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Extension Faculty and staff at the University of Vermont Extension (UVM Extension) and faculty and staff at the 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, UVM Extension and 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 wate U

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 through interdisciplinary and integrated work.

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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 can 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 VT-AES strive to strengthen efforts to ensure that research results, and educational resources remain accessible and relevant to the state's citizens. Advisors' continual check-ins 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 project's focus.

Additionally, UVM's Centers of Excellence help to coordinate, conduct and promote much of the research that is supported by VT-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:

- **7YbhYf'Zcf'GighU]bUV'Y'5 [f]Wi`hifY.** an interdisciplinary approach to integrating university and community expertise to promote sustainable farming systems throughout Vermont and the region.
- **7YbhYf'Zcf'FifU`GhiX]Yg.** connecting information and technical expertise with communities, businesses and policy makers in researching rural issues and information dissemination.
- **DfcWhcf'AUd`Y'FYgYUfW\`7YbhYf.** applied research in the production of maple sap and syrup.
- **8U]fm'7YbhYf'cZ'9IWY`YbWY.** an initiative to allow VT-AES to work in tandem with Vermont farms and state and agriculture leaders to tailor research to better serve Vermonters. Some of the research will be conducted in Vermont towns and farms allowing closer relationships and increased research relevancy. It is envisioned to expand this initiative to create a consortium of Northeast universities with similar vision.
- **:ccX'GmghYag=b]h]Uh]jY.** food systems research spans a broad spectrum of topics and disciplines. There is innovative work being done on working landscape, value-added foods, health of communities, among other food system initiatives.

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these workers to reach out to receive health care. Research studies are focusing on access and education for workers on health care issues.

- New Farmer Program provides programming for new American populations who have a strong history and culture of farming but Vermont's climate and farming practices are new to them.

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• Efforts to address community health issues, especially obesity and associated disease, through access of local, fresh food for all income levels will be important. Programs will work with those that serve at-risk clients such as migrant families, low resource families, seniors and those dealing with disease.

- "Food Agency" is a measure of an individual's ability to set and achieve food related goals in life. Researchers are testing this concept with people from rural locations in Vermont with the goal of improving food and health related interventions in schools and communities.

**7c a a i b]hm' 8Y jY'cd a Yb]** addresses community strengths and challenges, focusing programs to build assets through its citizens:

- Migrant Education Recruitment Program (MEP) ensures that children of migrant farm workers, and qualifying youth under age 22, are aware of the educational support services available to them. English as a Second Language (ESL) programming is done with translation services to improve employee-employer communication. Health access with the medical school and home gardens in some regions of the state occur to meet workers' daily needs.
- 4-H delivers educational programs to all youth developing life skills with extra effort in place to target urban areas, and offers activities for both teen audiences, as well as limited resource families and youth who are at-risk.
- PROSPER assists communities to build capacity to serve youth who are or might be at-risk.

ADA language is included on all our materials, following federal, state and university policies.

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

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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.

The ultimate goals section lists the outcome statements in each of the planned programs. Outcome measures list the outcome indicators. Data reported is taken from our on-line system, representing the sum of individual logic models using shared outcomes, outcome measures and outputs.

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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. Parent Plans (logic model format) focus on issues. They are developed and updated by faculty and program staff. Elements of these Parent Plans are used by individuals as they build individual plans, program logic models resulting in shared efforts to outputs and results to outcome indicators and outcomes. Clearly defined outcomes and measurable indicators create focused programming because they are problem driven and results focused.

The federal plan of work update 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. Professional development activities focus on evaluation and program development including evaluation. Evaluation and reporting is focused at mid-term results.

Efforts to focus programming and measurement of results are reflected each year as the planning process occurs annually.

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- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of the general public
- Other (see narrative for details)

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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. 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 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, a 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.

For the Vermont Agricultural Experiment Station, our stakeholders include the following:

- College of Agriculture and Life Sciences' Advisory Board
- Vermont Dairy Center of Excellence Advisory Board
- Vermont Maple Industry Council
- Vermont Agency of Agriculture, Food and Markets
- Northeast Organic Farming Association of Vermont (NOFA)
- Vermont Tree Fruit Growers' Association
- Several regional Maple Sugar Makers Associations
- Citizen action groups such as Friends of the Hort Farm

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

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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. Future efforts will include notices in local popular press and other media to solicit all interested stakeholders. Applications from women and people from diverse racial, ethnic and cultural backgrounds will be encouraged.

The Vermont Agricultural Experiment Station seeks input often from the College of Agriculture and Life Sciences' (CALs) Advisory Board to increase the relevancy of its research programs for Vermont communities, landscapes and human and animal health. This board is a cross section of Vermont and Northeast representatives that form part of our stakeholder groups. We seek input from these stakeholders and colleagues regularly and they consist within the following groups: the Vermont Agency of Agriculture, Food and Markets; various Vermont commodity groups; the UVM Dairy Center of Excellence; and among the agricultural industry groups throughout Vermont and beyond.

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]bX]j]Xi U`g'UbX' [ fc i dg'k \c'UfY'ghU\_Y\c`XYfg'UbX'hc'Wc``YWh']bd i h'Zfc a'h\Y a**

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

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The Vermont Agricultural Experiment Station (VT-AES) collects stakeholder input from

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1	Global Food Security and Hunger
2	Community Development and the Personal and Intellectual Development of Youth and Adults
3	Climate Change
4	Sustainable Energy
5	Childhood Obesity
6	Food Safety



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Global Food Security and Hunger

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UVM Extension and VT-AES are continually working to boost agricultural production in Vermont and the region to meet the needs of local communities and those wanting fresh agricultural products in Northeastern urban central products i

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1. Program Knowledge Areas and Percentage

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112	Watershed Protection and Management	5%		0%	
123	Management and Sustainability of Forest Resources	4%		0%	
133	Pollution Prevention and Mitigation	31%		2%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		6%	
205	Plant Management Systems	4%		13%	
206	Basic Plant Biology	0%		8%	
211	Insects, Mites, and Other Arthropods Affecting Plants	0%		8%	
216	Integrated Pest Management Systems	5%		7%	

5%

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Situation and priorities from each of the Parent plans (problem driven logic models) as follows:

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Agriculture in Vermont is becoming more highly diversified and represents a critical component of this state's revenue. The fundamental character of Vermont is reflected in its agricultural working landscape which symbolizes a way of life strongly cherished by its citizens. The stakeholders of Vermont's agriculture encompass all the state's citizens, including the general public and a diverse group of growers, farmers, landscapers and practitioners involved with working on or for the land. These stakeholders recognize the value of Vermont's agriculture and the need to increase their knowledge and improve their skills to ensure its environmental and economic sustainability, thereby protecting air, water, soil, and human health resources. As a result of climate change and increased mobility of people and products, there is an increased threat of new and invasive pests and diseases impacting agriculture and the landscape in Vermont. Extension programs and personnel address critical stakeholder issues by disseminating essential current science-based information to a broad range of audiences to increase their knowledge and skills and encourage implementation of cost-effective, environmentally sound sustainable agricultural practices.

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- Pest management practices including pest identification and pest management using a variety of tools employing least toxic practices (Integrated Pest Management/IPM).
- Safe and judicious use of pesticides
- Nutrient management
- Invasive pest identification and awareness
- Organic management concepts, strategies and practices

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Both the economy and the environment consistently top the list of Vermonters' concerns, according to the annual Vermonter Poll (2008). These findings correspond with a recent survey undertaken as part of the Council on the Future of Vermont, a project of the Vermont Council on Rural Development. The goal of the project was to promote public dialogue on values, challenges, opportunities, priorities and visions for Vermont. Survey findings include rankings of the top seven highest rated values and challenges (Center for Rural Studies, August 2008, [http://www.uvm.edu/crs/reports/2008/CFV\\_Full\\_Report.pdf](http://www.uvm.edu/crs/reports/2008/CFV_Full_Report.pdf)). Respondents placed the greatest value overall on "the state's working landscape and heritage." The greatest challenges were "the increasing costs of living, such as transportation, heating and electricity," followed closely by "the health and viability of Vermont farms and the agricultural sector."

Clearly, economic opportunities that support the working landscape are needed throughout the state. The Vermont Sustainable Agriculture Council's 2009 Annual Report and Recommendations (<https://www.uvm.edu/sustainableagriculture/council/SAC2009Report.pdf>) focus on two primary areas: strengthening Vermont's local food system and enhancing on-farm energy alternatives. Improved knowledge and skills lea

2017 University of Vermont Combined Research and Extension Plan of Work

Specific problems that need to be addressed include:

- There still is a trend and place in Vermont for large dairy farm operations.
- Environmental regulations are only getting tighter, therefore making it increasingly difficult for all dairy operations.
  - Due to niche marketing, value added products, the organic market, and Vermont's proximity to large markets, there should always be dairy farms in Vermont.
  - Education and research in organics will help farmers improve profitability. Organic dairy farmers will be able to add another enterprise to farm.
  - Price of fuel will remain unstable in the future. Price of fuel will continue to pose an economic risk to farmers. Economic advantages of on-farm biodiesel production will increase.
  - 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 that practitioners will continue to need good information that is reasonably-priced.
  - Many farmers start their business with no plan; sometimes they expand from a hobby, or take-over the family farm, then find themselves needing to borrow money or make a large change. Farmers would benefit from having a plan in place to help navigate these unexpected challenges.
  - The travel and tourism industry in Vermont is growing rapidly and may soon become the largest industry in Vermont if trends continue. This rapid growth provides both challenges and opportunities for Vermont's working landscape and rural communities.
  - Public interest in sourcing local foods extends into beverages and the demand for local hops, wines, and ciders have continued to rise. Environmentally safe methods for pest management are being studied.
  - Funding is available, but likely attained through cooperative efforts.

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Improve agricultural and environmental sustainability (Condition)

- Individuals and business owners take actions that improve their economic sustainability while minimizing their impact on the environment (Action)
- Individuals and business owners take actions that comply with environmental quality laws and/or protect natural resources (Action)

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	%, * &	%, -\$	%, * &	%, -\$
2017	29.9	0.0	15.0	0.0
2018	29.9	0.0	15.0	0.0
2019	29.9	0.0	15.0	0.0
2020	29.9	0.0	15.0	0.0
2021	29.9	0.0	15.0	0.0

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Project listed in bold followed by delivery methods

- **5 [ `6 i g]bYgg` AUbu [Y a Ybh`** Conferences, courses, consultations and farm visits.
- **5 [ f]Wi`h i fU`gUZYhm.** Courses, consultations and farm visits.
- **6Y [ ]bb]b [ ` : Uf a Yf`-b]h]U] j Y.** Focus groups, learning circles, workshops, mini-courses and publications.
- **7 c a a i b]hm`DfYdUfYXbYgg`** Workshops and discussion groups.
- **9b [ ]bYYf]b [ `Zcf` : ccX`DfcX i Wh]cbz` <Uf j Ygh`UbX`GhcfU [Y`** Consultations, workshops, various media.
- **9 I hYbg]cb` AUghYf` ; UfXYbYf`** Course, train the trainer.
- **: Uf a `UbX` : cfYgh`HfUbgZYfg`** Workshops, consultations, farm visits.
- **: Uf a `J]UV] ]hm`** Farm visits, consultations.
- **: Uf a ]b [ ` 5`hYfbUh] j Yg.** Workshops, consultations, farm visits.
- **: cfU [ Y`UbX`DUgh i fY` AUbu [Y a Ybh`9X i WU]cb`** Conference, farm visits, consultations.
- **; ccX` 5 [ f]Wi`h i fU`DfUWh]WYg`fl ; 5DŁ`** Consultations, workshops.
- **; fc i bX` Kcf`\_` 6 i ]`X]b [ ` 7UdUW]hm`hc` Dfc j]XY`HfUWhcf`9X i WU]cb`** Workshops, curriculum development.
- **@] j YghcW`\_` DfcX i Wh]cb`UbX`DfcX i Whg`** Consultations, discussion groups, workshops.
- **AUd`Y`Dfc [ fU a`** Conference, workshops, newsletter.
- **B i hf]Ybh` AUbu [Y a Ybh`Dfc [ fU a`.** Farm visits, consultations.
- **Cf [ Ub]W` ; fU]b`Dfc`^YWh.** Demonstrations, data gathering.
- **DYgh` AUbu [Y a Ybh`9X i WU]cb`** Integrated Pest Management (IPM) and Pesticide Education and Safety Program (PESP) training.
- **Df] j UhY#7 c a a YfW]U` `@UbXc kbYf`UbX`-bX i ghfm`DfcZYgg]cbU` `9X i WU]cb`** Tour and conference.
- **Gc]` <YU`h`** Workshops.
- **G i ghU]bUV`Y` : cfYghg`** Classes, workshop series, various media.
- **I JA`HUI`GW\cc`** Conference, tax book.
- **JY [ YhUV`Y`UbX`6Yffm` ; fc k Yfg.** Consultations, farm visits, meetings, various media, presentations, website.
- **JYf a cbh`BYk` : Uf a Yf`BYhkcf`\_`** Conference, networking, consultations.
- **JYf a cbh`DUgh i fY`BYhkcf`\_`** Pasture walks, demonstrations and trials, conference, consultations, various media.
- **JYf a cbh`Hc i f]g a `UbX`FYWfYU]cb`** Research, conference.
- **Kc a Ybfig` 5 [ f]Wi`h i fU`BYhkcf`\_`** Newsletters, website, classes, workshops, individual and small group consultations.

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- **Gc]`ZYfh] ]hm#W\Y a ]ghfm#d\mg]WU`dfcV`Y a g`UggcW]UhYX` k]h` kUghY`X]gdcgU` `UbX`V]cfY a cX`ZUWh]cb**

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Education Class Workshop Group Discussion One-on-One Intervention Demonstrations Other 1 (Train the Trainer) Other 2 (Presentation/field days)	Newsletters TV Media Programs eXtension web sites Web sites other than eXtension Other 1 (Publication- professional/peer)

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- Adults
- Agriculture/Natural Resources: Watershed Based Organizations
- Agriculture: CCA & Crop Consultants
- Agriculture: Crop Producers

- Agriculture: Dairy Producers
- Agriculture: Farm Employees
- Agriculture: Farm Families
- Agriculture: Farm Managers
- Agriculture: Farmers
- Agriculture: Goat & Sheep Producers
- Agriculture: Greenhouse Ornamental Growers
- Agriculture: Home Gardeners
- Agriculture: Industry Professionals
- Agriculture: Livestock producers
- Agriculture: Maple Industry
- Agriculture: Maple Sugar Producers
- Agriculture: Non-Dairy Producers
- Agriculture: Nursery operators
- Agriculture: Ornamentals Industry Professionals
- Agriculture: Service Providers
- Agriculture: Small Fruit & Vegetable Growers
- Agriculture: Veterinarians
- Agriculture: Dairy Goat, Meat Goat and Dairy Sheep Producers

**Jfl ; l" D`UbbYX`Dfc [fU a `fC i hd i hgt**

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

Number of contacts

Direct Adult Contacts

Indirect Adult Contacts

Direct Youth Contacts

Indirect Youth Contact

Number of patents submitted

Number of peer reviewed publications

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.



**Jfl<L''GhUhY' 8YZ]bYX' C i h d i h g**

**%'' C i h d i h' AYUg i f Y**

Class/course

Conference

Consultation

Consumer publication

Demonstration

Discussion group

Educational/evaluation instrument

Electronic communication/phone

Field day/fair

Field site visit

Funding request

Presentation

Publication - curriculum

Publication - fact sheet

Publication - magazine article

Publication - manual

Publication - newsletter

Publication - newspaper/article

Research project

TV segment/Across the Fence (ATF)

Publication - technical

Tour(s)

Mass Media - blog post/social media/web page/internet site development and updating

Workshop - series

Workshop - single session

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**Jfl-L'' GhUhY' 8YZ]bYX' C i hWc a Y**

<b>C''Bc</b>	<b>C i hWc a Y'BU a Y</b>
1	Number of farmers that develop a nutrient management plan protecting water and soil
2	Number of Master Gardener participants who earn certification and apply IPM and plant diagnostic skills with home gardeners, youth and community members
3	Number of farmers who implement best agricultural practice(s) improving crop/pasture, product, and/or soil productivity while protecting water, air, soil and/or other natural resource
4	Number of individuals who implement IPM practice(s) increasing the protection of water, air and/or soil

Number of individuals and business owners who implement recommended practice(s) that accomplish owner values and goals to improve mp d/l b/o

**C i h W c a Y , 1**

% " C i h W c a Y H U f [ Y h

Number of farmers that develop a nutrient management plan protecting water and soil

& " C i h W c a Y H m d Y . Change in Action Outcome Measure

' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l

133 - Pollution Prevention and Mitigation

( " 5 g g c W [ U h Y X ' = b g h ] h i h Y ' H m d Y f i g l

1862 Extension

**C i h W c a Y , 2**

% " C i h W c a Y H U f [ Y h

Number of Master Gardener participants who earn certification and apply IPM and plant diagnostic skills with home gardeners, youth and community members

& " C i h W c a Y H m d Y . Change in Action Outcome Measure

' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l

205 - Plant Management Systems

216 - Integrated Pest Management Systems

( " 5 g g c W [ U h Y X ' = b g h ] h i h Y ' H m d Y f i g l

1862 Extension

**C i h W c a Y , 3**

% " C i h W c a Y H U f [ Y h

Number of farmers who implement best agricultural practice(s) improving crop/pasture, product, and/or soil productivity while protecting water, air, soil and/or other natural resource

& " C i h W c a Y H m d Y . Change in Action Outcome Measure

' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l

112 - Watershed Protection and Management

133 - Pollution Prevention and Mitigation

402 - Engineering Systems and Equipment

601 - Economics of Agricultural Production and Farm Management

602 - Business Management, Finance, and Taxation

**( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ**

1862 Extension

**C i hWc a Y' 4**

**% " C i hWc a Y' HUf [ Yh**

Number of individuals who implement IPM practice(s) increasing the protection of water, air and/or soil

**& " C i hWc a Y' HmdY' .** Change in Knowledge Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUfigŁ**

133 - Pollution Prevention and Mitigation

205 - Plant Management Systems

216 - Integrated Pest Management Systems

**( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ**

1862 Extension

**C i hWc a Y' 5**

**% " C i hWc a Y' HUf [ Yh**

Number of individuals and business owners who implement recommended practice(s) that accomplish owner values and goals to improve/protect business sustainability

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUfigŁ**

112 - Watershed Protection and Management

133 - Pollution Prevention and Mitigation

205 - Plant Management Systems

216 - Integrated Pest Management Systems

315 - Animal Welfare/Well-Being and Protection

601 - Economics of Agricultural Production and Farm Management

602 - Business Management, Finance, and Taxation

604 - Marketing and Distribution Practices

605 - Natural Resource and Environmental Economics

723 - Hazards to Human Health and Safety

**( " 5ggcW]UhYX' -bgh]h i hY' HmdYflgŁ**

1862 Extension

1862 Research

**C i hWc a Y' 6**

**% " C i hWc a Y' HUf [ Yh**

Number of individuals who complete a plan including preventative measures to secure animal health, food safety and public health protecting the food chain and market integrity

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUflgŁ**

604 - Marketing and Distribution Practices

723 - Hazards to Human Health and Safety

**( " 5ggcW]UhYX' -bgh]h i hY' HmdYflgŁ**

1862 Extension

1862 Research

**C i hWc a Y' 7**

**% " C i hWc a Y' HUf [ Yh**

Number of growers who adopt new crop/plant variety(ies) resulting in maintaining or increasing sales

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUflgŁ**

205 - Plant Management Systems

602 - Business Management, Finance, and Taxation

**( " 5ggcW]UhYX' -bgh]h i hY' HmdYflgŁ**

1862 Extension

1862 Research



**( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ**

1862 Extension

**C i hWc a Y' . 11**

**% " C i hWc a Y' HUf [ Yh**

Number of growers growing organic crops increase revenues improving business sustainability

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUfigŁ**

601 - Economics of Agricultural Production and Farm Management

**( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ**

1862 Extension

1862 Research

**C i hWc a Y' . 12**

**% " C i hWc a Y' HUf [ Yh**

Number of producers who implement produce safety/food safety plans/practices to gain or maintain a market for their locally grown crop(s)

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure

**' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUfigŁ**

604 - Marketing and Distribution Practices

**( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ**

1862 Extension

**C i hWc a Y' . 13**

**% " C i hWc a Y' HUf [ Yh**

Number of farmers who implement key element(s) of their nutrient management plan protecting water and soil

**& " C i hWc a Y' HmdY' .** Change in Action Outcome Measure



**5ggcW]UhYX' ?bc k`YX[Y' 5fYUflgŁ**

133 - Pollution Prevention and Mitigation

602 - Business Management, Finance, and Taxation

**( " 5ggcW]UhYX' =bgh]h i hY' HmdYflgŁ**

1862 Extension

**C i hWc a Y' , 14**

**% " C i hWc a Y' HUf [Yh**

Number of farmers who report that accessibility, cost, and associated challenges of child care are factors in their success and wellbeing

**& " C i hWc a Y' HmdY' .** Change in Knowledge Outcome Measure

**5ggcW]UhYX' ?bc k`YX[Y' 5fYUflgŁ**

601 - Economics of Agricu - o

o

wl

**&" C i hWc a Y' HmdY' . Change in Knowledge Outcome Measure**

**" " 5ggcW]UhYX' ?bc k`YX [Y' 5fYUflgŁ**

- 205 - Plant Management Systems
- 206 - Basic Plant Biology
- 216 - Integrated Pest Management Systems

**(" 5ggcW]UhYX' =bgh]h i hY' HmdYflgŁ**

- 1862 Research

**Jfl>Ł" D`UbbYX`Dfc [fU a `fl9 IhYfbU` : UWhcflgŁ**

**%" 9 IhYfbU` : UWhcflg` k \]W\` a Um`UZZYWh` C i hWc a Yg**

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

**8YgWf]dh]cb**

**DUfYbh`D`Ub.`Wc a a i b]h]Ygž`V i g]bYgg`]bW` i X]b [ `U [f]Wi`h i fU`UbX`ZcfYgh`UbXc kbYfg`UbX`cdYfUhcflgž`UbX` \c a Yc kbYfg`dfchYWh`h \Y`Yb j]fcb a Ybh.**

- Soil building takes time and on some farms, investments in soil quality will take more than the duration of the project to show results.
- Growers are receptive to expand their use of IPM, but make changes in their production practices slowly to reduce negative impacts.
- New pesticides, biological controls and other effective IPM tactics are still being tested, and need to be assessed under field conditions before they are broadly adopted.
- The costs of some IPM practices are considerably higher than chemical pesticides which reduce adoption by growers.
- Customers in general have limited knowledge of IPM, though they are willing to pay more for IPM produced products when informed of the benefits of this production approach.

**DUfYbh`D`Ub.`YWcbc a ]W`g i ghU]bUV`]hm`cz`ZUf a gž`ZcfYghž`UbX`ch \Yf`YbhYfdf]gYg.**

- Costs of production inputs
- Prices received for products sold
- New laws and regulations are being introduced, and enforced almost constantly. The time has come when compliance is no longer voluntary but necessary.

**Jfl?L"D`UbbYX`Dfc [fUa`!`D`UbbYX`9 jU` i Uh]cb`Gh i X]Yg**

**8 YgWf]dh]cb`cZ`D`UbbYX`9 jU` i Uh]cb`Gh i X]Yg**

Every individual plan of work is logic model based, including targets for outcome indicators. A part of setting targets is laying out an evaluation plan. Evaluation results are reported in the accomplishment report against outcomes and in narratives. Post event surveys and evaluations completed by repeat attendees of annual events are asked about changes made as a result of something learned at the previous events. Observations, interviews, and other evaluation strategies are used to collect changes made, as well as resulting impacts experienced by program participants. Evaluation occurs at most educational events assessing participant knowledge and skills gained.



**Jfl6L''Dfc [fUa ' ?bck`YX[Y' 5fYUfgL**

1. Program Knowledge Areas and Percentage

?5 7cXY	?bck`YX[Y' 5fYU	i %, *& 9 lhYbg]cb	i %, -\$ 9 lhYbg]cb	i %, *& FYgYUfW\	i %, -\$ FYgYUfW\
124	Urban Forestry	7%		0%	
608	Community Resource Planning and Development	16%		0%	
802	Human Development and Family Well-Being	11%		0%	

necessary to succeed and meet our country's needs in the future. A recent report of the National Academy of Sciences (2006), *Rising Above the Gathering Storm*, speaks to the urgent need to enhance academic and vocational experiences in STEAM. American inventiveness and competitiveness in the global marketplace are at risk as student interest and performance in STEAM disciplines declines at the same time that STEAM literacy and mastery expectations rise (Business Roundtable, 2005). The increasing pace and complexity of life in a technological age demands engaged, innovative, and cooperating citizens" (Silliman, 2007).

When families undergo major transitions such as changing caregivers, separation and divorce, parents benefit from ideas and strategies to lessen the impact of the changes on the children.

**DUFYbh'D`Ub. `Dfc j]XY`d cg]h]j`Y`Wc a a i b]hm`Yb [U[Y a Ybh`cddcfh i b]h]Yg`Zcf`mc i h\`UbX`UX i`hg.**

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. In his book, *Bowling Alone*, Putnam states that, "Americans' affiliations with civic institutions with a face-to-face quality - from churches to service groups like Kiwanis and PTAs - have declined over the last generation."

*Youth in Decision-Making: A study on the impacts of youth on adults and organizations* (Zeldin, McDaniel, Topitzes, and Calvert, 2000) states, "Expanding community capacity means that a variety of organizations and agencies have to involve young people in decision-making. This has not yet happened ... as more organizations adopt youth governance into their operating philosophy in the future, a critical mass of expertise will grow." In addition, the connection of youth development to community development is critical; by integrating youth into their communities, they feel empowered, relevant and valued. In return, the community benefits from vital services provided by the youth.

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 the job market, but fails in teaching good citizenship. Citizenship education is a mission mandate area for 4-H Youth Development programming (4-H National Headquarters) in hopes that 4-H youth step into leadership roles and affect change at community level.

Cornelia and Jan Flora (2008) developed the **7c a a i b]hm`7Ud]hU`g` : fU a Ykcf\_** as an approach to analyze how communities work. Based on their research to uncover characteristics of entrepreneurial and sustainable communities, they found that the communities most successful in supporting healthy sustainable community and economic development paid attention to all seven types of capital: natural, cultural, human, social, political, financial and build. **< i a Ub`7Ud]hU`** is the focus of our work with youth and families; developing the skills and abilities of people, as well as the ability to access outside resources and bodies of knowledge in order to increase understanding and to identify promising practices. Human capital also addresses leadership's ability to "lead across differences," to focus on assets, to be inclusive and participatory, and to be proactive in shaping the future of the community or group.

The Migrant Education Recruitment Program (MEP) serves children and youth who move with family member(s) or guardian(s) to obtain or in search of temporary or seasonal work in agriculture or logging. MEP recognizes that a positive relationship between parents and school is essential to the success of a child's academic life. In order to further and support this positive relationship, MEP offers statewide support to migrant families.

Urban and community forests provide ecological services that benefit the environmental, economic and

social conditions of Vermont communities. This resource includes trees in our backyards, along our streets, in parks and town greens and in municipal forests. These urban forests can directly enhance the atmosphere and transform the surrounding environment through 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 stormwater 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. These benefits may not seem important to a state that is approximately 78% forested, but with 38% of Vermont's residents living in urban areas the need to better advocate for this public resource is becoming increasingly evident. Furthermore, with the increasing urbanization of Vermont, up 22% from 1990, the canopy cover over Vermont communities is decreasing and in many

enable them to move their communities toward solving self identified issues.

**9.1.1.1 Youth STEAM Literacy**

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

- Youth apply STEAM learning in their lives and demonstrate interests and aspirations toward STEAM careers

Improve community collaboration to address issues and build community assets. (Condition)

- Community members or community groups/organizations effectively mobilize to better understand and solve community problems
- Citizens participate in local government and/or community groups where policy decisions are made.

Improve personal and intellectual development of Vermont youth. (Condition)

- Families under transition acknowledge and mitigate the impact of changes on their children.
- Youth and adults gain mastery of life skills.
- Youth are involved in communities as active, productive citizens.

**9.1.1.2 Youth Personal and Intellectual Development**

9.1.1.2 Youth Personal and Intellectual Development: High School Graduation Rates

	%, * &	%, -\$	%, * &	%, -\$
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engineers. The 4-H STEAM program will present 4-H with a new opportunity to connect to the Land Grant University's STEAM research community and integrate with current youth workforce development initiatives.

**7ca a i b]hm'@YUXYfg\jd.** Assessing, addressing and expanding community capacity through leadership and public policy education efforts including building coalitions and collaboratives, and educating their members and clientele.

**7cd]b [ ' k]h \ 'GYdUfUh]cb'UbX' 8]jcfWY'fl7CD9L.** 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.

**A][fUbh'9X i WUh]cb' FYWf i ]h a Ybh'Dfc [fU a 'flA9Dl.** 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.

**JYf a cbh' I fVUb'UbX' 7ca a i b]hm' : cfYghfm'Dfc [fU a .** A joint initiative between UVM 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 as well as First Detector education for invasive pests. Delivery Methods: Classes, meetings, various media, community volunteer projects.

**DFCGD9F. [DFCmoting Gschool-community-university'Dartnerships to 9nhance Fesilience]:** PROSPER is a delivery system of evidence-based programs for the purpose of improved child and family outcomes such as long-term reductions in substance use; reduced youth behavior problems; and long-term effects on school engagement and academic success, with similar benefits occurring for both low- and high-risk groups.

**&''HmdYflgl' cZ' a Yh \ cXg'hc' VY' i gYX'hc' fYUW\ 'X]fYWh'UbX']bX]fYWh'WcbhUWhg**

**9 IhYbg]cb**

<b>8]fYWh' AYh \ cXg</b>	<b>-bX]fYWh' AYh \ cXg</b>
Education Class	Newsletters
Workshop	TV Media Programs
Group Discussion	Web sites other than eXtension
One-on-One Intervention	Other 2 (radio ed. spots)
Demonstrations	
Other 1 (Train the Trainer)	
Other 2 (4-H Afterschool, club)	

**' '' 8YgWf]dh]cb' cZ'hUf [ YhYX'U i X]YbWY**

- 4-H Leaders (Adult)
- 4-H: Adult Volunteers
- 4-H: Camp Board Directors

- 4-H: Youth Volunteers
- Adults
- Age 6 - 18 Youth
- Age 19 - 24 Young Adult
- Age 25 - 60 Adult
- Agriculture: Industry Professionals
- Agriculture: Government Agency Personnel
- Communities: Cities and Towns
- Communities: Educators
- Communities: Local Officials/Leaders
- Communities: Non-Governmental Organizations
- Communities: Schools
- Community leaders and citizens
- Extension: Faculty/Staff
- Forestry: Woodland Managers/Foresters
- Funders
- Policy Makers: Legislators
- Public: Families
- Public: General
- Public: Nonprofit Organizations
- Public: Parents
- Public: Small Business Owners/Entrepreneurs
- Train-the-Trainer recipients (Adults)
- USDA personnel
- 4-H Community or Project Clubs Participants (Youth)
- 4-H Special Interest or Short-Term Program Participants (Youth)
- 4-H Youth (Youth)
- Migrant In School Youth
- Migrant Out of School Youth
- School Enrichment Program Participants (Youth)

**Jfl ; l" D`UbbYX`Dfc [fU a `flC i hd i hgt**

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Indirect Adult Contacts

Direct Youth Contacts

Indirect Youth Contact

Number of patents submitted

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**Jfl<L''GhUhY' 8YZ]bYX' C i h d i h g**

**%'' C i h d i h' AYUg i fY**

4-H Afterschool

4-H Club

4-H Day Camp

4-H Overnight Camp

4-H School Enrichment

4-H Short-term/special interest

Class/course

Conference

Consultations

Discussion Group

Field Site Visit

Funding request

Presentations

Publication - fact sheet

Publication - newsletter

Publication - newspaper/article

TV segment/Across the Fence (ATF)

Train the Trainer sessions

Workshop - series

Workshop - single session

Trainee Delivered Programming

Mass Media: blog post/social media/web page/internet site updating

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**Jfl-L'' GhUhY' 8YZJbYX' C i hWc a Y**

<b>C''Bc</b>	<b>C i hWc a Y'BUa Y</b>
1	Number of eligible migrant youth enrolled in the Vermont Migrant Education Program
2	Number of individuals (youth and volunteers) in short term and/or afterschool programs increase STEAM related knowledge and/or skills in content and careers
3	Number of parents undergoing family transition through parentage, divorce or separation who understand the impact of these changes and their behavior on their children.
4	Increase in number of youth reached with positive youth development programming demonstrate mastery for targeted life skills, including: decision making; wise use of resources; communication; accepting differences; leadership; useful/marketable skills; healthy lifestyle choices; and/or self-responsibility

Number of individuals who use sewing, quilting or other techniques/activities in clubs and programs to better prepare youth to develop life and job skills, learned through 4-H training and development

**C i h W c a Y . 1**

**% " C i h W c a Y ' H U f [ Y h**

Number of eligible migrant youth enrolled in the Vermont Migrant Education Program

**& " C i h W c a Y ' H m d Y ' .** Change in Action Outcome Measure

**' " ' 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

805 - Community Institutions and Social Services

806 - Youth Development

**( " ' 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t**

1862 Extension

**C i h W c a Y . 2**

**% " C i h W c a Y ' H U f [ Y h**

Number of individuals (youth and volunteers) in short term and/or afterschool programs increase STEAM related knowledge and/or skills in content and careers

**& " C i h W c a Y ' H m d Y ' .** Change in Knowledge Outcome Measure

**' " ' 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

806 - Youth Development

**( " ' 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t**

1862 Extension

**C i h W c a Y . 3**

**% " C i h W c a Y ' H U f [ Y h**

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

**& " C i h W c a Y ' H m d Y ' .** Change in Knowledge Outcome Measure

**' " ' 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

802 - Human Development and Family Well-Being

( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ

1862 Extension

C i hWc a Y' 4

% " C i hWc a Y' HUf [ Yh

Increase in number of youth reached with positive youth development programming demonstrate mastery for targeted life skills, including: decision making; wise use of resources; communication; accepting differences; leadership; useful/marketable skills; healthy lifestyle choices; and/or self-responsibility

& " C i hWc a Y' HmdY'. Change in Action Outcome Measure

' " 5ggcW]UhYX' ?bc k`YX [ Y' 5fYUfigŁ

806 - Youth Development

( " 5ggcW]UhYX' =bgh]h i hY' HmdYfigŁ

1862 Extension

C i hWc a Y' ĸ

% " C i hWc a Y' HUf [ Yh

Number of volunteers and staff demonstrating new techniques/activities in clubs and programs to better





**( " 5ggcW]UhYX' -bgh]h i hY' HmdYflgŁ**

1862 Extension

**Jfl>Ł" D`UbbYX`Dfc [ fU a `fl9 I hYfbU` : UW hcfgŁ**

**%" 9 I hYfbU` : UW hcfg` k \]W\` a Um` UZZYWh` C i hWc a Yg**

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

Populations changes (immigration, new cultural groupings, etc.)

**Jfl5L"D`UbbYX`Dfc [fUa`flGi a aUfmL**

**Dfc [fUa`**

**%"BUaY`cZ`h\Y`D`UbbYX`Dfc [fUa**

Climate Change

**&"6f]YZ`gi a aUfm`UVci h`D`UbbYX`Dfc [fUa**

Climate change has the potential to have drastic impacts on Vermont agriculture, northern forests, land-use choices, net population change, and the overall Vermont rural economy. Research in this program reflects genetic variations in forests compositions, reduction in carbon footprints in food systems, leaching of nutrients from composts, to developing best management practices to adopt climate change mitigation. VT-AES scientists focus on understanding and modeling these changes, mitigating negative impacts if possible, and positioning our agricultural-based rural economy to remain competitive in the global marketplace. UVM Extension's educational outreach is continually updating its curriculum with the latest research, for changing audiences, and adjusting delivery strategies to meet client needs.

Extension's work with maple producers is sharing the latest research to efficiently produce a quality, safe product while protecting forest stands with good management and sound business practices. We are working with communities to develop policy and engage citizens so they can mitigate the effects of shifting weather patterns. Communities are dealing with invasive pests, water events, forest fragmentation and management, and energy efficiency and usage. Extension is adapting its programming for crop and produce growers who are dealing with extended drought spells and large weather events. Outreach and education assist with irrigation and drainage issues as well as strategies to protect crops and produce from harvest to its end point. Plant variety selection, water management and protection as well as carbon dioxide (CO2) emissions are other issues on which programming will focus. Extension programming is multidisciplinary resulting in its outreach and education that addresses issues related to climate change also addresses issues identified in Global Food and Community Development planned programs.

**"Dfc [fUa`YI]ghYbWY`. Intermediate (One to five years)**

**("Dfc [fUa`Xi fUh]cb`. Long-Term (More than five years)**

**)"9 IdYbX]b [Zcf a i`U`Zi bXg`cf`ghUhY! a UhW\]b [Zi bXg`. Yes**

**\*"9 IdYbX]b [ch\Yf`h\Ub`Zcf a i`U`Zi bXg`cf`ghUhY! a UhW\]b [Zi bXg`. Yes**

**Jf6L''Dfc [fUa ' ?bck`YX[Y'5fYUfgL**

1. Program Knowledge Areas and Percentage

7cXY	?bck`YX[Y'5fYU	1%, *& 9lhYbg]cb	1%, -\$ 9lhYbg]cb	1%, *& FYgYUfW\	1%, -\$ FYgYUfW\
102	Soil, Plant, Water, Nutrient Relationships	0%		22%	
104	Protect Soil from Harmful Effects of Natural Elements	0%		6%	
112	Watershed Protection and Management	0%		3%	
123	Management and Sustainability of Forest Resources	10%		28%	
125	Agroforestry	0%		4%	
131	Alternative Uses of Land	0%		6%	
132	Weather and Climate	13%		10%	
133	Pollution Prevention and Mitigation	49%		9%	
141	Air Resource Protection and Management	0%		1%	
205	Plant Management Systems	0%		5%	
212	Diseases and Nematodes Affecting Plants	0%		1%	
601	Economics of Agricultural Production and Farm Management	12%		2%	
602	Business Management, Finance, and Taxation	16%		0%	
610	Domestic Policy Analysis	0%		1%	
801	Individual and Family Resource Management	0%		1%	



2017 University of Vermont Combined Research and Extension Plan of Work

2019	2.4	0.0	4.0	0.0
2020	2.4	0.0	4.0	0.0
2021	2.4	0.0	4.0	0.0

**Jfl : t " D`UbbYX`Dfc [ fU a `fl5Wh] j ]hmk**

**% " 5Wh] j ]hm`Zcf`h\Y`Dfc [ fU a**

Invasive Pests - monitoring of the Asian Long Horned Beetle and Hemlock Woolly Adelgid; interception and prevention if possible, mitigation through work with bioactive fungi and natural enemy species; work with the US forest service, US Agricultural Research Service (ARS), and the maple industry.

Maple Production - research and extension efforts at the Proctor Maple Center are directed at extending the sugaring season, maximizing yield, and minimizing disease to trees.

Monitoring of the Eastern Forests - Species change and demarcation levels are being observed, documented and modeled for northern forests through remote sensing and on-the-ground observations.

Invasive Plants - research will continue on the genetic and physiological basis for "invasiveness" of problem plant species and introductions.

Climate Change Adaptation - work with growers with irrigation, drainage, plant selection and harvest. "Climate Change Best Management Practices" (CCBMPs) provides education through workshops and focus groups to help farmers boost adoption of climate change mitigation and adaptation strategies.

Forest Health and Sustainability - work with mostly small forest landholders to make decisions that protect forest stands and the ecosystems within, mitigate fragmentation of forest lands and assist with forest land transfer.

Sustainable Transportation - work within the transportation sector to assist them nabl bl sist t the g

2017 University of Vermont Combined Research and Extension Plan of Work

- Agriculture: Farmers
- Agriculture: Produce Growers
- Agriculture: Service Providers
- Agriculture: Government Agency Personnel
- Extension: Faculty/Staff
- Researchers
- Agriculture: Maple producers

**Jfl<L''GhUhY' 8YZ]bYX' C i h d i h g**

**%'' C i h d i h' AYUg i f Y**

Research Projects

Consultations

Workshop Series

Mass Media: blog post/social media/web page/internet site updating

Publication - popular press

Focus Groups

Research Conferences

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**Jfl-L'' GhUhY' 8YZjbYX' C i hWc a Y**

<b>C''Bc</b>	<b>C i hWc a Y'BUa Y</b>
1	Number of climate change management practices identified for Vermont farms that aid in climate change adaptation
2	Number of ecological and evolutionary factors identified that influence invasive plants in Vermont
3	Number of landowners who actively engage with their land to protect/improve/create woodlands
4	Number enterprises who implement recommended environmental behaviors to meet or exceed terms to have vehicles certified through the eRating program
5	Number of new and continuing enterprise/organizations offering CST 'eco-driver' and/or 'idle free' themed certification courses to employees and related stakeholders in order to promote saving fuel, money, and reducing environmental impacts.
6	Number of individuals who implement one or more best practices that mitigate the effects of climate change for farm, forest, or garden
7	Number of drivers completing a personal pledge to embrace 'Eco-driving' practices
8	Number of eRating certified vehicles



**C i h W c a Y , 1**

**% " C i h W c a Y ' H U f [ Y h**

Number of climate change management practices identified for Vermont farms that aid in climate change adaptation

**& " C i h W c a Y ' H m d Y ' .** Change in Knowledge Outcome Measure

**' " ' 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

- 104 - Protect Soil from Harmful Effects of Natural Elements
- 112 - Watershed Protection and Management
- 125 - Agroforestry
- 132 - Weather and Climate
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 610 - Domestic Policy Analysis
- 801 - Individual and Family Resource Management
- 903 - Communication, Education, and Information Delivery

**( " ' 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t**

- 1862 Extension
- 1862 Research

**C i h W c a Y , 2**

**% " C i h W c a Y ' H U f [ Y h**

Number of ecological and evolutionary factors identified that influence invasive plants in Vermont

**& " C i h W c a Y ' H m d Y ' .** Change in Knowledge Outcome Measure

**' " ' 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

- 102 - Soil, Plant, Water, Nutrient Relationships

**( " ' 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t**

- 1862 Research

**C i h W c a Y , 3**

**% " C i h W c a Y ' H U f [ Y h**

Number of landowners who actively engage with their land to protect/improve/create woodlands

**& " C i h W c a Y ' H m d Y ' .** Change in Action Outcome Measure

**' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l**

123 - Management and Sustainability of Forest Resources

132 - Weather and Climate

**( " 5 g g c W [ U h Y X ' - b g h ] h i h Y ' H m d Y f i g l**

1862 Extension

**C i h W c a Y , 4**

**% " C i h W c a Y ' H U f [ Y h**

Number enterprises who implement recommended environmental behaviors to meet or exceed terms to have vehicles certified through the eRating program

**& " C i h W c a Y ' H m d Y ' .** Change in Action Outcome Measure

**' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l**

132 - Weather and Climate

133 - Pollution Prevention and Mitigation

**( " 5 g g c W [ U h Y X ' - b g h ] h i h Y ' H m d Y f i g l**

1862 Extension

**C i h W c a Y , 5**

**% " C i h W c a Y ' H U f [ Y h**

Number of new and continuing enterprise/organizations offering CST 'eco-driver' and/or 'idle free' themed certification courses to employees and related stakeholders in order to promote saving fuel, money, and reducing environmental impacts.

**& " C i h W c a Y ' H m d Y ' .** Change in Action Outcome Measure

**' " 5 g g c W [ U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g l**

132 - Weather and Climate

133 - Pollution Prevention and Mitigation

( " 5ggcW]UhYX' -bgh]h i hY' HmdYflgŁ

1862 Extension

C i hWc a Y' ĸ

% " C i hWc a Y' HUF [ Yh

Number of individuals who implement one or more best practices that mitigate the effects of climate

**C i h W c a Y . 8**

% " C i h W c a Y H U f [ Y h

Number of eRating certified vehicles

& " C i h W c a Y H m d Y . Change in Action Outcome Measure

' " 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t

133 - Pollution Prevention and Mitigation

602 - Business Management, Finance, and Taxation

( " 5 g g c W ] U h Y X ' - b g h ] h i h Y ' H m d Y f i g t

1862 Extension

J f l > L " D ` U b b Y X ` D f c [ f U a ` f l 9 I h Y f b U ` : U W h c f g t

% " 9 I h Y f b U ` : U W h c f g ` k \ ] W \ ` a U m ` U Z Z Y W h ` C i h W c a Y g

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

**8 Y g W f ] d h ] c b**

{NO DATA ENTERED}

J f l ? L " D ` U b b Y X ` D f c [ f U a ` ! ` D ` U b b Y X ` 9 j U ` i U h ] c b ` G h i X ] Y g

**8 Y g W f ] d h ] c b ` c z ` D ` U b b Y X ` 9 j U ` i U h ] c b ` G h i X ] Y g**

Evaluation during programming will collect input to be used to influence future programming delivery modes, location, timing and topics. Post event evaluations will be used to document best practices, actions that are taken as a result of increased knowledge/skills gained from UVM Extension outreach and education.

**Jf5L"D'UbbYX'Dfc [fUa 'flG i a a UfmL**

**Dfc [fUa ' (**

**%"BUaY'cZ'h\Y'D'UbbYX'Dfc [fUa**

Sustainable Energy

**&"6f]YZ'gi a a Ufm'UVc i h'D'UbbYX'Dfc [fUa**

Energy independence is the hallmark of the work of VT-AES looking for innovative approaches to energy research and education. The research done at the University of Vermont is committed to clean, sustainable energy sources.

Many Vermont dairy farms are operating methane digester systems. Research studies are being done to

**Jfl7L"D`UbbYX`Dfc [fUa`flG]hiUh]cb`UbX`GWcdYŁ**

**%`G]hiUh]cb`UbX`df]cf]h]Yg**

Both the economy and the environment consistently top the list of Vermonters' concerns, according to the annual Vermonter Poll (2008). These findings correspond with a recent survey undertaken as part of the Council on the Future of Vermont, a project of the Vermont Council on Rural Development with the goal of promoting public dialogue on values, challenges, opportunities, priorities and visions for Vermont. Survey findings include rankings of the top seven highest rated values and challenges (Center for Rural Studies, August 2008, [http://www.uvm.edu/crs/reports/2008/CFV\\_Full\\_Report.pdf](http://www.uvm.edu/crs/reports/2008/CFV_Full_Report.pdf)). Respondents placed the greatest value overall on "the state's working landscape and heritage." The greatest challenges were "the increasing costs of living, such as transportation, heating and electricity" followed closely by "the health and viability of Vermont farms and the agricultural sector."

Clearly, economic opportunities that support the working landscape are needed throughout the state. The Vermont Sustainable Agriculture Council's 2009 Annual Report and Recommendations (<https://www.uvm.edu/sustainableagriculture/council/SAC2009Report.pdf>) focus on two primary areas: strengthening Vermont's local food system and enhancing on-farm energy alternatives. Improved knowledge and skills leading to adoption of new practices can promote economic sustainability of farms, forests, natural-resource based enterprises, and communities. Specific problems that need to be addressed include the "price and supply of fuel poses economic risks to farmers and rural communities."

**&`GWcdY`cz`h\Y`Dfc [fUa**

In-State Research

Integrated Research and Extension

**Jfl8L"D`UbbYX`Dfc [fUa`fl5gg`i`a`dh]cbg`UbX` ; cU`gŁ**

**%`5gg`i`a`dh]cbg`a`UXY**

..

2017 University of Vermont Combined Research and Extension Plan of Work

2019	0.0	0.0	0.6	0.0
2020	0.0	0.0	0.6	0.0
2021	0.0	0.0	0.6	0.0

Jfl : t " D ` UbbYX ` Dfc [ fU a ` fl5Wh] j ] hmk

% " ` 5Wh] j ] hm ` Zcf ` h \ Y ` Dfc [ fU a

**Jfl ; L" D`UbbYX`Dfc [fUa `flC i hd i hgt**

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

Number of contacts

Direct Adult Contacts

Indirect Adult Contacts

Direct Youth Contacts

Indirect Youth Contact

Number of patents submitted

Number of peer reviewed publications





**Jfl-L'' GhUhY' 8YZ]bYX' C i hWc a Y**

<b>C''Bc</b>	<b>C i hWc a Y'BUa Y</b>
1	Number of research studies that assess the financial and economic feasibility of converting cow manure into renewable energy products
2	Number of research findings that propose using plant cell walls as a source of biofuels



**Jfl?L"D`UbbYX`Dfc [fUa !`D`UbbYX`9 jU` i Uh]cb`Gh i X]Yg**

**8 YgWf]dh]cb`cZ`D`UbbYX`9 jU` i Uh]cb`Gh i X]Yg**

Collecting data and conducting financial analysis of farm operations.



**Jfl6L''Dfc [fUa ' ?bc k`YX[Y' 5fyUflgŁ**

1. Program Knowledge Areas and Percentage

<b>? 5 7cXY</b>	<b>?bc k`YX[Y' 5fyU</b>	<b>1 %, * &amp; 9 lhYbg]cb</b>	<b>1 %, -\$ 9 lhYbg]cb</b>	<b>1 %, * &amp; FYgYUfW\</b>	<b>1 %, -\$ FYgYUfW\</b>
604	Marketing and Distribution Practices	2%		0%	
607	Consumer Economics	2%		8%	
609	Economic Theory and Methods	0%		4%	
703	Nutrition Education and Behavior	17%		46%	
704	Nutrition and Hunger in the Population	5%		4%	
724	Healthy Lifestyle	22%		30%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%		2%	
805	Community Institutions and Social Services	52%		2%	
903	Communication, Education, and Information Delivery	0%		4%	
	<b>HchU`</b>	100%		100%	

**Jfl7L''D`UbbYX`Dfc [fUa `flG]h i Uh]cb`UbX`GWcdYŁ**

**%`G]h i Uh]cb`UbX`df]cf]h]Yg**

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. Type 2 diabetes is increasing considerably in children and adolescents. Currently 56% of Vermont adults are overweight or obese with an increase in the rate of obesity among Vermont adults of 77% from 1990 to 2002. The prevalence of obesity among youth is high as well with 24% 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% 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 (encourage consumption of whole grains, vegetables, and fruits - especially those locally grown; portion control; and 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 their chances for a longer life.

Vermont now has over 1200 migrant farmworkers living and working in the state. This population is geographically, culturally, and linguistically isolated. The majority lack transportation and depend on others for basic needs including housing, purchasing of food or transportation to purchase food, and health care



**Jfl9L"D`UbbYX`Dfc [fUa`fl=bd i hgŁ**

**%`9gh]a UhYX`B i a VYf`cZ`dfcZYgg]cbU` : H9#GMg`hc`VY`V i X [YhYX`Zcf`h\]g`Dfc [fU a**

MYUf	9 l hYbg]cb		FYgYUfW\	
	%, * &	%, -\$	%, * &	%, -\$
2017	6.3	0.0	3.0	0.0
2018	6.3	0.0	3.0	0.0
2019	6.3	0.0	3.0	0.0
2020	6.3	0.0	3.0	0.0
2021	6.3	0.0	3.0	0.0

**Jfl : Ł"D`UbbYX`Dfc [fUa`fl5Wh] j]hmk**

**%`5Wh] j]hm`Zcf`h\Y`Dfc [fU a**

**9b\UbW]b [ `<YU`h\m` : ccX`5WWYgg.**

- **GYb]cf` : Uf a`G\UfY.** Produce is distributed to approximately 900 households of older and disabled adults who live in subsidized housing. Extension role in this collaborative project involves production of educational materials and conductiN

**6YWca]b[ 'Ub'Ci hXccf' :Ua]m.** an annual weekend event that creates opportunities for families to experience being outdoors together while learning about environmental conservation, outdoor safety and wilderness skills. Families engage in healthy behaviors and acquire skills through outdoor recreation activities like kayaking, hiking, and fishing.

~: **ccX'5 [YbWm.** a measure of an individual's ability to set and achieve food-related goals in life. Studies to determine use patterns for food purchasing, preparation/cleanup, eating/drinking and traveling associated with food consumption.

&"'HmdYfigt' cZ' a Yh\cXg'hc'VY' i gYX'hc' fYUW\ 'X]fYWh'UbX']bX]fYWh'WcbhUWhg

**9 IhYbg]cb**

<b>8]fYWh' AYh\cXg</b>	<b>-bX]fYWh' AYh\cXg</b>
Workshop One-on-One Intervention Other 1 (Research)	TV Media Programs eXtension web sites



**Number of contacts**

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

Number of contacts

Direct Adult Contacts

Indirect Adult Contacts

Direct Youth Contacts

Indirect Youth Contact

Number of patents submitted

Number of peer reviewed publications

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**Number of publications**

**Number of publications**

Consultation

Workshop Series

Workshop - single session

Presentations

Radio

Television

Demonstration

Research Project

Field Site Visits

Conference

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

**Jfl-L'' GhUhY' 8YZ]bYX' C i hWc a Y**

<b>C''Bc</b>	<b>C i hWc a Y'BUa Y</b>
1	Number of individuals who incorporate one or more healthful eating practices and/or physical activity to prevent/manage disease and/or obesity
2	Number of individuals who select and prepare a variety of produce to help prevent/manage disease and/or obesity
3	Number of weight loss programs that help/reduce adult obesity.
4	Number of individuals who take steps to meet daily needs for health, education, social and personal wellbeing

**C i h W c a Y , 1**

% " C i h W c a Y ' H U f [ Y h

Number of individuals who incorporate one or more healthful eating practices and/or physical activity to prevent/manage disease and/or obesity

& " C i h W c a Y ' H m d Y ' . Change in Action Outcome Measure

' " 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t

- 607 - Consumer Economics
- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population
- 724 - Healthy Lifestyle
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

( " 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t

- 1862 Extension
- 1862 Research

**C i h W c a Y , 2**

% " C i h W c a Y ' H U f [ Y h

Number of individuals who select and prepare a variety of produce to help prevent/manage disease and/or obesity

& " C i h W c a Y ' H m d Y ' . Change in Action Outcome Measure

' " 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

( " 5 g g c W ] U h Y X ' = b g h ] h i h Y ' H m d Y f i g t

- 1862 Extension
- 1862 Research

**C i h W c a Y , 3**

% " C i h W c a Y ' H U f [ Y h

Number of weight loss programs that help/reduce adult obesity.

**&"C i hWc a Y' HmdY' . Change in Knowledge Outcome Measure**

'"5ggcW]UhYX' ?bc k`YX [Y' 5fYUflgŁ

724 - Healthy Lifestyle

803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

("5ggcW]UhYX' =bgh]h i hY' HmdYflgŁ

1862 Research

**C i hWc a Y' . 4**

%"C i hWc a Y' HUf [Yh

Number of individuals who take steps to meet daily needs for health, education, social and personal wellbeing

**&"C i hWc a Y' HmdY' . Change in Action Outcome Measure**

'"5ggcW]UhYX' ?bc k`YX [Y' 5fYUflgŁ

604 - Marketing and Distribution Practices

607 - Consumer Economics

704 - Nutrition and Hunger in the Population

724 - Healthy Lifestyle

805 - Community Institutions and Social Services

("5ggcW]UhYX' =bgh]h i hY' HmdYflgŁ

1862 Extension

**Jf>L" D`UbbYX` Dfc [fU a `fl9 I hYfbU` : UW hcfgŁ**

%"9 I hYfbU` : UW hcfg' k \]W\` a Um` UZZYWh` C i hWc a Yg

Economy

Public Policy changes

Government Regulations

Competing Programmatic Challenges

Populations changes (immigration, new cultural groupings, etc.)

**8YgWf]dh]cb**

{NO DATA ENTERED}

**Jointly Developed by the University of Vermont and the Vermont Statewide Extension Program**

**8. Evaluation of the University of Vermont Extension Program**

Every individual plan of work is logic model based, including targets for outcome indicators. A part of setting targets is laying out an evaluation plan. Evaluation results are reported in the accomplishment report. Post event surveys and evaluations completed by repeat attendees of annual events are asked about changes made as a result of something learned at the previous events, observation, interview, and other evaluation strategies are used to collect changes made and results of those changes experienced by program participants. Regular evaluation occurs at most educational events assessing participant knowledge and skills gained.

2017 University of Vermont Combined Research and Extension Plan of Work

**Jfl5L"D'UbbYX'Dfc [fUa 'flG i a a UfmL**

**Dfc [fUa ' '\***

**%"BUaY'cZ'h\Y'D'UbbYX'Dfc [fUa**



Food producers understand the need for ensuring food safety and are open to working together with relevant stakeholders to improve food safety in Vermont.

Research on microbiological risks will define best risk management practices for artisan cheese makers thus ensuring public confidence in food safety.

**8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

Improve individual and family health. (Condition)

- Consumers secure access to safe, nutritious food. (Action)

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

MYUF	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		FYgYUfW\	
	%, * &	%, -\$	%, * &	%, -\$
2017	0.0	0.0	5.0	0.0
2018	0.0	0.0	5.0	0.0
2019	0.0	0.0	5.0	0.0
2020	0.0	0.0	5.0	0.0
2021	0.0	0.0	5.0	0.0

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

**9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

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Other 1 (N/A)	Other 1 (Research)

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- Small scale meat and produce farmers
- Artisan cheese makers and consumers
- Researchers

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NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

Number of contacts

Direct Adult Contacts

Indirect Adult Contacts

Direct Youth Contacts

Indirect Youth Contact

Number of patents submitted

Number of peer reviewed publications

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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Research Projects

Publications

Presentations

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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<b>C''Bc</b>	<b>C i hWc a Y'BUa Y</b>
1	Number of research projects working with farmers to improve food safety of artisan cheeses.

**C i h W c a Y . 1**

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Number of research projects working with farmers to improve food safety of artisan cheeses.

**& " C i h W c a Y ' H m d Y .** Change in Knowledge Outcome Measure

**' " 5 g g c W ] U h Y X ' ? b c k ` Y X [ Y ' 5 f Y U f i g t**

311 - Animal Diseases

312 - External Parasites and Pests of Animals

503 - Quality Maintenance in Storing and Marketing Food Products

607 - Consumer Economics

