      **2012 :** 100                      **2013 :** 100

**3. Associated Institute Type(s)**

•1862 Extension

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

- 216 - Integrated Pest Management Systems

**Outcome #41****1. Outcome Target**

Increase in the number of Watershed Alliance (WSA) interns who report increased knowledge and skills related to environmental education and watersheds.

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

**2009 :** 9                      **2010 :** 9                      **2011 :** 9                      **2012 :** 9                      **2013 :** 9

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #42**

**1. Outcome Target**

Increase in number of farms that implement business plans resulting in increased profitability.

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

**2009** 20                      **2010** : 20                      **2011** : 20                      **2012** 20                      **2013** :20

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

**Outcome #43**

**1. Outcome Target**

Increase number of gardeners and growers who select and grow new crops based on relevant information on climate tolerance, performance and overwintering of perennials

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

**2009** 50                      **2010** : 50                      **2011** : 50                      **2012** 50                      **2013** :50

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants

**Outcome #44**

**1. Outcome Target**

Increase number of towns using stormwater management and non-point source pollution prevention best management practices.

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

**2009** 3                      **2010** : 3                      **2011** : 3                      **2012** 3                      **2013** :3

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management
- 723 - Hazards to Human Health and Safety

**Outcome #45**

**1. Outcome Target**

Increase the number of growers implementing Integrated Pest Management (IPM) practices reducing reliance on pesticides.

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

<b>2009</b> :160	<b>2010</b> : 160	<b>2011</b> : 160	<b>2012</b> :160	<b>2013</b> :160
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management
- 216 - Integrated Pest Management Systems

**Outcome #46****1. Outcome Target**

Increase the number of participants (who average 8 hours each in seminars) who will change a business practice(s)

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

<b>2009</b> 0	<b>2010</b> : 800	<b>2011</b> : 0	<b>2012</b> 800	<b>2013</b> :0
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 602 - Business Management, Finance, and Taxation

**Outcome #47****1. Outcome Target**

Increased delivery of organic dairy information to dairy farmers across the nation that is accessible, reliable, credible and up-to-date.

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

<b>2009</b> :1	<b>2010</b> : 1	<b>2011</b> : 1	<b>2012</b> :1	<b>2013</b> :1
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #48****1. Outcome Target**

Increase the number of local retail lawn and garden centers that are sources of information about low input lawn care options

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

<b>2009</b> 5	<b>2010</b> : 0	<b>2011</b> : 0	<b>2012</b> 0	<b>2013</b> :0
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**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #49**

**1. Outcome Target**

Increase in number of Master Gardener participants earning certification

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

**2009** :100                      **2010** : 100                      **2011** : 100                      **2012** :100                      **2013** :100

**3. Associated Institute Type(s)**

•1862 Extension

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 216 - Integrated Pest Management Systems

**Outcome #50**

**1. Outcome Target**

Increase in number of community watershed organizations developing pollution prevention outreach effort

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

**2009** 3                      **2010** : 3                      **2011** : 0                      **2012** 0                      **2013** :0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

**Outcome #51**

**1. Outcome Target**

Increase in number of educators in Watershed Alliance Program increasing knowledge and use of new teaching tools and techniques

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

**2009** 21                      **2010** :21                      **2011** : 21                      **2012** 21                      **2013** :21

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

**Outcome #52**

**1. Outcome Target**

Increase in number of households adopting low input lawn/garden care practices

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

**2009** :75                      **2010** : 100                      **2011** : 150                      **2012** :150                      **2013** :150

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

**Outcome #53**

**1. Outcome Target**

Increase in number of participants who report making a change in on-farm production, marketing, financial management, legal or human resource aspects of their business

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

**2009** :68                      **2010** : 71                      **2011** : 71                      **2012** :74                      **2013** :74

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

**Outcome #54**

**1. Outcome Target**

Increase in number of schools that continue to participate in Watershed Alliance (WSA) Program in subsequent years

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

**2009** :20                      **2010** : 20                      **2011** : 20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #55**

**1. Outcome Target**

Increase in number of students demonstrating increased knowledge of watersheds

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

**2009** :1200                      **2010** : 1200                      **2011** : 1200                      **2012** :1200                      **2013** :1200

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #56**

**1. Outcome Target**

Increase in number of towns adopting residential domestic NPS surveys to develop pollution prevention education

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

**2009 :** 3                      **2010 :** 3                      **2011 :** 0                      **2012 :** 0                      **2013 :** 0

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

**Outcome #57**

**1. Outcome Target**

Increase in the number of farmers who improve pasture management practices

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

**2009 :** 40                      **2010 :** 45                      **2011 :** 40                      **2012 :** 40                      **2013 :** 40

**3. Associated Institute Type(s)**

•1862 Extension

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 205 - Plant Management Systems

**Outcome #58**

**1. Outcome Target**

Increase in the number of student led community service watershed/water quality outreach projects

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

**2009 :** 20                      **2010 :** 20                      **2011 :** 20                      **2012 :** 20                      **2013 :** 20

**3. Associated Institute Type(s)**

•1862 Extension

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

- 112 - Watershed Protection and Management

**Outcome #59**

**1. Outcome Target**

Increase or maintain the number of growers who make informed decisions regarding best integrated pest management (IPM) options to reduce economic, health and/or environmental risks

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

**2009 :** 30                      **2010 :** 30                      **2011 :** 30                      **2012 :** 30                      **2013 :** 30

**3. Associated Institute Type(s)**

•1862 Extension

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

- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

**Outcome #60**

**1. Outcome Target**

Increase the number of commercial properties reducing landscape inputs

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

**2009** :20                      **2010** :25                      **2011** :25                      **2012** :0                      **2013** :0

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 205 - Plant Management Systems

**Outcome #61**

**1. Outcome Target**

Increase the number of home gardeners who increase their knowledge of Integrated Pest Management (IPM) practices

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

**2009** :175                      **2010** :175                      **2011** :175                      **2012** :175                      **2013** :175

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 216 - Integrated Pest Management Systems

**Outcome #62**

**1. Outcome Target**

Increase the number of people who show improvement in food safety and preservation practices

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

**2009** :20                      **2010** :20                      **2011** :20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 723 - Hazards to Human Health and Safety

**Outcome #63**

**1. Outcome Target**

Increase the number of student interns teaching backyard composting

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

**2009** :20                      **2010** : 0                      **2011** : 20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

•1862 Extension

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 216 - Integrated Pest Management Systems

**Outcome #64**

**1. Outcome Target**

Increase in number of Vermont Dairy Herd Improvement Association members that use their records to make herd management decisions that will improve business profitability

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

**2009** :75                      **2010** : 75                      **2011** : 75                      **2012** :75                      **2013** :75

**3. Associated Institute Type(s)**

•1862 Extension

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

- 307 - Animal Production Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #65**

**1. Outcome Target**

Increase in number of equine owners who use information to change behaviors in land and manure management of business practices to improve safety, animal health, and/or profitability of equine businesses and clientele

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

**2009** :40                      **2010** : 50                      **2011** : 55                      **2012** :55                      **2013** :55

**3. Associated Institute Type(s)**

•1862 Extension

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

- 307 - Animal Production Management Systems
- 602 - Business Management, Finance, and Taxation

**Outcome #66**

**1. Outcome Target**

Increase in number of farmers who implement a practice that improves pasture health and soil quality for improved forage yields and quality

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

**2009** :20                      **2010** : 20                      **2011** : 20                      **2012** :20                      **2013** :20

**3. Associated Institute Type(s)**

•1862 Extension

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

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**Outcome #67**

**1. Outcome Target**

Increase number of 4-H dairy youth project members and 4-H dairy adult leaders who use the Vermont 4-H Dairy Project Manual

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

**2009** 540                      **2010** : 540                      **2011** : 540                      **2012** 540                      **2013** :540

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

**Outcome #68**

**1. Outcome Target**

Increase number of dairy producers that make a facility change(s) to improve either heard health, herd productivity, the environment, community relations, labor efficiency, and/or crop quality/quantity

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

**2009** 45                      **2010** : 45                      **2011** : 45                      **2012** 45                      **2013** :45

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 307 - Animal Production Management Systems
- 315 - Animal Welfare, Well-Being and Protection

**Outcome #69**

**1. Outcome Target**

Increase the number of agricultural service providers who will make at least one change to their program and/or the way they work with beginning farmers to address stakeholder needs

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

**2009** 20                      **2010** : 20                      **2011** : 0                      **2012** 0                      **2013** :0

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 602 - Business Management, Finance, and Taxation

**Outcome #70**

**1. Outcome Target**

Increase the number of farmers who implement cover cropping on their farm

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

**2009** :15                      **2010** : 15                      **2011** : 15                      **2012** :15                      **2013** :15

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 205 - Plant Management Systems

**Outcome #71**

**1. Outcome Target**

Increase in number of forest owners, managers and users who make better decisions about forests using stumpage data

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

**2009** 0                      **2010** : 2000                      **2011** : 0                      **2012** 0                      **2013** :0

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 205 - Plant Management Systems
- 602 - Business Management, Finance, and Taxation

**Outcome #72**

**1. Outcome Target**

Increase in the number of forest owners saving money through use of written contracts for timber sales

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

**2009** 0                      **2010** : 0                      **2011** : 1200                      **2012** :1200                      **2013** :1200

**3. Associated Institute Type(s)**

- 1862 Extension

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

- 601 - Economics of Agricultural Production and Farm Management
- 605 - Natural Resource and Environmental Economics

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

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

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

**Description**

•Weather can affect sap and syrup quality    •High cost of gas may hinder travel to workshops    •Some sugarmakers may not have access to forest land with the proper species density or topography that permits efficient sap collection    •Newer and more efficient technologies for both sap collecting and syrup making may be too expensive for some sugarmakers    •Price of organic grain stays high    •Sponsors of on-farm field days have become lax about practicing biosecurity, and many ag service providers bend to the culture of not inconveniencing hosts and attendees    •Regulations for fuel production    •Dairy farm

profitability is currently influenced by decreasing price received for milk and meat products sold, coupled with increasing costs of production inputs including fuel, taxes, feed, fertilizer and labor •State and Federal water quality regulations require dairy farmers to implement management changes that may not be economically feasible or personally valued •There is money available to farmers to fund on-farm projects that improve water quality •Soil Building takes time and on some farms investments in soil quality will take more than the duration of the project to show results •If funds go away, so will the programs. If milk prices continue to be low, we may see a rise or fall in the demand for these programs •Farmers are generally producers of commodities of which they have no control of the price. They are also subject to biological and natural processes which affect their financial security and profitability •New farmers interested in sheep and market for lamb stays consistent •More tax practitioners need to be licensed

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

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

- Before-After (before and after program)
- After Only (post program)
- Retrospective (post program)
- Case Study
- Other (other data sources)

#### **Description**

{NO DATA ENTERED}

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

- Sampling
- Unstructured
- Case Study
- Telephone
- Observation
- Structured
- Portfolio Reviews
- Mail

#### **Description**

{NO DATA ENTERED}