

2012 NY State Agricultural Experiment Station Research and Cornell University Research and Extension Combined Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

CORNELL UNIVERSITY EXECUTIVE SUMMARY

At Cornell, Federal Formula Funds are administered strategically to address a wide range of issues in the state and foster integration of applied research and extension programming.

Cornell Cooperative Extension, the Cornell University Agricultural Experiment Station and the New York State Agricultural Experiment Station work collaboratively to determine common priorities and to direct funds to research and extension projects as well as those that integrate research and extension. The approach used to integrate the work of the experiment stations and Cooperative Extension is unique and designed to serve the citizens of New York State and improve the human condition through excellence in scholarship; linking research, non-formal teaching and extension to "real life" challenges and opportunities.

Throughout the process, stakeholder input is key. An Integrated Program/Research/Extension Council advises and informs priority-setting for use of these funds. These stakeholders also review proposals submitted to an internal competitive process through which faculty may apply for federal formula funds for projects with research and extension components that match the current priorities. In addition, we have 31 active Program Work Teams comprised of extension educators, faculty, and stakeholders who work together to develop, implement, and evaluate priority programs.

This report documents the impacts of the work done collectively as a result of Federal Formula Funds. Descriptions of the individual operations of Cornell Cooperative Extension, the Cornell University Agricultural Experiment Station, and the New York State Experiment Station can be found below, followed by a summary of planned program initiatives.

Cornell University Agricultural Experiment Station

The Cornell University Agricultural Experiment Station links Cornell's world-class research facilities with one of the nation's most comprehensive statewide cooperative extension systems. Through this engaged, interactive system we address pressing issues that directly affect the health and welfare of the state, and beyond. Many of today's most urgent societal concerns - from childhood obesity to invasive species to global climate change - do not recognize state or national boundaries.

With more than 130 years of experience identifying, quantifying, and responding to emerging issues in an ever-changing world, CUAES directs some of the most important projects in the state on a broad range of topics with five general themes: agriculture and food systems, quality of life, youth development, community and economic vitality, and natural resources and the environment.

CUAES currently oversees a \$7 million federally-funded project portfolio, in partnership with Cornell

Cooperative Extension and the New York State Agricultural Experiment Station. The chief source of station funding is a yearly allocation made on a formula basis by the National Institute of Food and Agriculture (NIFA) of the United States Department Agriculture (USDA) as part of the land-grant system.

The station also has influence over 12,000 acres of farms and forests and seven farms, facilities and greenhouses, providing critical research services to scientists. Our student-run farm, Dilmun Hill, which uses organic agricultural practices, is a model of a student-run agricultural operation that has been emulated by other organizations and universities. Every aspect of our operation - from staff development to forest management to farm equipment - is viewed through the lens of environmental sustainability. The Cornell University Agricultural Experiment Station:

- Manages more than \$5 million in federal Hatch grants.
- Annually distributes approximately \$1.5 million to new competitive reviewed projects. Most research and integrated project grants run three years, while multi-state grants run up to five years. Federal formula grants are an essential element of Cornell's research portfolio, supporting applied research that benefits residents of the state and the nation.
- Operates with a budget that is approximately \$3 million. Federal funds provide a small part of our operations budget, most of the money for our farms, greenhouses and facilities - foundational to research and extension - comes from the state and college.
- Employs 49 full-time staff including 42 in operations and seven in administration.
- Operates seven farms with agricultural production and forest acreage across the state, from Willsboro on Lake Champlain to Long Island on the Atlantic Seaboard.

New York State Agricultural Experiment Station

Established in 1880, Cornell's New York State Agricultural Experiment Station (NYSAES) in Geneva has existed for more than 130 years developing cutting-edge technologies essential to feeding the world and strengthening New York economies. The focus of both research and extension programs at NYSAES is on the production, protection and processing of horticulture food crops, turf and hybrid willow for renewable energy. While our programs have traditionally addressed global food security and hunger issues, the Experiment Station is also well positioned to address other challenges identified as high priorities by NIFA.

The New York State Agricultural Experiment Station:

- Operates on a budget that is approximately \$29 million with \$9.9 million funded through SUNY's base budget.
- Employs 307 staff and 39 tenure-track professors.
- Partners with Faculty and Extension Associates: on the range of 15 visiting scientists, 10 postdocs, 20 research associates and 6 extension associates.
- Extends research and knowledge through students. In recent years there have been 50 to 55 graduate students conducting masters and doctoral studies.
- Encourages cross departmental/Research Association operations: Our four departments -- horticulture; plant pathology and plant-microbe biology; entomology and food science - have faculty in Geneva and Ithaca. The main focus is on improving the genetics, cultivation, production, protection, handling and processing of fruit and vegetable crops.
- Partners with the Northeast Center for Food Entrepreneurship (NECFE), at the NY Food Venture Center at Geneva to provide assistance to over 200 food entrepreneurs annually, promoting sustainable economic development in rural communities.
- Campus includes:
 - the U.S. Department of Agriculture's Plant Genetic Resources Unit (PGRU), responsible for the collection of apple, sour cherry and cold-hardy grapes and selected seed-propagated crops, such as

onion, garlic, broccoli, cabbage and winter squash; and the Grape Genetics Resources Unit (GGRU), responsible for the national program on grape genetics and genomics.

- A central Geneva campus made up of 20 major buildings, several smaller buildings for farm machinery storage and similar purposes, and 3 houses with rooms rented to graduate students, visiting scientists, and postdocs.

- Two pilot plants -- the Fruit & Vegetable Processing Pilot Plant and the Vinification & Brewing Technology Laboratory -- provide opportunities for entrepreneurs and processors to add value to the state's raw products.

- The NYS IPM Program
- The NYS Seed Testing Laboratory
- IR-4 Field Research Program
- Cornell Agriculture and Food Technology Park adjacent to the main NYSAES campus
- Administers other research/extension laboratories - Hudson Valley at Highland, NY, and the Cornell Lake Erie Research and Extension Laboratory at Portland, NY.

- Operates eleven farms for experimental plot work close to the Geneva campus with a total of 870 acres. There is also one acre of glasshouse space on the campus.

Cornell Cooperative Extension

Cornell Cooperative Extension extends Cornell University's land-grant programs to citizens all across New York State. With a presence in every county and New York City, CCE puts research into practice by providing high-value educational programs and university-backed resources that help solve real-life problems, transforming and improving New York families, farms, businesses and communities.

Cornell Cooperative Extension:

- Reaches 3.1 million per year directly, and 25.5 million indirectly.
- Employs 1,400 local and regional staff and educators organized around program initiatives and local needs.
 - Uses 60 specialists to provide programming in such areas as integrated pest management, energy education and vegetable and field crop production and management.
 - Extends community work by partnering with over 52,440 volunteers who advise, plan, teach and mentor in all program areas.
 - Partners with approximately 250 Cornell faculty; primarily from the College of Agriculture and Life Sciences and the College of Human Ecology.
 - Engages a program development process that relies heavily on local citizen input to identify issues of local importance. Often research is informed by the two-way flow of information and experience.
 - Includes 55 distance learning centers across New York State, and is fully equipped to deliver events and instruction through various modes including webinars and on-demand videos to remote audiences.

Planned Programs are addressed collectively by Cornell Cooperative Extension, the Cornell University Agricultural Experiment Station and the New York State Agricultural Experiment Station. **Our programs directly address the priority areas from the National Institute for Food and Agriculture. Further detail, outcome indicators and success stories are included in the formal report.**

GLOBAL FOOD SECURITY & HUNGER

BRIEF SUMMARY OF PROGRAM:

Cornell Cooperative Extension, the Cornell University Agricultural Experiment Station and the New York State Agricultural Experiment Station support a **NY** agriculture industry **that is** diverse, sustainable, and profitable, **and which produces** a safe, reliable, healthy and local food **supply**.

ULTIMATE GOALS OF THE PROGRAM:

- Boost U.S. agricultural production.
- Improve global capacity to meet growing food demand in spite of changing climate.
- Foster innovation in fighting hunger by addressing food insecurity in vulnerable populations.
- Assure the long-term viability and well-being of the agricultural/horticulture industry and rural communities in New York State.
 - Promote economically and environmentally sound products and practices, and safer and healthier products.
 - Assist producers, horticulture businesses and natural resource managers to optimize production management and improve profitability and sustainability in accordance with their goals.
 - Increase the use of sustainable practices to result in improved or protected soil, air and water quality and production of high quality and safe food and fiber.
 - Improve soil health and productivity, resulting in increased farm profitability and improved environmental quality.

GLOBAL FOOD SECURITY AND HUNGER PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 446,748 individuals were directly reached and information about this program was disseminated to reach 33,437,548.
- 23% of the resources are used for this program.
- There were 7,076 non-credit instructional activities and 1,472,274 non-credit instructional activity contact hours for this program.
- 66 research, multistate and integrated projects were funded in this program area.

CLIMATE CHANGE

BRIEF SUMMARY OF PROGRAM:

In the past decade, Cornell researchers have focused on identifying and quantifying the level of climatic disruption caused by heat-trapping greenhouse gasses and the resulting impacts on weather patterns, geographic bioregions and living creatures. Now, researchers are exploring the looming challenges, investigating strategies to address expected impacts and developing new resources to reduce the human "carbon footprint" that adds to greenhouse gas emissions. Multidisciplinary researchers, educators and extension faculty -- from plant biologists to economists to climatologists -- are engaged in three vital areas of exploration for the well-being of future generations:

- Climate science: quantifying the current trend and predicting future impact
- Adaptation: moderating expected damage and identifying potential opportunities
- Mitigation: reducing the human "carbon footprint" to slow the pace of climate change

ULTIMATE GOALS OF THE PROGRAM:

- Reduce factors contributing to climate change at the individual, community, industry and institutional levels.
- Develop an agricultural system that maintains high productivity in the face of climate changes.
- Help producers and communities adapt to changing environments.

- Sustain economic vitality, identify challenges and take advantage of emerging economic opportunities offered by climate change mitigation technologies.

CLIMATE CHANGE PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 828,843 individuals were directly reached and information about this program was disseminated to reach 5,360,455.
- 15% of the resources are used for this program.
- There were 4,399 non-credit instructional activities and 7,963,217 non-credit instructional activity contact hours.
- 19 research, multistate and integrated projects were funded in this program area.

SUSTAINABLE ENERGY

BRIEF SUMMARY OF PROGRAM:

With some of the highest energy costs in the nation, New York residents are hungry for information on viable renewable energy options, as well as strategies to promote energy conservation, while farmers, forest owners and agricultural producers in the state are eager to explore new markets.

The state's vast resources of available land and organic waste streams offer opportunities for new, renewable energy initiatives, considered a vital part of forward-looking national energy policy.

ULTIMATE GOALS OF THE PROGRAM:

- Make sure New York leads the country in pursuing the national goal of energy independence
- Encourage communities to focus on locally-produced and owned energy sources and/or lower cost external sources, helping to retain energy dollars within the state
- Reduce energy costs to boost the economic health of agriculture/horticulture/natural resource and supporting businesses, the financial security of individuals and families and the operations of local governments
- Improve waste management and waste reduction efforts to enhance and protect the environment, resulting in improved soil, air, and water quality; reduced risk for individuals and families; and an improved economic climate for businesses and government

SUSTAINABLE ENERGY PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 213,586 individuals were directly reached and information about this program was disseminated to reach 3,427,467.
- 7% of the resources are used for this program.
- There were 2,148 non-credit Instructional activities and 500,475.65 non-credit instructional activity contact hours for this program.
- 2 multistate and integrated research projects were funded in this program area.

CHILDHOOD OBESITY AND NUTRITION

BRIEF SUMMARY OF PROGRAM:

Childhood obesity prevention research and education are based upon an ecological approach, focusing on individuals and their interactions among the multiple environments that surround them. This approach recognizes that there are inherent multiple levels of influence that affect a child's body weight. Research and Extension topics include nutrition and hunger, nutrition education and behavior, built and natural environments, physical activity promotion, healthful food availability, food product development and health care organization, services and policies.

ULTIMATE GOALS OF THE PROGRAM:

- Ensure affordable, available nutritious foods
- Guide families to make science-based decisions about health and well-being
- Prevent childhood weight problems and reduce long-term risks for chronic disease by encouraging healthy eating and increased physical activity
 - Improve community food security and healthful food-choice options

CHILDHOOD OBESITY AND NUTRITION PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 483,753 individuals were directly reached and information about this program was disseminated to reach 10,957,386.
- 17% of the resources are used for this program.
- There were 38,937 non-credit instructional activities and 5,490,791.55 non-credit instructional activity contact hours for this program.
- 14 multistate and integrated research projects were funded in this program area.

FOOD SAFETY

BRIEF SUMMARY OF PROGRAM:

Cornell's statewide food safety research and education program serves a broad constituency including food producers, processors and retailers, as well as consumers and research scientists. The program encompasses the National Institute of Food and Agriculture food safety components: investigating causes of microbiological contamination and microbiological resistance, educating consumers and food safety professionals and developing food processing and storage technologies.

ULTIMATE GOALS OF THE PROGRAM:

- Provide for the nutritional well-being and safety of New York residents by assuring a continuous, reasonably-priced supply of wholesome foods.
- Improve food safety and food-handling practices throughout the food system.
- Reduce the incidence of food-borne illnesses.

FOOD SAFETY PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 195,364 individuals were directly reached and information about this program was disseminated to reach 5,418,584.
- 4% of the resources are used for this program.
- There were 17,016 non-credit instructional activities and 640,229.54 non-credit instructional activity contact hours for this program.
- 1 multistate and integrated research project was funded in this program area.

YOUTH, FAMILY & COMMUNITY

BRIEF SUMMARY OF PROGRAM:

Our Youth, Family, and Community plan reflects the priorities of the National Institute of Food and Agriculture's institute of the same title. The programs represented here are foundational to each of our five other work plans.

Youth programs focus on life skill development, as well as science, technology, engineering and math opportunities. Family programs emphasize human development and social well-being, economic well-being, and quality of home and work environments. And in order to help citizens and local officials build strong and vibrant communities, CCE emphasizes community and economic development; connections between people, their land and the environment; the agriculture/community interface; and youth citizenship.

ULTIMATE GOALS OF THE PROGRAM:

Youth

- Enhance youth development.
- Empower youth to become life-long learners who lead healthy, satisfying, and productive lives.
- Ensure that youth become caring and contributing members of society, enhancing the quality of life for themselves, their families and their communities.
 - Prepare the next generation of scientists as youth become knowledgeable, contributing participants in science and technology-related issues in their communities and chosen professions.
 - Support youth as community leaders who make decisions and take action on issues of public/community concern.

Family

- Enable vibrant and resilient communities.
- Improve parenting practices that result in better child and youth outcomes.
- Improve parent/caregiving practices, resulting in parents and caregivers reporting increased confidence in their roles.
 - Improve financial status of targeted NYS residents.
 - Improve indoor air quality in low income households resulting in better health outcomes.

Community

- Ensure that diverse interests and populations in communities are reflected within and engaged as key stakeholders.
 - Increase the quality of life, sense of community, environmental health, ecological integrity, effective decision-making capabilities and new economic opportunities in communities.
 - Strengthen community networks that link diverse sub-groups.
 - Increase local capacity for management and protection of local environmental resources.
 - Avoid or minimize conflicts between agriculture, horticulture and naturalresource enterprises and community members and resolve them within communities when they occur.
 - View agriculture, horticulture and naturalresource enterprises as contributing and positive elements in the community.
 - Help communities protect and enhance their financial, infrastructure, human, environmental, and social resources.
 - Support retirees who want to develop leadership capacity to engage in the application of science-based solutions to environmental problems at the community level.
 - Diversify local economies to make them more sustainable.

YOUTH, FAMILY, AND COMMUNITY PROGRAM SUMMARY RESULTS BY THE NUMBERS:

- 1,242,780 individuals were directly reached and information about this program was disseminated to reach 15,478,268.
- 34% of the resources are used for this program.

- There were 30,547 non-credit instructional activities and 14,103,015.26 non-credit instructional activity contact hours for this program.
- 16 multistate and integrated research projects were funded in this program area.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	1467.0	0.0	86.0	0.0
Actual	1382.0	0.0	29.0	0.0

II. Merit Review Process

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

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

2. Brief Explanation

We use one integrated process for merit review for applied research and extension projects, including integrated and multistate activities. Key elements of the process are described here including statistics from the most current (2012) proposal cycle.

Review Process (Research Projects and Extension Projects with Designated Funding):

Principal investigators are asked to consult program priorities (established as outlined in the stakeholder involvement section) and develop short pre-proposals for new or revised projects funded by Federal Formula Funds.

Pre-proposals are reviewed for purpose and relevancy by a joint advisory Program Council (see stakeholder involvement section) and other external stakeholders, the principal investigator's department chair, Extension Program Associate/Assistant Directors, and the Agricultural Experiment Station directors (Ithaca and Geneva). Reviews are submitted via a secure website.

For research proposals:

1. Pre-proposals are accepted/rejected; Principal Investigators develop accepted pre-proposals into full proposals.
2. The Department Chair recommends two or three peer reviewers to the Director's Office.
3. The Director's Office obtains the necessary reviews in accordance with CSREES rules using standard format.
4. Changes suggested by the peer reviewer are conveyed to the Principal Investigator. Peer reviewer names are not revealed to the Principal Investigator.
5. The revised proposal, with required CRIS forms, is submitted to the Director's Office.
6. The Director's Office submits the package to CSREES along with an attached statement certifying the peer review was completed.
7. Reviews are kept on file in the Director's Office.
8. The Director's Office attaches a statement to the proposal and sends this with the proposal and Form 10 to the CALS Research Office.

9. After approval by CSREES, funds are allocated to the appropriate research account.

For extension proposals:

1. Extension Program Directors rank/recommend extension pre-proposals.
2. Extension Program Directors meet with Agricultural Experiment Station (Ithaca and Geneva) staff to discuss potential R-E linkages among extension pre-proposals.
3. Extension Program Directors finalize Smith-Lever funding recommendations and communicate decisions and needed modifications.

Cornell Review Criteria:

- Anticipated significance of results relative to current priority needs or opportunities
- Scientific merit of objectives
- Clarity of objectives
- Appropriate methodology
- Feasibility of attaining objectives
- Accomplishment during preceding project (for revisions)
- Research performance competence of investigator(s)
- Relevance of the proposed work to regional or national goals
- Level of research-extension integration

For ongoing extension work not captured in current funded projects, we rely on our structure of Program Council and Program Work Teams for input and conduct regular program conferences with academic units to review program progress and direction. For FY12, our most current data, a total of 141 pre-proposals were submitted to the two Experiment Stations and to Cooperative Extension of which 101 were funded.

III. Stakeholder Input

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

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

Brief explanation.

Gaining stakeholder input and encouraging stakeholder participation is a system-wide expectation of all levels and units. Across the system, all of the stakeholder participation methods listed are employed; no single unit uses them all.

At the state level, we have a single multidisciplinary program council. Membership is

intentionally monitored and updated to ensure involvement and ties to traditional and non-traditional constituents and established and emerging partnerships. The council provides guidance for CCE, CUAES and NYSAES by setting broad priorities for applied research and extension programming.

In addition, we have 31 active Program Work Teams comprised of extension educators, faculty, and stakeholders who work together to develop, implement and evaluate priority programs.

A new team was added in FY12 focused on risk and thriving in adolescence. More than 1,000 participants were involved in the work of these teams in 2012. Since 2001, forty-eight (48) program work teams have been authorized and supported to develop and deliver integrated applied research and extension programming across the state. The fact that more than 20 have completed their work and "decommissioned" indicates they are serving as intended, as a flexible program development mechanism responsive to needs. PWTs are expected to nurture research-extension integration, to encourage campus-field interactions and collaborations, to take multi-disciplinary approaches, to evaluate their efforts, and to involve their external members in all aspects of their work.

Beyond this state-level program development and stakeholder input structure/process, each of Cornell Cooperative Extension's county extension associations continue to work closely with stakeholders in their counties via participation in their local governance structures, i.e. board of directors, and program guidance structures, i.e., advisory committee structures. Formal advisory committees are also used to guide New York City Extension programs. In 2012, more than 1,400 board and committee volunteers from diverse backgrounds participated and assisted in the direction, priority setting programs throughout the state, and over 59,000 committed volunteers assisted with program delivery adding to stakeholder involvement.

By definition, "under-represented or under-served" groups require that additional outreach and engagement steps be taken. One of the most effective strategies for gaining input and developing working relationships is by networking and partnering with organizations that do have credible relationships with target groups. Our local boards of directors and advisory committees include at least 300 such representatives statewide. On both the program council and program work teams, we target representatives of organizations working effectively with groups with whom we should strengthen ties. When possible we deliver programs directly through those organizations.

Effective involvement of youth in program determination and implementation is of particular concern. Our local advisory committees are expected to include youth members as part of the needs assessment and decision making structure. In 2012, more than 6,000 youth served in governance and program delivery roles statewide.

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

1. Method to identify individuals and groups

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

Brief explanation.

Across all levels of the system, all of the techniques listed were used; the mix of methods varied from site to site and program to program. All of our units are required to have active and diverse advisory processes and to intentionally consider audiences not currently served. Activities of our state level councils and work teams described in other questions in this section. Needs assessments, focus groups, and use surveys are conducted at the level of individual program units as well as in our statewide plan of work process.

Extension educators are expected to submit narrative reports of efforts to engage underserved populations. For the 2012 reporting year, more than 160 such stories were submitted representing all five of our broad program areas. Example titles included: Franklin County 4-H Seeks to Improve the Quality of Life among Native Youth, Urban Ornithology: A Citizen Science Tool for Youth Development, Teen Leaders Learn On The Job Through CITIZEN U, TANF Financial Management Education, STEM in 4-H Afterschool Leads to Academic Success, Reducing Sodium reduces Chronic Diseases and Illness, Parent Education Home Visits, New Grow Cook Eat program has successful first year, Tribal Mentees/Mentors Develop Valuable Skills, Youth Buzz on Biz, and Teen Parents Raising Child Graduate High School.

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

1. Methods for collecting Stakeholder Input

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

Brief explanation.

All of the techniques listed were used in 2012 but methods varied site to site and program-to-program across the system. Structures and processes for aggregating data are described in other questions in this section. The most active data gathering occurred in three venues - local advisory bodies, the program work teams, and the program council. Example outreach mechanisms include dramatic increase in use of Internet based instruction and forums at the community level directed to economic sustainability, particularly of rural communities. We continued statewide efforts begun in 2008 to provide current resources for educators regarding equal program opportunity and have done extensive participant mapping to identify opportunities to increase inclusiveness of our programs. Our Civil Rights compliance review in late 2009 provided additional guidance for connecting with diverse audiences.

Additionally it should be noted that in 2012, Cornell Cooperative Extension completed a comprehensive strategic planning process to inform choices about programs and operations in

coming years. The sample size was roughly 6,000 with participants completing surveys and discussion groups. The strategic planning process was used to refine the planned program areas that will begin with 2014 so noted in the planning documents. The same emphasis areas will be targeted but how that will be communicated to the public and planned for will be different.

3. A statement of how the input will be considered

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

Brief explanation.

The stakeholder input process for statewide program development jointly utilized by Cornell Cooperative Extension (CCE), the Cornell University Agricultural Experiment Station (CUAES), and the New York State Agricultural Experiment Station (NYSAES) was established in February 2001.

The process informs federal formula funding priorities and provides project specific input on relevance and value of proposed work. In other words, our program council and program work teams work to improve program focus, relevance, and planning activities. Members of our program council have direct input on decisions regarding funding of current extension and research projects contributing ratings of perceived relevance. Each year, we compare funding decisions with advisory input and can confidently conclude that stakeholders are having a powerful voice in the direction of our programs. Our program council also advises the directors of CCE and CAUES on annual statewide program priorities, review Program Work Team performance and identify "gaps" in programmatic coverage. Our statewide applied research and extension priorities are updated annually, communicated to faculty and staff, and used as a primary criterion in funding decisions.

For example, for the FY12 funding year, 141 pre-proposals were received for research, extension, or integrated projects and 101 were funded. Traditionally, 85-90% of the pre-proposals highly rated by stakeholder- reviewers have been funded. The majority of the pre-proposals receiving lower ratings were not funded. Regular communications with Program Council members especially focused on off-campus and external members, have been used each year to keep these stakeholders abreast of the decision-making process, and notified about the projects that were funded.

On a regular basis local and programmatic stakeholders influence decisions on program priorities and delivery. Our county extension associations and multi-county programs are semi-autonomous, much more so than in many states. The program of work of each unit is established under guidance of stakeholders in local advisory structures and governing boards and through environmental scanning activities conducted as part of our plan of work process. Such input has immediate and specific influence on program direction and strategy.

The CCE Strategic Planning Survey done in 2012 provided input and observations from multiple perspectives about programs, our effectiveness, opportunities for improvement, and new

areas of growth. This input was used to develop People, Purpose, Impact: A Strategy for Engagement in the 21st Century - a new strategic plan.

Brief Explanation of what you learned from your Stakeholders

Stakeholders help to frame, develop, and shape: plans of work, strategic plans, funding proposals, programs, and educational activities. System wide the Program Council and Program Work Teams have reaffirmed our commitment to the NIFA priorities below and have pointed to the emphasis areas indicated as focal points where the greatest need and the greatest opportunities to make use of campus resources cross.

Global Food Security and Hunger

Supporting new science to boost U.S. agricultural production, improve global capacity to meet the growing food demand, and foster innovation in fighting hunger by addressing food security for vulnerable populations.

Emphases includes:

Agriculture/Natural Resources Business Management
Producer Alternatives and New Ventures
Agriculture/Natural Resources Production Practices
Food Security and Hunger
[this Includes producer/processor aspects of food safety.]

Climate Change

Projects that generate knowledge to develop an agriculture system that maintains high productivity in the face of climate changes. This will help producers plan for and make decisions to adapt to changing environments and sustain economic vitality and can take advantage of emerging economic opportunities offered by climate change mitigation technologies.

Emphases includes:

Climate Change
Water Resources
Biodiversity and Natural Resources Protection

Sustainable Energy

Programs that emphasize varied energy production including biomass used for biofuels, optimum forestry and crops for bioenergy production, and value-added bio-based industrial products.

Emphases includes:

Bioenergy
Agriculture/Natural Resources Producer Energy
Consumer Energy
Community Energy
Waste Management

Nutrition Childhood Obesity

Programs that ensure that nutritious foods are affordable and available and provide guidance so that individuals and families are able to make informed, science-based decisions about their health and well-being.

Emphases includes:

Healthy Eating and Active Living (adult and youth)
Food Resource Management

Decision Makers/Policy Education

Food Safety

(From NIFA Factsheet) NIFA food safety programs work to reduce the incidence of food-borne illness and provide a safer food supply by addressing the causes of micro-bial contamination and antimicrobial resistance, educating consumer and food safety professionals, and developing food processing technologies.

Emphases includes:

Food Safety

Youth, Family and Community

- Enabling vibrant and resilient communities
- Preparing the next generation of scientists
- Enhancing science capacity in minority-serving institutions
- Enhancing youth development

Youth Emphases includes:

- Positive Youth Development Including Science, Engineering and Technology Literacy
- Youth Community Action

Family Emphases includes:

- Human Development
- Parenting
- Family Economic Security
- Indoor Environment

Community Emphases includes:

- Community and Economic Development
- Community Capacity Building
- Community Sustainability Decision-making
- Agricultural Awareness
- Master Gardener Program

There will be a slight shift in the way that we define our programs for 2014, but the emphasis will remain the same. See plans section of NIFA reporting.

IV. Expenditure Summary

Institution Name: Cornell University

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
8163220	0	6877358	0

Institution Name: NY State Agricultural Experiment Station

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

Institution Name: Cornell University

2. Totalled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	8895530	0	5296281	0
Actual Matching	8895530	0	5296281	0
Actual All Other	0	0	0	0
Total Actual Expended	17791060	0	10592562	0

Institution Name: NY State Agricultural Experiment Station

2. Totalled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	0	0	1319559	0
Actual Matching	0	0	1319559	0
Actual All Other	0	0	0	0
Total Actual Expended	0	0	2639118	0

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

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger
2	Climate Change
3	Sustainable Energy
4	Childhood Obesity -- Nutrition and Childhood Obesity
5	Food Safety
6	Youth, Family, and Community

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

Reporting on this Program

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	10%		11%	
202	Plant Genetic Resources	1%		20%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		4%	
204	Plant Product Quality and Utility (Preharvest)	5%		4%	
205	Plant Management Systems	15%		0%	
211	Insects, Mites, and Other Arthropods Affecting Plants	2%		10%	
212	Pathogens and Nematodes Affecting Plants	2%		18%	
213	Weeds Affecting Plants	2%		4%	
215	Biological Control of Pests Affecting Plants	3%		4%	
216	Integrated Pest Management Systems	3%		5%	
301	Reproductive Performance of Animals	1%		4%	
302	Nutrient Utilization in Animals	6%		2%	
305	Animal Physiological Processes	2%		2%	
307	Animal Management Systems	16%		2%	
311	Animal Diseases	2%		0%	
501	New and Improved Food Processing Technologies	1%		5%	
503	Quality Maintenance in Storing and Marketing Food Products	2%		2%	
601	Economics of Agricultural Production and Farm Management	22%		2%	
604	Marketing and Distribution Practices	2%		1%	
704	Nutrition and Hunger in the Population	3%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	290.0	0.0	50.0	0.0
Actual Paid Professional	403.0	0.0	11.0	0.0
Actual Volunteer	1079.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2564318	0	2195118	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2564318	0	2195118	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	1133018	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	1133018	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a comprehensive program entailing a wide range of applied research activities and multiple education methods depending on context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

Multi-disciplinary, multi-institutional and collaborative program examples include: Collaborative Crops

Research Program (CCRP), Cornell-Eastern Europe-Mexico International Collaborative Project in Potato Late Blight Control (CEEM), Cornell International Institute for Food, Agriculture and Development (CIIFAD), Institute for Genomic Diversity (IGD), Institute for Global Learning, International Integrated Pest Management, International Programs Initiative for Biotechnology, International Research and Scientific Exchanges, Program in International Nutrition, Strategic World Initiative for Technology Transfer (SWIFTT), and The Essential Electronic Agricultural Library (TEEAL).

2. Brief description of the target audience

Key audiences served, directly and indirectly, in enhancing agricultural and horticultural business viability include: established producers; new and young producers, consultants and service providers, input suppliers, cooperative directors and managers, marketing firms, governmental agencies, lenders, and local/state/federal governmental leaders.

Food security and hunger programming addresses individuals and families, caregivers, nutritionists, community leaders, human service providers and food policy makers at the local, state, and national levels.

3. How was eXtension used?

Cornell Cooperative Extension supports and promotes eXtension communities of practice, the eXtension public site and the professional development offered through eXtension.org.

Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 323 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are identified national projects - such as with Financial Security for All COP.

Examples of participation in COPs that fall int this plan of work area include:
Global Food Security and Hunger

- Cooperatives *
 - Animal Manure Management
 - Apples *
 - Dairy
 - Farm Safety and Health
 - Forest Farming
 - Grapes
 - Horses
 - Organic Agriculture
 - Pest Management
 - Pesticide Environmental Stewardship *
- *Cornell Faculty/Staff on Leadership Team

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	365514	27418789	81234	601875

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

Patent Applications Submitted

Year: 2012

Actual: 1

Patents listed

Biological Control of Crown Gall Disease on Grapevines (61/635,160) Thomas Burr, Desen Zheng

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	4	438	442

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (1.1a) # producers/horticulture/natural resources business persons completing education programs on business management, finance, business planning and marketing, human resource management, risk management, production economics, and business transitions. Not reporting on this Output for this Annual Report

Output #2

Output Measure

- (1.2a) # producers/horticulture business persons completing programs to expand profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies.

Year	Actual
2012	6217

Output #3

Output Measure

- (1.3a) # producers, horticulture business persons, and/or natural resource managers completing

education programs on existing and new production-management practices and techniques.

Not reporting on this Output for this Annual Report

Output #4

Output Measure

- (1.4a) # of children, youth, and adults completing education programs on: identifying food insecurity, how to obtain food assistance, how to balancing available resources by planning food choices, and improve the sufficiency and quality of the diet.

Year	Actual
2012	8108

Output #5

Output Measure

- (1.4b) # of policy makers and citizens participating in education programs on status of food security in their communities and possible actions to promote increased food security.

Year	Actual
2012	316

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(1.1b) # participants demonstrating knowledge or skill gains in business management, finance, business planning and marketing, human resource management, risk management, production economics, inter-generational transfer and other business transitions.
2	(1.1c) # participants documented to have applied knowledge or skills gained to strengthen existing business operations.
3	(1.1d) # participating family-owned agricultural/horticultural/natural resources businesses that plan for succession, transfer, or sale of their business.
4	(1.1e) # participants reporting improved agricultural/ horticultural business profitability attributed at least in part to program participation.
5	(1.1f) # business owners successfully completing an intergenerational transfer or other desired dispensation of their business attributed at least in part to program participation.
6	(1.2b) # participants demonstrating knowledge or skill gains related to expanding profitability, developing marketing options, diversifying or substituting alternative products or enterprises, and/or increasing operational efficiencies to solve immediate concerns.
7	(1.2c) # participants documented to have initiated one or more alternative or expanded ventures.
8	(1.2d) # participants or producer groups who adopt practices of value-added production through retaining control of their product further in the processing chain, starting their own value added business, or forming alliances.
9	(1.2e) # of new food, horticultural, and agricultural businesses and/or new enterprises within existing businesses reported by program participants and attributed at least in part to program participation.
10	(1.3b) # of producers, horticulture business persons, and/or natural resource managers demonstrating knowledge/skill gains in existing/new practices and techniques; improved product handling and storage to maintain quality and food safety; and/or improving production efficiency through adoption of best management practices.
11	(1.3c) # of producers, horticulture business persons, and/or natural resource managers modifying existing practices and/or adopted new production management practices to address current issues and improve yield efficiency, consistency and/or quality.
12	(1.3d) # of producers, horticulture business persons, and/or natural resource managers who report improved ability to anticipate and respond to environmental and market variations through alternative production management strategies.
13	(1.3e) # technical assistance providers documented to have incorporated current best management practices in their recommendations.
14	(1.3f) # of producers, horticulture business persons, and/or natural resource managers documented to have improved economic returns to agricultural business profitability and vitality resulting from enhanced production management practices.
15	(1.4c) # of program participants who demonstrate knowledge or skill gains related to status of food security in their communities and possible actions to promote increased food security.
16	(1.4d) # of program participants who know what to do related to food insecurity problems such as how to obtain food assistance, how to balance available resources by planning food choices, and how to improve the sufficiency and quality of the diet.

17	(1.4e) # of program participants who have acted to improve their food security status.
18	(1.4f) # of participating communities that assess food insecurity and develop appropriate action plans.
19	(1.4g) # of individuals or households documented to have improved food security status.
20	(1.4h) # of participating communities reporting declines in food insecurity indicators.
21	(1.5c) # of producers, horticulture businesses, and/or resource managers documented to have assessed potential environmental impacts of their operations and developed and acted on plans to eliminate or minimize those concerns.
22	(1.5d) # of producers, horticulture businesses, and/or natural resource managers documented to have developed and implemented nutrient management and/or waste management plans or modified existing plans to meet production and environmental goals and meet regulations
23	(1.5e) # of producers, horticulture businesses, and/or natural resource managers documented to meet or exceed current environmental protection standards as a result of participating in relevant educational programs.
24	(1.5f) # of resource managers reporting reduced environmental concerns for participating enterprises.
25	Hull-less seeds: A Trait in Cucurbita Pepo that Would Benefit Nutrition and Vegetable Sales and Reduce Waste Mazourek
26	Increasing Forest Value through Growing the Maple Sugar Industry Chabot
27	Breeding Common Beans for Resistance to Stresses, Sustainable Production and Enhanced Nutritional Value Halseth
28	A better mousetrap - More Accurate Crop Damage Assessment in Lake Erie Grapes
29	Potato/Tomato Grower and Consultant Adoption of an Advanced Late Blight Forecast Tool
30	Weed Control Is Critical To Profitability In New High-Density Orchards.

Outcome #1

1. Outcome Measures

(1.1b) # participants demonstrating knowledge or skill gains in business management, finance, business planning and marketing, human resource management, risk management, production economics, inter-generational transfer and other business transitions.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

(1.1c) # participants documented to have applied knowledge or skills gained to strengthen existing business operations.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	6217

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

(1.1d) # participating family-owned agricultural/horticultural/natural resources businesses that plan for succession, transfer, or sale of their business.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	338

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #4

1. Outcome Measures

(1.1e) # participants reporting improved agricultural/ horticultural business profitability attributed at least in part to program participation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2625

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #5

1. Outcome Measures

(1.1f) # business owners successfully completing an intergenerational transfer or other desired dispensation of their business attributed at least in part to program participation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #6

1. Outcome Measures

(1.2b) # participants demonstrating knowledge or skill gains related to expanding profitability, developing marketing options, diversifying or substituting alternative products or enterprises, and/or increasing operational efficiencies to solve immediate concerns.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

(1.2c) # participants documented to have initiated one or more alternative or expanded ventures.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	828

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #8

1. Outcome Measures

(1.2d) # participants or producer groups who adopt practices of value-added production through retaining control of their product further in the processing chain, starting their own value added business, or forming alliances.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	392

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #9

1. Outcome Measures

(1.2e) # of new food, horticultural, and agricultural businesses and/or new enterprises within existing businesses reported by program participants and attributed at least in part to program participation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	153

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #10

1. Outcome Measures

(1.3b) # of producers, horticulture business persons, and/or natural resource managers demonstrating knowledge/skill gains in existing/new practices and techniques; improved product handling and storage to maintain quality and food safety; and/or improving production efficiency through adoption of best management practices.

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

(1.3c) # of producers, horticulture business persons, and/or natural resource managers modifying existing practices and/or adopted new production management practices to address current issues and improve yield efficiency, consistency and/or quality.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8189

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
302	Nutrient Utilization in Animals
307	Animal Management Systems
311	Animal Diseases

Outcome #12

1. Outcome Measures

(1.3d) # of producers, horticulture business persons, and/or natural resource managers who report improved ability to anticipate and respond to environmental and market variations through alternative production management strategies.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3260

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #13

1. Outcome Measures

(1.3e) # technical assistance providers documented to have incorporated current best management practices in their recommendations.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1188

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
302	Nutrient Utilization in Animals
307	Animal Management Systems
311	Animal Diseases

Outcome #14

1. Outcome Measures

(1.3f) # of producers, horticulture business persons, and/or natural resource managers documented to have improved economic returns to agricultural business profitability and vitality resulting from enhanced production management practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1280

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
302	Nutrient Utilization in Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #15

1. Outcome Measures

(1.4c) # of program participants who demonstrate knowledge or skill gains related to status of food security in their communities and possible actions to promote increased food security.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	16786

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

Outcome #16

1. Outcome Measures

(1.4d) # of program participants who know what to do related to food insecurity problems such as how to obtain food assistance, how to balance available resources by planning food choices, and how to improve the sufficiency and quality of the diet.

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

(1.4e) # of program participants who have acted to improve their food security status.

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

(1.4f) # of participating communities that assess food insecurity and develop appropriate action plans.

Not Reporting on this Outcome Measure

Outcome #19

1. Outcome Measures

(1.4g) # of individuals or households documented to have improved food security status.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	14073

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code **Knowledge Area**
704 Nutrition and Hunger in the Population

Outcome #20

1. Outcome Measures

(1.4h) # of participating communities reporting declines in food insecurity indicators.

Not Reporting on this Outcome Measure

Outcome #21

1. Outcome Measures

(1.5c) # of producers, horticulture businesses, and/or resource managers documented to have assessed potential environmental impacts of their operations and developed and acted on plans to eliminate or minimize those concerns.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2013

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code **Knowledge Area**
102 Soil, Plant, Water, Nutrient Relationships
213 Weeds Affecting Plants
216 Integrated Pest Management Systems

Outcome #22

1. Outcome Measures

(1.5d) # of producers, horticulture businesses, and/or natural resource managers documented to have developed and implemented nutrient management and/or waste management plans or modified existing plans to meet production and environmental goals and meet regulations

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	836

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
302	Nutrient Utilization in Animals

Outcome #23

1. Outcome Measures

(1.5e) # of producers, horticulture businesses, and/or natural resource managers documented to meet or exceed current environmental protection standards as a result of participating in relevant educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1315

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #24

1. Outcome Measures

(1.5f) # of resource managers reporting reduced environmental concerns for participating enterprises.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	179

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #25

1. Outcome Measures

Hull-less seeds: A Trait in Cucurbita Pepo that Would Benefit Nutrition and Vegetable Sales and Reduce Waste Mazourek

Not Reporting on this Outcome Measure

Outcome #26

1. Outcome Measures

Increasing Forest Value through Growing the Maple Sugar Industry Chabot

Not Reporting on this Outcome Measure

Outcome #27

1. Outcome Measures

Breeding Common Beans for Resistance to Stresses, Sustainable Production and Enhanced Nutritional Value Halseth

Not Reporting on this Outcome Measure

Outcome #28

1. Outcome Measures

A better mousetrap - More Accurate Crop Damage Assessment in Lake Erie Grapes

Not Reporting on this Outcome Measure

Outcome #29

1. Outcome Measures

Potato/Tomato Grower and Consultant Adoption of an Advanced Late Blight Forecast Tool

Not Reporting on this Outcome Measure

Outcome #30

1. Outcome Measures

Weed Control Is Critical To Profitability In New High-Density Orchards.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Agricultural/horticultural/natural resources enterprises operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, competitive land uses and shifting development patterns, evolving consumer demands, and globally influenced markets. During FY11 two dramatic and highly damaging flood events damaged crop and forest resources in highly productive areas of New York. Recovery is slow and has extended well into 2012 and likely will for many areas.

Fundamental change is occurring in the state and regional economies within which agricultural/horticultural/natural resources enterprises operate. The specific implications of these external factors vary greatly by locale and across commodities and business forms in some cases creating new market opportunities and in others erosion of traditional markets. Population and land use changes in farming communities has led in some places to producer/neighbor issues that influence choice of production practices. Economic stress has exacerbated issues of food insecurity and hunger and many community organizations are over- burdened and unable to meet demands.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The evaluation approach included in our plan can more accurately be described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to influence our evaluation patterns and procedures. CORE has piloted the Evaluation Partnership Project (EPP) over the last decade, documenting processes that work for Cornell Cooperative Extension and teaching process. The CORE Evaluation Partnership Project has included intensive program development and evaluation planning with a number of targeted programs and counties.

We employ a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities for each of our planned programs. The results are aggregated in a statewide accountability system which leads to the summary results reported in the State Defined Outcomes in each plan, including selected impact statements and success stories from a pool of more than 400 documented narratives.

To strengthen evaluation of commercial agriculture programs, our two commercial vegetable regional specialist teams participated in an Evaluation Planning Partnership with the Cornell Office for Research on Evaluation in 2010 and 2011. Past participation in the EPP continues to drive evaluation efforts. This year the Small Farms Program participated in a self-driven version of the Evaluation Planning Partnership program.

Key Items of Evaluation

See cross-cutting outcomes in State Defined Outcomes.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
104	Protect Soil from Harmful Effects of Natural Elements	7%		1%	
111	Conservation and Efficient Use of Water	15%		3%	
112	Watershed Protection and Management	17%		24%	
125	Agroforestry	5%		2%	
132	Weather and Climate	14%		8%	
133	Pollution Prevention and Mitigation	10%		21%	
135	Aquatic and Terrestrial Wildlife	8%		15%	
136	Conservation of Biological Diversity	15%		15%	
141	Air Resource Protection and Management	2%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	2%		0%	
304	Animal Genome	0%		1%	
315	Animal Welfare/Well-Being and Protection	0%		5%	
405	Drainage and Irrigation Systems and Facilities	5%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	70.0	0.0	11.5	0.0
Actual Paid Professional	140.4	0.0	6.0	0.0
Actual Volunteer	421.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
893090	0	769105	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
893090	0	769105	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	29387	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	29387	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a comprehensive effort entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored applied research and educational efforts depending on the focus and scope of their role. Example targeted activities include a comprehensive "Northeast Climate Impacts Assessment" that details potential impacts on crops, dairy, forests, and invasive pest species for the region and the Cornell Computational Agricultural Project that is compiling daily weather data and using complex computing tools to create a user friendly website and database for farmers to help them make critical decisions as they adapt to the changing environment. Climate change is tied intimately to sustainable energy concerns. Therefore, climate change is an important element of energy literacy initiatives across all audiences including youth.

2. Brief description of the target audience

Key audiences served, directly and indirectly include: agricultural, horticultural and natural resource producers; consultants and service providers, resource managers, governmental agencies, and local/state/federal governmental leaders and policy makers, individual consumers, and youth.

3. How was eXtension used?

eXtension public site and the professional development offered through eXtension.org. Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 347 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are identified national projects - such as with Financial Security for All COP.

Examples of participation in COPs in this plan of work area include:

Climate Change

- Climate, Woodlands, and Forests
- Agricultural Disaster Preparedness
- Floods
- Invasive Species

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	784043	5092432	44800	268023

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	9	180	189

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- 2.1a # of agricultural/natural resources producers, and/or organization and business representatives completing educational programs on the causes and implications of climate change and adaptive or mitigating strategies.
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- 2.2a # of local government officials and community leaders completing educational programs on causes and implications of climate change and adaptive or mitigating strategies.
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- 2.3a # of adult and youth consumers, residents, and landowners completing educational programs on causes and implications of climate change and adaptive or mitigating strategies.
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- 2.4a # of agricultural/natural resources producers, and/or organization and business representatives completing educational programs on managing water resources and/or environmental planning.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- 2.5a # of government officials and community leaders completing educational programs on managing water resources and the relationship between water resources and land use management.
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- 2.6a # of adult and youth consumers, residents, and landowners completing educational programs on water resources protection.
Not reporting on this Output for this Annual Report

Output #7

Output Measure

- 2.7a # of agricultural/ natural resources producers, and/or organization and business representatives completing educational programs on managing natural resources, invasive species, and/or biodiversity.
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- 2.8a # of local government officials and community leaders completing educational programs on managing natural resources, invasive species, open space preservation, alternative land uses and/or biodiversity.
Not reporting on this Output for this Annual Report

Output #9

Output Measure

- 2.9a # of adult and youth consumers, residents, and landowners completing educational programs on natural resources protection, invasive species, and/or biodiversity.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	2.1b # of agricultural/natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about on the causes and implications of climate change and adaptive or mitigating strategies.
2	2.1c # agricultural/natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to minimize their contribution to climate change and/or adapt to climate change effects.
3	2.1d # agricultural/natural resources producers, and/or organization and business representatives documented to have successfully adapted to climate change effects enhancing economic viability.
4	2.2b # of local government officials and community leaders who demonstrate knowledge gains about causes and implications of climate change and adaptive or mitigating strategies.
5	2.2c # of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to minimize their contribution to climate change and/or adapt to climate change effects.
6	2.2d # of communities documented to have established or modified public policies to minimize contribution to climate change and/or adapt to climate change effects.
7	2.3b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains on causes and implications of climate change and adaptive or mitigating strategies.
8	2.3c # of adult and youth consumers, residents, and landowners documented to have modified existing practices and/or adopted new practices to minimize their contribution to climate change and/or adapt to climate change effects.
9	2.4b # of agricultural/natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about managing water resources.
10	2.4c # agricultural/natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance water resources.
11	2.4d # agricultural/ natural resources producers, and/or organization and business representatives documented to have improved and/or protected water resources.
12	2.5b # of government officials and community leaders who demonstrate knowledge gains about managing water resources and the relationship between water resources and land use management.
13	2.5c # of government officials and community leaders documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance water resources.
14	2.5d # of communities documented to have established or modified land use and development policies to enhance and protect water resources.
15	2.6b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains about water resources protection.
16	2.6c # of adult and youth consumers, residents, and landowners documented to have modified existing practices or adopted new practices to protect/enhance water resources.

2012 NY State Agricultural Experiment Station Research and Cornell University Research and Extension Combined Annual Report of Accomplishments and Results

17	2.6d # of adult and youth consumers, residents, and landowners documented to have successfully modified existing practices and/or adopted new practices leading to improved protection/enhancement of water resources.
18	2.7b # of agricultural/ natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about managing natural resources, invasive species, and/or biodiversity.
19	2.7c # of agricultural/ natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance natural resources and/or enhance biodiversity.
20	2.7d # of documented instances in which implementation of natural resources management practices by agricultural/ natural resources producers, and/or organization and business representatives lead to increase open space preservation, enhanced/ protected natural resources, biodiversity, land use.
21	2.8a # of local government officials and community leaders who demonstrate knowledge gains about managing natural resources, invasive species, open space preservation, alternative land uses and/or biodiversity.
22	2.8c # of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity.
23	2.8d # of documented instances in which implementation of natural resources management practices and/or land use policies lead to increased open space preservation, enhanced or protected natural resources, enhanced biodiversity, and/or increased alternative land use.
24	2.9b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains about natural resources management, invasive species, and/or biodiversity.
25	2.9c # of adult and youth consumers, residents, and landowners documented to have modified existing practices and/or adopted new practices to protect/enhance natural resources and/or enhance biodiversity.
26	2.9d # of documented instances in which implementation of natural resources management practices by individual consumers, residents, and/or private landowners lead to increased open space preservation, enhanced or protected natural resources or enhanced biodiversity.
27	Climate Change Mitigation and Adaptation with New Tools for Soil Carbon and Nitrogen Management van Es
28	Assessing the Geography of Weed Damage in Agricultural Systems and the Potential Impacts of Climate Change Riha
29	On-Farm Opportunities to Reduce Greenhouse Gas Emissions while Maintaining Soil and Water Quality Woodbury
30	Emergency Flood Response Training for Equipment Operators (A.K.A. Contractors? Training)
31	GIS Training and Support to Inform Sustainable Land Use and Natural Resource Planning
32	Marine Meadows Program

Outcome #1

1. Outcome Measures

2.1b # of agricultural/natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about on the causes and implications of climate change and adaptive or mitigating strategies.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

2.1c # agricultural/natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to minimize their contribution to climate change and/or adapt to climate change effects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	143

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
132	Weather and Climate
133	Pollution Prevention and Mitigation
405	Drainage and Irrigation Systems and Facilities

Outcome #3

1. Outcome Measures

2.1d # agricultural/natural resources producers, and/or organization and business representatives documented to have successfully adapted to climate change effects enhancing economic viability.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

2.2b # of local government officials and community leaders who demonstrate knowledge gains about causes and implications of climate change and adaptive or mitigating strategies.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

2.2c # of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to minimize their contribution to climate change and/or adapt to climate change effects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
132	Weather and Climate
133	Pollution Prevention and Mitigation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
141	Air Resource Protection and Management

Outcome #6

1. Outcome Measures

2.2d # of communities documented to have established or modified public policies to minimize contribution to climate change and/or adapt to climate change effects.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

2.3b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains on causes and implications of climate change and adaptive or mitigating strategies.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

2.3c # of adult and youth consumers, residents, and landowners documented to have modified existing practices and/or adopted new practices to minimize their contribution to climate change and/or adapt to climate change effects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	461

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
132	Weather and Climate
133	Pollution Prevention and Mitigation
136	Conservation of Biological Diversity
141	Air Resource Protection and Management

Outcome #9

1. Outcome Measures

2.4b # of agricultural/natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about managing water resources.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

2.4c # agricultural/natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1301

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife

Outcome #11

1. Outcome Measures

2.4d # agricultural/ natural resources producers, and/or organization and business representatives documented to have improved and/or protected water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	803

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #12

1. Outcome Measures

2.5b # of government officials and community leaders who demonstrate knowledge gains about managing water resources and the relationship between water resources and land use management.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

2.5c # of government officials and community leaders documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	278

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #14

1. Outcome Measures

2.5d # of communities documented to have established or modified land use and development policies to enhance and protect water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	52

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #15

1. Outcome Measures

2.6b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains about water resources protection.

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

2.6c # of adult and youth consumers, residents, and landowners documented to have modified existing practices or adopted new practices to protect/enhance water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3770

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #17

1. Outcome Measures

2.6d # of adult and youth consumers, residents, and landowners documented to have successfully modified existing practices and/or adopted new practices leading to improved protection/enhancement of water resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4160

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #18

1. Outcome Measures

2.7b # of agricultural/ natural resources producers, and/or organization and business representatives who demonstrate knowledge gains about managing natural resources, invasive species, and/or biodiversity.

Not Reporting on this Outcome Measure

Outcome #19

1. Outcome Measures

2.7c # of agricultural/ natural resources producers, and/or organization and business representatives documented to have modified existing practices or technologies and/or adopted new practices to protect/enhance natural resources and/or enhance biodiversity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	967

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #20

1. Outcome Measures

2.7d # of documented instances in which implementation of natural resources management practices by agricultural/ natural resources producers, and/or organization and business representatives lead to increase open space preservation, enhanced/ protected natural resources, biodiversity, land use.

Not Reporting on this Outcome Measure

Outcome #21

1. Outcome Measures

2.8b # of local government officials and community leaders who demonstrate knowledge gains about managing natural resources, invasive species, open space preservation, alternative land uses and/or biodiversity.

Not Reporting on this Outcome Measure

Outcome #22

1. Outcome Measures

2.8c # of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	221

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #23

1. Outcome Measures

2.8d # of documented instances in which implementation of natural resources management practices and/or land use policies lead to increased open space preservation, enhanced or protected natural resources, enhanced biodiversity, and/or increased alternative land use.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	309

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #24

1. Outcome Measures

2.9b # of adult and youth consumers, residents, and landowners who demonstrate knowledge gains about natural resources management, invasive species, and/or biodiversity.

Not Reporting on this Outcome Measure

Outcome #25

1. Outcome Measures

2.9c # of adult and youth consumers, residents, and landowners documented to have modified existing practices and/or adopted new practices to protect/enhance natural resources and/or enhance biodiversity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2182

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #26

1. Outcome Measures

2.9d # of documented instances in which implementation of natural resources management practices by individual consumers, residents, and/or private landowners lead to increased open space preservation, enhanced or protected natural resources or enhanced biodiversity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #27

1. Outcome Measures

Climate Change Mitigation and Adaptation with New Tools for Soil Carbon and Nitrogen Management van Es

Not Reporting on this Outcome Measure

Outcome #28

1. Outcome Measures

Assessing the Geography of Weed Damage in Agricultural Systems and the Potential Impacts of Climate Change Riha

Not Reporting on this Outcome Measure

Outcome #29

1. Outcome Measures

On-Farm Opportunities to Reduce Greenhouse Gas Emissions while Maintaining Soil and Water Quality Woodbury

Not Reporting on this Outcome Measure

Outcome #30

1. Outcome Measures

Emergency Flood Response Training for Equipment Operators (A.K.A. Contractors? Training)

Not Reporting on this Outcome Measure

Outcome #31

1. Outcome Measures

GIS Training and Support to Inform Sustainable Land Use and Natural Resource Planning

Not Reporting on this Outcome Measure

Outcome #32

1. Outcome Measures

Marine Meadows Program

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Climate change issues play out in a complex and volatile context involving weather extremes, changing governmental policies and regulations, competitive land uses and shifting development patterns, evolving consumer demands, and globally influenced markets. The specific implications of external factors vary greatly by locale and across commodities and business forms. Technical knowledge of climate change issues and mitigation strategies is evolving rapidly.

With weather related impacts directly impacting communities and agriculture, there is a growing interest in programs that will prepare youth, families and communities for potential changes. This year saw a rise in participation numbers and offerings in education and research related to Climate Change. The impacts of programs have not yet caught up with the offerings, but they are anticipated in coming years.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The evaluation approach included in our plan can more accurately be described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to influence our evaluation patterns and procedures. CORE has piloted the Evaluation Partnership Project (EPP) over the last decade documenting processes that work for Cornell Cooperative Extension and teaching process. The CORE Evaluation Partnership Project has included intensive program development and evaluation planning with a number of targeted programs and counties.

We employ a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities for each of our planned programs. The results are aggregated in a statewide accountability system which leads to the summary results reported in the State Defined Outcomes in each plan including selected impact statements and success stories from a pool of more than 400 documented narratives.

In 2010, we established an Energy and Climate Change team to provide leadership for statewide program initiatives. In 2011, the team entered into partnership with the Cornell Office for Research on Evaluation in their Evaluation Planning Partnership. This collaboration assisted the team in developing detailed logic models for initial program emphases and development of specific evaluation approaches for the coming year. The process continues to influence the way that the team is working.

Key Items of Evaluation

See cross cutting outcomes in State Defined Outcomes.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	18%		2%	
124	Urban Forestry	10%		0%	
205	Plant Management Systems	0%		40%	
401	Structures, Facilities, and General Purpose Farm Supplies	14%		0%	
402	Engineering Systems and Equipment	8%		4%	
403	Waste Disposal, Recycling, and Reuse	25%		13%	
404	Instrumentation and Control Systems	5%		0%	
511	New and Improved Non-Food Products and Processes	0%		24%	
601	Economics of Agricultural Production and Farm Management	0%		4%	
605	Natural Resource and Environmental Economics	20%		12%	
609	Economic Theory and Methods	0%		1%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	175.0	0.0	4.0	0.0
Actual Paid Professional	75.0	0.0	2.0	0.0
Actual Volunteer	424.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
477494	0	509165	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
477494	0	509165	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	89143	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	89143	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored applied research and educational efforts depending on the focus and scope of their role. In Spring 2010 we launched a major statewide educational initiative based on a team of four specialists located regionally, four campus faculty in leadership roles, and several program work teams. The team is focusing on biofuels and agricultural energy, household energy, community energy planning, and youth involvement in energy.

2. Brief description of the target audience

Agricultural/horticulture/natural resource and supporting businesses are targeted both regarding bioenergy production opportunities and information regarding alternative energy sources and conservation. Policy education efforts relate to development of agriculture and natural resources based alternative energy sources.

Consumers, property managers, and community leaders are targeted for information regarding

energy supply alternatives and energy conservation options for residential, facilities, and transportation needs. Citizens, community agencies and organizations are targeted for energy-related policy education efforts particularly as related to development of alternative energy sources and the interaction between land use and energy conservation.

Residents and property owners are targeted with stewardship and waste reduction and management in their homes and on their properties. Businesses, organizations, and producers are targeted with information about reducing impacts of their operations. Local government and community leaders are targeted with information related to governmental management of waste, such as relationship between waste management and land use, effective recycling programs, and roadkill management. Environmental planners and managers and technical assistance providers are targeted with in-depth information related to their audiences/constituents. Teachers and youth professionals and volunteers are provided with curriculum and training. Youth are targeted with age appropriate education.

3. How was eXtension used?

Cornell Cooperative Extension supports and promotes eXtension communities of practice, the eXtension public site and the professional development offered through eXtension.org.

Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 347 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are

identified national projects - such as with Financial Security for All COP.

Examples of participation in COPs in this plan of work area include:

- Sustainable Energy
- Farm Energy
- Home Energy
- Wood Energy

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	200665	3221819	12921	205648

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	97	98

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (3.1a) # agricultural producers and agribusiness representatives completing educational programs on the potential for development of biologically-based fuels.
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- (3.1b) # local and state leaders completing educational programs on the potential for development of biologically-based fuels such as biodiesel, ethanol, methane, recycled vegetable oils, space heating fuels etc.
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- (3.1c) # agricultural producers and agribusiness, and natural resource business representatives completing educational programs about cropping for bioenergy production.
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- (3.2a) # agricultural/horticulture/ natural resource and supporting business representatives completing educational programs about the availability and pros and cons of alternative energy sources and/or about potential energy savings in operations.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- (3.3a) # consumers and community leaders completing educational programs about the availability and pros and cons of alternative energy.
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- (3.4a) # consumers, property managers, and/or housing officials completing educational programs about potential energy cost savings, including selecting energy providers, and energy conservation strategies and measures especially related to housing and transportation.

Not reporting on this Output for this Annual Report

Output #7

Output Measure

- (3.5a) # community members, leaders and officials completing education programs about the relationships between development patterns and energy use/costs.

Not reporting on this Output for this Annual Report

Output #8

Output Measure

- (3.5b) # of workforce professionals, economic developers and/or entrepreneurs participating in educational programs on energy workforce and business opportunities.

Not reporting on this Output for this Annual Report

Output #9

Output Measure

- (3.6a) agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents completing educational programs on managing and reducing waste

Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(3.1d) # agricultural producers, agribusiness, or local and state leaders who demonstrate knowledge gains about the potential for development of biologically-based fuels.
2	(3.1e) # forest owners and purchasers of forest products who demonstrate knowledge or skills gains about current markets for firewood and chips/pellets and associated cropping practices.
3	(3.1f) # producers, economic development organizations and other groups who collaborate to establish bioenergy as a viable alternative crop.
4	(3.1g) # of existing or new producers documented to have modified existing practices or technologies and/or adopted new production management practices for bioenergy production.
5	(3.1.h) # of producers, horticulture businesses and/or natural resource managers reporting that cropping for and/or use of bioenergy leads to increased economic returns to their enterprises.
6	(3.2b) # agricultural/horticulture/ natural resource and supporting businesses who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources and/or potential energy savings in operations.
7	(3.2c) # of agricultural/horticultural/ natural resource businesses documented to have adopted appropriate alternative energy sources and/or energy conservation practices.
8	(3.2d) # of producers/horticulture businesses/natural resource managers documented to have improved economic returns to agricultural/ horticultural business profitability and vitality resulting from adopting alternative energy sources and/or energy conservation.
9	(3.3b) # consumers and/or community leaders who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources especially related to housing and transportation.
10	(3.3c) # of consumers documented to have adopted appropriate alternative energy sources.
11	(3.3d) # of consumers who report savings on energy costs attributable to adopting alternative energy sources.
12	(3.4b) # consumers, property managers, and/or housing officials who demonstrate knowledge or skills gains and/or can articulate specific actions they will take related to energy cost controls and conservation measures especially related to housing and transportation.
13	(3.4c) # of consumers reporting to have adopted appropriate energy cost control and/or conservation practices.
14	(3.4d) # of property managers, and/or housing officials documented to have taken measures to improve energy cost control or efficiency of existing and new buildings.
15	(3.4e) # of consumers who report savings on energy costs attributable to adopting energy conservation measures.
16	(3.5c) # community members, leaders and officials who demonstrate knowledge gains about the relationships between development patterns and energy use/costs.

17	(3.5e) # communities documented to have assessed local energy development proposals and/or the relationships between current policies and regulations and energy conservation.
18	(3.5f) # of community agencies/organizations documented to have adopted appropriate alternative energy sources.
19	(3.5h) # of communities documented to have established or modified land use and development policies to promote energy conservation.
20	(3.5i) # of community agencies/organizations reporting savings on energy costs attributable to adopting alternative energy sources.
21	(3.5d) # of workforce professionals, economic developers and/or entrepreneurs demonstrating knowledge gains related to energy workforce and business opportunities.
22	(3.5g) # of new workers trained and energy-related businesses established at least in part due to participation in the program.
23	(3.5j) # of communities that report increased diversification of their local economies attributable at least in part to participation in the program.
24	(3.6 b) number of agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents who demonstrate knowledge gains about waste management and reduction
25	(3.6 c) agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste
26	(3.6d) number of agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents documented to have reduced costs through improved waste management practices
27	(3.8c) Number of adult and youth consumers, residents and landowners documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste
28	(3.8d) number of adult and youth consumers, residents, and/or landowners, documented to have reduced waste volumes and/or costs
29	Use of Agricultural Waste Products and Plant-Microbe Interactions to Alleviate Environmental Pollution and Produce Carbon Neutral Bioenergy Harman
30	Safeguarding Upstate New York Farmland and Waters: Solutions for Safe Handling of Marcellus Shale Drilling Fluids Steenhuis
31	Bio-Fuel Educational Outreach Tool Launched
32	Renewable Energy on the Farm
33	Saving Energy, Saving Dollars
34	Residential Energy Efficiency

Outcome #1

1. Outcome Measures

(3.1d) # agricultural producers, agribusiness, or local and state leaders who demonstrate knowledge gains about the potential for development of biologically-based fuels.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

(3.1e) # forest owners and purchasers of forest products who demonstrate knowledge or skills gains about current markets for firewood and chips/pellets and associated cropping practices.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

(3.1f) # producers, economic development organizations and other groups who collaborate to establish bioenergy as a viable alternative crop.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	64

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

(3.1g) # of existing or new producers documented to have modified existing practices or technologies and/or adopted new production management practices for bioenergy production.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #5

1. Outcome Measures

(3.1.h) # of producers, horticulture businesses and/or natural resource managers reporting that cropping for and/or use of bioenergy leads to increased economic returns to their enterprises.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #6

1. Outcome Measures

(3.2b) # agricultural/horticulture/ natural resource and supporting businesses who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources and/or potential energy savings in operations.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

(3.2c) # of agricultural/horticultural/ natural resource businesses documented to have adopted appropriate alternative energy sources and/or energy conservation practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	39

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #8

1. Outcome Measures

(3.2d) # of producers/horticulture businesses/natural resource managers documented to have improved economic returns to agricultural/ horticultural business profitability and vitality resulting from adopting alternative energy sources and/or energy conservation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	24

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #9

1. Outcome Measures

(3.3b) # consumers and/or community leaders who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources especially related to housing and transportation.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

(3.3c) # of consumers documented to have adopted appropriate alternative energy sources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	380

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #11

1. Outcome Measures

(3.3d) # of consumers who report savings on energy costs attributable to adopting alternative energy sources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3782

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #12

1. Outcome Measures

(3.4b) # consumers, property managers, and/or housing officials who demonstrate knowledge or skills gains and/or can articulate specific actions they will take related to energy cost controls and conservation measures especially related to housing and transportation.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

(3.4c) # of consumers reporting to have adopted appropriate energy cost control and/or conservation practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3112

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
403	Waste Disposal, Recycling, and Reuse
605	Natural Resource and Environmental Economics

Outcome #14

1. Outcome Measures

(3.4d) # of property managers, and/or housing officials documented to have taken measures to improve energy cost control or efficiency of existing and new buildings.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #15

1. Outcome Measures

(3.4e) # of consumers who report savings on energy costs attributable to adopting energy conservation measures.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4451

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
403	Waste Disposal, Recycling, and Reuse
605	Natural Resource and Environmental Economics

Outcome #16

1. Outcome Measures

(3.5c) # community members, leaders and officials who demonstrate knowledge gains about the relationships between development patterns and energy use/costs.

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

(3.5e) # communities documented to have assessed local energy development proposals and/or the relationships between current policies and regulations and energy conservation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	73

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry

Outcome #18

1. Outcome Measures

(3.5f) # of community agencies/organizations documented to have adopted appropriate alternative energy sources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	55

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #19

1. Outcome Measures

(3.5h) # of communities documented to have established or modified land use and development policies to promote energy conservation.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
605	Natural Resource and Environmental Economics

Outcome #20

1. Outcome Measures

(3.5i) # of community agencies/organizations reporting savings on energy costs attributable to adopting alternative energy sources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	20

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #21

1. Outcome Measures

(3.5d) # of workforce professionals, economic developers and/or entrepreneurs demonstrating knowledge gains related to energy workforce and business opportunities.

Not Reporting on this Outcome Measure

Outcome #22

1. Outcome Measures

(3.5g) # of new workers trained and energy-related businesses established at least in part due to participation in the program.

Not Reporting on this Outcome Measure

Outcome #23

1. Outcome Measures

(3.5j) # of communities that report increased diversification of their local economies attributable at least in part to participation in the program.

Not Reporting on this Outcome Measure

Outcome #24

1. Outcome Measures

(3.6 b) number of agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents who demonstrate knowledge gains about waste management and reduction

Not Reporting on this Outcome Measure

Outcome #25

1. Outcome Measures

(3.6 c) agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	79

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
401	Structures, Facilities, and General Purpose Farm Supplies
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #26

1. Outcome Measures

(3.6d) number of agricultural/natural resources producers, organization and business representatives, community leaders, and/or residents documented to have reduced costs through improved waste management practices

Not Reporting on this Outcome Measure

Outcome #27

1. Outcome Measures

(3.8c) Number of adult and youth consumers, residents and landowners documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3611

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
401	Structures, Facilities, and General Purpose Farm Supplies
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #28

1. Outcome Measures

(3.8d) number of adult and youth consumers, residents, and/or landowners, documented to have reduced waste volumes and/or costs

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3711

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
401	Structures, Facilities, and General Purpose Farm Supplies
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
605	Natural Resource and Environmental Economics

Outcome #29

1. Outcome Measures

Use of Agricultural Waste Products and Plant-Microbe Interactions to Alleviate Environmental Pollution and Produce Carbon Neutral Bioenergy Harman

Not Reporting on this Outcome Measure

Outcome #30

1. Outcome Measures

Safeguarding Upstate New York Farmland and Waters: Solutions for Safe Handling of Marcellus Shale Drilling Fluids Steenhuis

Not Reporting on this Outcome Measure

Outcome #31

1. Outcome Measures

Bio-Fuel Educational Outreach Tool Launched

Not Reporting on this Outcome Measure

Outcome #32

1. Outcome Measures

Renewable Energy on the Farm

Not Reporting on this Outcome Measure

Outcome #33

1. Outcome Measures

Saving Energy, Saving Dollars

Not Reporting on this Outcome Measure

Outcome #34

1. Outcome Measures

Residential Energy Efficiency

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

The interaction between natural disasters, the economy, and energy costs is well documented. Weather in particular has interrupted supplies and dramatically influences heating and cooling costs. Appropriations, public policy, and regulations directly affect the ability to pursue energy source alternatives, including bioenergy development, and to implement energy conservation alternatives, particularly for low-income households. Dramatic cuts in state funding for consumer energy education is a significant barrier. Public and private funders and CCE may have fewer fiscal resources and other resources to devote to energy matters. The potential for Marcellus Shale development in New York has in some ways elevated energy awareness but also has exposed how polarized views are about energy conservation and development.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The evaluation approach included in our plan can more accurately be described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to influence our evaluation patterns and procedures. CORE has piloted the Evaluation Partnership Project (EPP) over the last decade documenting processes that work for Cornell Cooperative Extension and teaching process. The CORE Evaluation Partnership Project has included intensive program development and evaluation planning with a number of targeted programs and counties.

We employ a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities for each of our planned programs. The results are aggregated in a statewide accountability system which leads to the summary results reported in the State Defined Outcomes in each plan including

selected impact statements and success stories from a pool of more than 400 documented narratives.

In 2010, we established an Energy and Climate Change team to provide leadership for statewide program initiatives. Soon after formation, the team entered into partnership with the Cornell Office for Research on Evaluation in their Evaluation Planning Partnership. This collaboration assisted the team in developing detailed logic models for initial program emphases and development of specific evaluation approaches for the coming year.

Key Items of Evaluation

See cross cutting outcomes in State Defined Outcomes.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity -- Nutrition and Childhood Obesity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
502	New and Improved Food Products	5%		0%	
603	Market Economics	0%		5%	
607	Consumer Economics	0%		4%	
701	Nutrient Composition of Food	15%		1%	
702	Requirements and Function of Nutrients and Other Food Components	15%		25%	
703	Nutrition Education and Behavior	40%		30%	
724	Healthy Lifestyle	25%		35%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	360.0	0.0	5.0	0.0
Actual Paid Professional	260.0	0.0	3.0	0.0
Actual Volunteer	5652.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1653542	0	391735	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1653542	0	391735	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

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

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a statewide multi-disciplinary extension program with emphases cutting across many content areas and audiences. Campus-based faculty and extension associates provide leadership and participate in work teams with CCE educators. Programs draw upon Cornell and other academic research. All are involved in designing, implementing and evaluating tailored outreach. Trained Extension nutritionists and parenting and 4-H educators lead local program activities. Researchers in horticulture and agricultural economics and marketing investigate options for improving local production and direct marketing of fresh produce into areas where they are currently lacking.

Programs for children and youth are delivered through a variety of settings: 4-H camps, clubs, fairs and afterschool as well as through child-parent/grandparent involvement projects and in-school student education. Family-focused programs promote a positive parent/care-giver-child feeding relationship and planning for good nutrition and physical activity. Extension staff collaborate with community leaders to improve the local environment for healthy eating and active living. Activities include sequential learning events, "community workshops" and engagement with community and civic leaders to improve the environment for nutrition and wellness and support of the local food system.

2. Brief description of the target audience

Audiences reached include: moderate and low income families; 4-H youth; children in and out of school; nutrition, health, and family professionals; front-line family workers; school food service staff; community leaders; and government and agency leaders at the local, state, and federal level.

3. How was eXtension used?

Cornell Cooperative Extension supports and promotes eXtension communities of practice, the eXtension public site and the professional development offered through eXtension.org.

Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 347 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are

identified national projects - such as with Financial Security for All COP.

Examples of participation in COPs in this plan of work area include:

- Childhood Obesity and Nutrition
- Families, Food, and Fitness

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	219301	4930824	264452	6026562

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

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	3	208	211

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (4.1a) # children, youth, parents/caregivers and other adults reached via healthy eating and active living programs
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- (4.1b) # of women and health providers completing education programs addressing healthy weight gain during pregnancy and breastfeeding
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- (4.1c) #of extension educators and/or volunteers participating in training programs to enhance obesity prevention educational opportunities for children and youth, and adults who care for them
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- (4.2a) # of program participants reached to improve their food resource management and food security
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- (4.3a) # of community and/or government/ agency members completing educational programs on issues related to childhood obesity prevention programs and policy related to healthy living
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(4.1d) of children, youth, parents/caregivers and other adults who demonstrate knowledge or skill gains related to healthy eating and active living
2	(4.1e) #of women and health providers demonstrating increased knowledge or skill gains related to healthy weight gain during pregnancy and breastfeeding
3	(4.1f) # of extension educators or volunteers demonstrating knowledge or skill gains related to healthy eating and active living programs for obesity prevention
4	(4.1g) # of youth program participants documented to have applied healthy eating and/or active living, recommendations
5	(4.1h) # of adult program participants documented to have applied healthy eating and/or active living, recommendations
6	(4.1i) #of extension educators and/or volunteers reporting increased delivery of healthy living-related programs.
7	(4.1j) # of vulnerable children and youth documented to have reduced incidence of overweight and obesity as a result of participating in relevant educational programs.
8	(4.1k) # of adult program participants documented to have reduced one or more chronic disease indicators associated with overweight.
9	(4.2b) #of program participants who demonstrate knowledge or skill gains related to food resource management and food security
10	(4.2c) # of program participants who adopt food resource management and/or food security practices
11	(4.2d) # of program participants documented to have improved food resource management and/or food security
12	(4.3b) # of program participants who demonstrate increased knowledge or skill gains related to childhood obesity prevention programs and policies
13	(4.3c) # of program participants documented to have increased involvement in public/community childhood obesity prevention actions
14	(4.3d) # of participating schools and/or communities documented to have made practice and/or policy changes to promote healthy eating and active living
15	(4.3e) # of participating schools and/or communities reporting decline in incidence of childhood overweight and/or indicators of chronic diseases associated with obesity.
16	Developing Strategies to Encourage Healthier Food Choice in New York School Cafeterias
17	Applying an Ecological Approach to Childhood Obesity Prevention at the Community Level Stark

18	Adopting Healthy Habits in the North Country
19	Families Cooking Together
20	Healthy Children Healthy Families: Parents Making A Difference
21	People's Garden Pilot School Garden Project: Healthy Gardens, Healthy Youth

Outcome #1

1. Outcome Measures

(4.1d) of children, youth, parents/caregivers and other adults who demonstrate knowledge or skill gains related to healthy eating and active living

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

(4.1e) #of women and health providers demonstrating increased knowledge or skill gains related to healthy weight gain during pregnancy and breastfeeding

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

(4.1f) # of extension educators or volunteers demonstrating knowledge or skill gains related to healthy eating and active living programs for obesity prevention

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

(4.1g) # of youth program participants documented to have applied healthy eating and/or active living, recommendations

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	20778

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #5

1. Outcome Measures

(4.1h) # of adult program participants documented to have applied healthy eating and/or active living, recommendations

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #6

1. Outcome Measures

(4.1i) #of extension educators and/or volunteers reporting increased delivery of healthy living-related programs.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

(4.1j) # of vulnerable children and youth documented to have reduced incidence of overweight and obesity as a result of participating in relevant educational programs.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

(4.1k) # of adult program participants documented to have reduced one or more chronic disease indicators associated with overweight.

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

(4.2b) #of program participants who demonstrate knowledge or skill gains related to food resource management and food security

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

(4.2c) # of program participants who adopt food resource management and/or food security practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	16786

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior

Outcome #11

1. Outcome Measures

(4.2d) # of program participants documented to have improved food resource management and/or food security

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	14073

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior

Outcome #12

1. Outcome Measures

(4.3b) # of program participants who demonstrate increased knowledge or skill gains related to childhood obesity prevention programs and policies

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

(4.3c) # of program participants documented to have increased involvement in public/community childhood obesity prevention actions

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #14

1. Outcome Measures

(4.3d) # of participating schools and/or communities documented to have made practice and/or policy changes to promote healthy eating and active living

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	76

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #15

1. Outcome Measures

(4.3e) # of participating schools and/or communities reporting decline in incidence of childhood overweight and/or indicators of chronic diseases associated with obesity.

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Developing Strategies to Encourage Healthier Food Choice in New York School Cafeterias

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

Applying an Ecological Approach to Childhood Obesity Prevention at the Community Level Stark

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

Adopting Healthy Habits in the North Country

Not Reporting on this Outcome Measure

Outcome #19

1. Outcome Measures

Families Cooking Together

Not Reporting on this Outcome Measure

Outcome #20

1. Outcome Measures

Healthy Children Healthy Families: Parents Making A Difference

Not Reporting on this Outcome Measure

Outcome #21

1. Outcome Measures

People's Garden Pilot School Garden Project: Healthy Gardens, Healthy Youth

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Local governments, an important funder for local extension staff, face diminished revenues and increased mandated costs outside of the non-mandated extension programs. Thus having professionals available to implement new research-based programming is not always possible.

A

very slow recovery from the recession and pockets of high unemployment in the state affect how public and private funds are allocated to educational activities. In some instances, family subsistence

is a higher priority than improved nutrition and opportunities for physical activity. As an example of

the latter, in New York state, cost cuts include closing some public parks and reducing recreational

physical activity programs. Some decision-makers and others in the community do not agree with all

aspects of an ecological approach to childhood obesity prevention, including disagreeing with community or institutional policy changes such as eliminating non-nutritious snacks from after school

activities instead viewing the individual and within the family as responsible for nutrition and health.

It should also be noted that state funding to nutrition programs has stopped and started and been threatened in the last two years, impacting the quality and availability of nutrition programming in New York state.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Some The Expanded Food and Nutrition Education Program (EFNEP) and Supplemental Nutrition Assistance Program - Education (SNAP-Ed) are nutrition education programs designed to enhance the quality of life for a low-income ($\leq 185\%$ of poverty) participants and their families. EFNEP is provided to participants who are parenting, pregnant, or influencing the nutritional well-being of children under the age of 19 years, and who meet the income guidelines. SNAP-Ed is provided to any person who meets the income guidelines.

- Participants complete an assessment form at entry into the program and at exit. The question sets used are based on the content of classes delivered. Enrollment in the program is usually limited to 4 - 12 lessons, but may occasionally be longer, depending upon the needs and desires of the individual participant. The assessment form collects demographic information, a maximum of 25 behavior checklist items and a 24-hour dietary recall. These collected data are entered into a web-based electronic database, specifically designed by the USDA to capture these evaluation data.
- The web-based system provides multiple levels of assessment on participant and program outputs. The web-based system provides individual assessment: providing output reports which summarize participant reported behaviors to use with program participants to facilitate awareness of current practices and improved practices, at the conclusion of the sessions. The web-based system provide aggregated reports of program participant data which summarizes output and outcome (reported behavior and diet changes) at the local county level. The web-based system then enables to aggregation of data at the state and federal levels, to facilitate program reporting and evaluation assessment at each of these levels.
- Participants reached through one-time education will complete a form which captures demographic characteristics and an assessment of topic-specific intent to change behavior, e.g. intent to choose water and low-fat milk instead of sweetened beverages. Data will not be linked to participant's name or address. Data on enrolled participants are used to 1) assist staff in establishing goals and objectives with the participants for program delivery and 2) assess outcomes of the program. Aggregated data are shared with the Federal and State funding agencies at the end of each Federal Fiscal Year as required for Cornell University and Cornell Cooperative Extension to receive the Federal funding.

Key Items of Evaluation

See cross cutting outcomes in State Defined Outcomes.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
303	Genetic Improvement of Animals	0%		1%	
308	Improved Animal Products (Before Harvest)	5%		0%	
311	Animal Diseases	0%		33%	
312	External Parasites and Pests of Animals	0%		10%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%		3%	
501	New and Improved Food Processing Technologies	10%		0%	
502	New and Improved Food Products	0%		4%	
503	Quality Maintenance in Storing and Marketing Food Products	18%		0%	
504	Home and Commercial Food Service	30%		0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	10%		2%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	15%		18%	
721	Insects and Other Pests Affecting Humans	2%		9%	
722	Zoonotic Diseases and Parasites Affecting Humans	0%		4%	
723	Hazards to Human Health and Safety	10%		6%	
903	Communication, Education, and Information Delivery	0%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Extension	Research
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Year: 2012	1862	1890	1862	1890
	Plan	115.0	0.0	8.0
Actual Paid Professional	17.0	0.0	4.0	0.0
Actual Volunteer	700.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
106110	0	584509	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
106110	0	584509	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	64451	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	64451	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a comprehensive program entailing a wide range of applied research activities and multiple education methods depending on context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

Examples of activities are:

- Convey general knowledge and understanding of food safety science to New York State residents and beyond via varied communication strategies;
- Provide educational programs in collaboration with regulatory agencies involved with assuring the safety and wholesomeness of food processed, prepared, sold and handled and consumed by the public in New York State;
 - Via courses, presentations and materials, support transfer of new research-based information for appropriate applications in the agricultural production, manufacturing, retailing and food service industries;
 - Communicate current food safety production, manufacturing and technical problems to researchers at Cornell;
 - Conduct specialized instruction in the effective application of laboratory methods to maintain and improve product safety and quality in the dairy and food industry.

2. Brief description of the target audience

Audiences reached include: processors, producers and consumers with targeted programs for moderate and low income families; 4-H youth; nutrition, health, and family professionals; front-line family workers; food service and food production staff and their managers and directors; and government and agency leaders at the local, state, and federal level.

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	165336	4605796	30028	812788

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	29	29

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (5.1a) # of consumers in programs on: reducing food safety and/or food borne risks and illnesses including recommended purchasing, handling, storage, and preparation practices
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- (5.2a) # of producers/processors/food service providers participating in programs on: reducing food safety and/or food borne risks and illnesses including recommended production, processing, storage, handling, marketing, and preparation practices
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- (5.3a) # food safety decision-makers, policy makers and other officials reached with science-based information to improve food safety practices and policies
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(5.1b) # of consumers who demonstrate knowledge or skill gains related to reducing food safety and/or food-borne risks and illnesses including recommended purchasing, handling, storage, and preparation practices
2	(5.1c) # of consumers documented to have implemented new and/or increased application of ongoing safe food purchasing, handling, storage, and preparation practices
3	(5.1d) Reduced incidence of food-borne illness among program participants.
4	(5.2b) # of producers/processors/food service providers who demonstrate knowledge or skill gains related to reducing food safety and/or food-borne risks and illnesses including recommended production, processing, storage, handling, marketing, and preparation practices
5	(5.2c) # of producers/processors/food service providers documented to have implemented new and/or increased application of ongoing safe food production, processing, storage, handling, marketing and preparation practices.
6	(5.2d) Improved safety of foods available through wholesale and retail outlets and institutional foods.
7	(5.3b) # of food safety decision-makers, policy makers and other officials who demonstrate knowledge gains relative to improved food safety practices and policies
8	(5.3c) # of communities/ firms/or organizations documented to have assessed practices or food safety policies as a result of participating in relevant educational programs.
9	(5.3d) # of communities/firms/or organizations documented to have implemented improved practices or food safety policies as a result of participating in relevant educational programs
10	Intervention Methods for Enhancing the Microbiological Safety of Fresh and Fresh-cut Produce Worobo
11	Mastitis Resistance to Enhance Dairy Food Safety Schukken
12	A Landscape Ecology Approach to Pre-harvest Food Safety
13	Food Preservation Remains a Relevant Skill
14	From Recipe to Market - A Program for New Food Entrepreneurs
15	Good Agricultural Practices (GAPs) Food Safety Training for Farmers & Trainers

Outcome #1

1. Outcome Measures

(5.1b) # of consumers who demonstrate knowledge or skill gains related to reducing food safety and/or food-borne risks and illnesses including recommended purchasing, handling, storage, and preparation practices

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

(5.1c) # of consumers documented to have implemented new and/or increased application of ongoing safe food purchasing, handling, storage, and preparation practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	12405

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
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

Outcome #3

1. Outcome Measures

(5.1d) Reduced incidence of food-borne illness among program participants.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

(5.2b) # of producers/processors/food service providers who demonstrate knowledge or skill gains related to reducing food safety and/or food-borne risks and illnesses including recommended production, processing, storage, handling, marketing, and preparation practices

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

(5.2c) # of producers/processors/food service providers documented to have implemented new and/or increased application of ongoing safe food production, processing, storage, handling, marketing and preparation practices.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

(5.2d) Improved safety of foods available through wholesale and retail outlets and institutional foods.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

(5.3b) # of food safety decision-makers, policy makers and other officials who demonstrate knowledge gains relative to improved food safety practices and policies

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

(5.3c) # of communities/ firms/or organizations documented to have assessed practices or food safety policies as a result of participating in relevant educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	170

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
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
721	Insects and Other Pests Affecting Humans
723	Hazards to Human Health and Safety

Outcome #9

1. Outcome Measures

(5.3d) # of communities/firms/or organizations documented to have implemented improved practices or food safety policies as a result of participating in relevant educational programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	237

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
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
721	Insects and Other Pests Affecting Humans
723	Hazards to Human Health and Safety

Outcome #10

1. Outcome Measures

Intervention Methods for Enhancing the Microbiological Safety of Fresh and Fresh-cut Produce
Worobo

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Mastitis Resistance to Enhance Dairy Food Safety Schukken

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

A Landscape Ecology Approach to Pre-harvest Food Safety

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Food Preservation Remains a Relevant Skill

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

From Recipe to Market - A Program for New Food Entrepreneurs

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

Good Agricultural Practices (GAPs) Food Safety Training for Farmers & Trainers

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Large-scale food illness outbreaks are attributed to a number of factors such as the complexity of evolving microbes and changing food consumption patterns which influences the conduct of research and development of educational programs. Unknown agents account for approximately 81% of foodborne illnesses and hospitalizations and 64% of deaths, according to the Center for Disease Control, constraining the design of programs.

Lack of an integrated system for federal agencies and the food industry to coordinate food contamination information hampers research and education. Changing and sometimes complex governmental policies and regulations affect implementation of food safety measures. Food from countries beyond the US may further complicate control and implementation of effective food safety measures.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The evaluation approach included in our plan can more accurately be described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data

needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to influence our evaluation patterns and procedures. CORE has piloted the Evaluation Partnership Project (EPP) over the last decade documenting processes that work for Cornell Cooperative Extension and teaching process. The CORE Evaluation Partnership Project has included intensive program development and evaluation planning with a number of targeted programs and counties.

We employ a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities for each of our planned programs. The results are aggregated in a statewide accountability system which leads to the summary results reported in the State Defined Outcomes in each plan including selected impact statements and success stories from a pool of more than 400 documented narratives.

Key Items of Evaluation

See cross cutting outcomes in State Defined Outcomes.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Youth, Family, and Community

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	0%		2%	
124	Urban Forestry	0%		4%	
131	Alternative Uses of Land	3%		3%	
134	Outdoor Recreation	1%		5%	
511	New and Improved Non-Food Products and Processes	3%		0%	
602	Business Management, Finance, and Taxation	0%		4%	
607	Consumer Economics	7%		0%	
608	Community Resource Planning and Development	15%		4%	
610	Domestic Policy Analysis	4%		7%	
611	Foreign Policy and Programs	0%		1%	
801	Individual and Family Resource Management	8%		1%	
802	Human Development and Family Well-Being	12%		29%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	7%		11%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	4%		2%	
805	Community Institutions, Health, and Social Services	6%		9%	
806	Youth Development	30%		18%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Extension	Research
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Year: 2012	1862	1890	1862	1890
	Plan	440.0	0.0	7.0
Actual Paid Professional	503.0	0.0	3.0	0.0
Actual Volunteer	7634.0	0.0	0.0	0.0

2. Institution Name: Cornell University

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
3200976	0	846649	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
3200976	0	846649	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: NY State Agricultural Experiment Station

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	3560	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	3560	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Youth

This is a comprehensive, statewide educational program entailing a wide variety of applied research and multiple education methods depending on local context and need. Campus-based faculty and extension associates, program work teams, the NYSACCE4-HE professional development committee and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts

depending on the focus and scope of their role.

A variety of educational strategies will be used to help county educators and volunteers gain the skills and knowledge necessary to fully understand and differentiate between the range of possibilities that exist within initiatives. Trained 4-H Staff, teachers, community agency staff, volunteers, and teens lead youth in 4-H projects, which are a planned series of learning experiences through which youth develop knowledge, practical skills (woodworking, gardening, cooking, etc.) and life skills (decision-making, self-discipline, leadership, etc.) in a variety of settings including after school programming and school enrichment activities.

Family

This is a comprehensive, statewide educational program entailing multiple education methods depending on local context and need. Campus-based faculty and extension associates and county-based educators are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

Community

CCE, CUAES and NYSAES have a commitment to the people of New York to build self-capacity among citizens so they can solve problems, improve quality of life, and build strong and vibrant communities. Through integrated research and extension agendas, we can help develop effective and collaborative land use/natural resource management approaches and policies that enhance economic, environmental and social connections. Program staff work with a variety of state and local groups to tackle projects that vary in nature from applied research to pilot projects or case studies. These activities, which are demand driven (locally or regionally initiated usually with sponsored or self-financing), provide valuable insights, resources and materials for extension education.

2. Brief description of the target audience

Youth

- Young people
- Youth development educators and workers
- Youth development volunteers
- Parents and guardians
- Youth serving organizations
- Teachers and schools
- Community leaders

Family

- Parents, grandparents and other caregivers
- Child care providers
- Community stakeholders such as employers, leaders and policy makers at the local and state levels
- Low and moderate-income households who are especially vulnerable to financial setbacks and have less disposable income to commit to savings
 - Low-income households living in poor-quality housing

Community

- Elected officials, community leaders, business leaders, not-for-profit agencies, youth serving agencies, schools, environmental groups, agribusiness leaders, etc.
- Retirees and other elders who have time to engage in community stewardship
- Engaged community citizens
- Communities as whole: youth and adults organizations, businesses, schools, and other institutions
- Agriculture/horticulture/natural resource enterprise managers, community residents and visitors, youth, local media, local officials, and local planning and economic development staff.
- Youth and youth serving organizations and adult volunteers who work with youth

3. How was eXtension used?

Cornell Cooperative Extension supports and promotes eXtension communities of practice, the eXtension public site and the professional development offered through eXtension.org. Staff across the state are encouraged to be involved in appropriate COPs, and the link to eXtension is promoted on the front page of the Cornell Cooperative Extension public staff site. Currently 323 staff are registered users of eXtension. Staff have cited the usefulness of COPs - particularly where there are

identified national projects - such as with Financial Security for All COP.

Examples of participation in COPs in this plan of work area include:

Youth, Family, Community

- Science for Youth *
- Extension Master Gardener
- Enhancing Rural Capacity *
- Family Care Giving
- Financial Security for All
- Gardens, Lawns & Landscapes
- Just in Time Parenting
- Entrepreneurs and Their Communities
- Creating Healthy Communities
- Diversity, Equity and Inclusion
- Pest Management in and Around Structures
- Wildlife Damage Management *

*Cornell Faculty/Staff on Leadership Team

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	896088	11144353	346692	4333915

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

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	34	190	224

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- (6.1a) # of youth program educators and adult volunteers participating in programs on positive youth development.
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

- (6.1b) # of youth participating in projects related to vocational skills and/or citizenship.
 Not reporting on this Output for this Annual Report

Output #3

Output Measure

- (6.2a) # of 4-H members enrolled in Science and Technology project areas.
 Not reporting on this Output for this Annual Report

Output #4

Output Measure

- (6.2b) # of youth reached through school enrichment and special interest programs, 4-H camp, and after school programs coded as science and technology related.
 Not reporting on this Output for this Annual Report

Output #5

Output Measure

- (6.2c) # of 4-H and other youth program educators and adult volunteers participating in programs on SET for youth.
 Not reporting on this Output for this Annual Report

Output #6

Output Measure

- (6.3a) # of infant and child care-givers completing non-formal education programs about quality dependent care giving.
Not reporting on this Output for this Annual Report

Output #7

Output Measure

- (6.3b) # of persons with care-requiring dependents completing non-formal education programs on selection of care-giving individuals and facilities.
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- (6.4a) # of organizations, agencies, and institutions participating in non-formal educational programs about social and public policy issues to enhance opportunities for safe, economical, and developmentally appropriate care-giving programs for infants, children and youth.
Not reporting on this Output for this Annual Report

Output #9

Output Measure

- (6.5a) # of persons completing complete non-formal education programs about parenting.
Not reporting on this Output for this Annual Report

Output #10

Output Measure

- (6.6a) # of persons completing education programs on age-appropriate topics like spending and saving concepts, appropriate use of money, financial goals, tracking expenses, budgeting, credit management, financial planning, and/or wealth generation strategies.
Not reporting on this Output for this Annual Report

Output #11

Output Measure

- (6.7a) # of consumers and property managers completing programs on indoor air quality issues.
Not reporting on this Output for this Annual Report

Output #12

Output Measure

- (6.8a) # of residents, community leaders, entrepreneurs, economic development professionals participating in programs re: workforce, entrepreneurial climate, diversification, economic impact analysis, e-commerce, market development, business planning, partnerships.
Not reporting on this Output for this Annual Report

Output #13

Output Measure

- (6.9a) # of community members participating in educational programs related to community decision-making, public participation, planning and monitoring processes, and collaborative approaches.
Not reporting on this Output for this Annual Report

Output #14

Output Measure

- (6.10a) # of economic developers and/or entrepreneurs participating in educational programs on "green" business opportunities.
Not reporting on this Output for this Annual Report

Output #15

Output Measure

- (6.11a) # of residents and community leaders participating in programs on community sustainability, community assets, citizen involvement, property rights, land use, conservation, interaction between environmental, economic, and quality of life issues.
Not reporting on this Output for this Annual Report

Output #16

Output Measure

- (6.12a) # of agriculture/horticulture/natural resource business persons participating in education programs on potential environmental, health, social, and cultural impacts of their operations from the perspective of the community.
Not reporting on this Output for this Annual Report

Output #17

Output Measure

- (6.13a) # of community members and/or local leaders participating in education programs on the roles of agriculture/horticulture/ natural resource enterprises in the local community, tax base, and environment.
Not reporting on this Output for this Annual Report

Output #18

Output Measure

- (6.13b) # of local community members and/or leaders participating in programs on the potential benefits of community-based agriculture and opportunities for promoting same.
Not reporting on this Output for this Annual Report

Output #19

Output Measure

- (6.15a) # of youth participating in education programs leading to youth community action initiatives.
Not reporting on this Output for this Annual Report

Output #20

Output Measure

- (6.15b) # of youth participating in train-the-trainer programs related to youth community action.
Not reporting on this Output for this Annual Report

Output #21

Output Measure

- (6.15c) # of adults participating train-the-trainer programs related to youth community action.
Not reporting on this Output for this Annual Report

Output #22

Output Measure

- (6.15d) # of communities participating in youth community action initiatives.
Not reporting on this Output for this Annual Report

Output #23

Output Measure

- (6.14a) # of hours of instruction by Master Gardener volunteers in educational programs for youth and adult audiences.
Not reporting on this Output for this Annual Report

Output #24

Output Measure

- (6.14b) # of hours by Master Gardener volunteers in general program support.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	(6.1c) # of youth participants who demonstrate gains in vocational/citizenship skills - knowledge, attitudes, and/or behaviors.
2	(6.1d) # of youth participants who learn to set goals, make plans and identify resources to achieve goals.
3	(6.1e) # of youth program educators and adult volunteers who demonstrate knowledge and/or skill gains in meeting the needs of youth at various stages of development.
4	(6.1f) # of youth participants who demonstrate ability to express their ideas confidently and competently.
5	(6.1g) # of adult volunteers documented to mentor and advise youth and other adult volunteers in an effective and positive manner.
6	(6.1h) # of youth participants documented as serving in age-appropriate leadership roles.
7	(6.1i) # of youth organizations/programs documented as reflecting youth needs, interests, and excitement for learning.
8	(6.2d) # participants demonstrating increased awareness of SET, improved SET skills including scientific methods, knowledge of specific sciences, and/or increased awareness of opportunities to contribute to society using SET skills.
9	(6.2e) # of participants that report improved success in school science and/or increased interest in science and technology.
10	(6.2f) # youth applying SET learning to contexts outside 4-H programs, e.g., school classes, science fairs, invention contests, etc.
11	(6.2g) # youth expressing interest/demonstrating aspirations towards SET careers, e.g., career fairs, job shadowing, volunteer work or internships
12	(6.2h) # youth adopting and using new scientific methods or improved technology.
13	(6.2i) # of youth and adult volunteers documented to become contributing participants in sci/tech related issues in their communities and/or choose sci/tech related professions and who attribute same at least in part to involvement with the program.
14	(6.2j) Increased number and more diverse pool of youth pursuing education and careers in SET related fields.
15	(6.2k) Increased and more diverse pool of trained teachers, educators, scientists.
16	(6.3c) # of participating infant and child caregivers who demonstrate knowledge or skill gains related care-giving practices.
17	(6.3d) # of participating persons with care-requiring dependents who demonstrate ability to evaluate the quality of care programs

18	(6.3e) # of participating infant and child caregivers reporting to have applied positive care-giving practices.
19	(6.3f) # participating persons with care-requiring dependents reporting to have used child care quality characteristics in their care selection.
20	(6.3g) # participating persons with care-requiring dependents reporting positive change in child care as a result of participating in educational programs.
21	(6.4b) # of program participants who demonstrate knowledge or skills gains regarding community approaches to family care.
22	(6.4c) # of program participants reporting to have been involved in community level assessments of family care needs.
23	(6.4d) # of communities documented to have taken action to address family needs that can be related to educational programs and/or critical community collaborations provided.
24	(6.5b) # parents, grandparents and other adults providing parental care gaining who demonstrate knowledge or skills gains regarding developmentally appropriate and effective parenting methods.
25	(6.5c) # parents and other adults providing parental care adopting development-ally appropriate and effective parenting methods.
26	(6.5d) # parents/relative caregivers reporting to have experienced positive change in parent-child relationships and child nurturance that they attribute to implementing new parenting behaviors learned in educational programs.
27	(6.6b) # participants who demonstrate knowledge or skill gains and/or can articulate specific actions they will take related to spending and saving concepts, appropriate use of money, setting financial goals, tracking expenses, budgeting, credit management, financial planning, and/or wealth generation strategies.
28	(6.6c) # of program participants reporting they are practicing improved money management skills such as comparison shopping, paying bills on time, paying more than minimum payment, checking credit report, and reviewing and understanding bills/statements as a means to meeting financial goals.
29	(6.6d) # of program participants reporting to have met day-to-day financial obligations while also progressing on future goals for homeownership, savings, retirement accounts, etc.
30	(6.6e) # of program participants reporting to have reduced debts and/or increased savings.
31	(6.7b) # of consumers and property managers gaining awareness and knowledge of indoor air quality issues and remediation options.
32	(6.7c) # of program participants documented to have taken measures to prevent or remediate indoor air quality issues.
33	(6.7d) # of program participants documented to have reduced short-term health effects of indoor air pollutants (such as irritation of the eyes, nose, and throat, headaches, dizziness, and fatigue) as a result of participating in educational programs.
34	(6.7e) # of participants reducing risks of respiratory diseases, heart disease, and cancer by implement measures such as radon remediation, controlling indoor triggers of asthma: secondhand smoke, dust mites, pet dander, and pests.
35	(6.8b) # of residents, community leaders, entrepreneurs, economic development professionals demonstrating knowledge/ skill gains re: workforce, entrepreneurial climate, diversification, economic impact analysis, e-commerce, market development, business

	planning, partnerships.
36	6.8c) # of residents and/or community leaders, demonstrating knowledge/skill gains about enhancing facilities and/or other community resources or services.
37	(6.8d) # of communities who plan for and implement initiatives on community based agricultural economic development, workforce development, business and entrepreneurial development and assistance, non-profit sector development and/or other elements of sustainable growth.
38	(6.8e) # of residents and/or community leaders, who plan for and initiate steps to enhance facilities, and/or other community resources or services.
39	(6.8f) # of communities establishing an infrastructure and climate to support entrepreneurs, local farms and agribusinesses attributable at least in part to initiatives of the program.
40	(6.8g) # of communities documenting improvements in facilities and/or other community resources or services.
41	(6.9b) # of community members demonstrating knowledge or skills gains related to community decision-making, public participation, planning and monitoring processes, collaborative approaches, and/or emergency preparedness.
42	(6.9c) # of communities instituting new or enhanced participatory processes related to economic development.
43	(6.9d) # of collaborative partnerships established within and across communities for issue resolution and collective action and/or to improve community services.
44	(6.9e) # of documented instances in which a community effectively resolves a need or strengthens community assets attributable at least in part to participation in the program.
45	(6.9f) # of communities reporting specific improvements in quality or scope of community services.
46	(6.10b) # of workforce professionals, economic developers and/or entrepreneurs demonstrating knowledge gains related to "green" workforce and business opportunities.
47	(6.10c) # of new workers trained and "green" businesses established at least in part due to participation in the program.
48	(6.10d) # of communities that report increased diversification of their local economies attributable at least in part to participation in the program.
49	(6.11b) # of residents and/or community leaders demonstrating knowledge or skill gains related to community sustainability, community assets, property rights, land use, environmental conservation, interaction between environmental, economic issues, quality of life indicators.
50	(6.11c) # of community leaders documented to apply community economic development and quality of life indicators to support decision-making.
51	(6.11d) # of communities implementing projects that enhance community sustainability and/or protect public health and community well being through sound environmental management.
52	(6.12b) # of agriculture/horticulture/natural resource business persons demonstrating knowledge or skill gains related to potential environmental, health, social, and cultural impacts of their operations from the perspective of the community.

53	(6.12c) # of instances in which producers/ horticulture businesses/ natural resource enterprises, residents and community leaders work together to address issues.
54	(6.12d) # documented instances in which agriculture/community conflicts are resolved locally.
55	(6.13c) # of community members and/or local leaders demonstrating knowledge or skill gains related to the roles of agriculture/horticulture/ natural resource enterprises in the local community, tax base, and environment and how they are affected by local policy.
56	(6.13e) # of communities that assess how current policies and infrastructures sustain or impede agriculture/ horticulture/natural resource enterprises (such as farmland protection or including such enterprises in economic development planning) and how the enterprises are affected by public policy.
57	(6.13f) # of communities that initiate specific plans to address agriculture/ horticulture/ natural resource enterprise related issues or capitalize on new opportunities including community agriculture initiatives.
58	(6.13g) # communities documented to adopt, maintain, or expand policies supportive of appropriate agriculture/horticulture/ natural resource enterprise development and/or community agriculture.
59	(6.15e) # of youth and adults demonstrating knowledge gains related to Youth/Adult Partnerships and Youth Community Action Initiatives.
60	(6.15f) # of youth documented to have practiced life skills necessary to meet challenges of adolescence and adulthood in authentic decision-making partnerships with adults as a result of participating in the program.
61	(6.15g) # of adults documented to have applied knowledge, skills and abilities and behaviors necessary as they assist youth developing into productive community members as a result of participating in the program.
62	(6.15h) # of documented instances in which youth and adults partner to improve quality of life within a community as a result of participating in the program.
63	(6.14c) # of community residents gaining knowledge and skill in weighing the environmental impacts and consequences of management actions taken in residential landscapes and homes.
64	(6.14d) # of community residents enhancing knowledge and skill in using research-based information to make plant and management choices among alternatives.
65	(6.14e) # of community residents gaining knowledge and skill in choosing and growing food crops for home, school and community gardens.
66	(6.14f) # of community residents practicing management tactics in residential landscapes and homes that work to sustain or enhance a healthy community and environment.
67	(6.14g) # of community residents with improved availability and access to fresh fruits and vegetables.
68	(6.14h) # of community education/demonstration food gardens established or maintained.
69	(6.13d) number of youth demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises
70	(6.14e) number of adultss demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises

71	Does the Income Achievement Gap Begin in Infancy? Casasola
72	Balancing Natural Resource Recreation Management, Human Well-Being, and Community Resilience Tidball
73	Linking Community Information Needs with Information Resources to Support Community Capacity and Regional Cooperation Brown
74	Partnerships for STEM Education: 4-H Robotics with Lego Mindstorm Technology
75	4-H Club Choose Health Officers Help Youth Embrace Healthy Snacks and Active Play
76	4-H Food Science Camp Increases Interest in Science Among Youth
77	Parenting the Second Time Around (PASTA) - NYC - Year One
78	Understanding Non-Suicidal Self Injury in Adolescence

Outcome #1

1. Outcome Measures

(6.1c) # of youth participants who demonstrate gains in vocational/citizenship skills - knowledge, attitudes, and/or behaviors.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

(6.1d) # of youth participants who learn to set goals, make plans and identify resources to achieve goals.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

(6.1e) # of youth program educators and adult volunteers who demonstrate knowledge and/or skill gains in meeting the needs of youth at various stages of development.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

(6.1f) # of youth participants who demonstrate ability to express their ideas confidently and competently.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	30028

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #5

1. Outcome Measures

(6.1g) # of adult volunteers documented to mentor and advise youth and other adult volunteers in an effective and positive manner.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4475

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #6

1. Outcome Measures

(6.1h) # of youth participants documented as serving in age-appropriate leadership roles.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	6274

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #7

1. Outcome Measures

(6.1i) # of youth organizations/programs documented as reflecting youth needs, interests, and excitement for learning.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

(6.2d) # participants demonstrating increased awareness of SET, improved SET skills including scientific methods, knowledge of specific sciences, and/or increased awareness of opportunities to contribute to society using SET skills.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	69805

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code **Knowledge Area**
806 Youth Development

Outcome #9

1. Outcome Measures

(6.2e) # of participants that report improved success in school science and/or increased interest in science and technology.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	19263

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code **Knowledge Area**
806 Youth Development

Outcome #10

1. Outcome Measures

(6.2f) # youth applying SET learning to contexts outside 4-H programs, e.g., school classes, science fairs, invention contests, etc.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	26690

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #11

1. Outcome Measures

(6.2g) # youth expressing interest/demonstrating aspirations towards SET careers, e.g., career fairs, job shadowing, volunteer work or internships

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	12148

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #12

1. Outcome Measures

(6.2h) # youth adopting and using new scientific methods or improved technology.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	9471

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #13

1. Outcome Measures

(6.2i) # of youth and adult volunteers documented to become contributing participants in sci/tech related issues in their communities and/or choose sci/tech related professions and who attribute same at least in part to involvement with the program.

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

(6.2j) Increased number and more diverse pool of youth pursuing education and careers in SET related fields.

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

(6.2k) Increased and more diverse pool of trained teachers, educators, scientists.

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

(6.3c) # of participating infant and child caregivers who demonstrate knowledge or skill gains related care-giving practices.

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

(6.3d) # of participating persons with care-requiring dependents who demonstrate ability to evaluate the quality of care programs

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

(6.3e) # of participating infant and child caregivers reporting to have applied positive care-giving practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1582

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #19

1. Outcome Measures

(6.3f) # participating persons with care-requiring dependents reporting to have used child care quality characteristics in their care selection.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1271

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #20

1. Outcome Measures

(6.3g) # participating persons with care-requiring dependents reporting positive change in child care as a result of participating in educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #21

1. Outcome Measures

(6.4b) # of program participants who demonstrate knowledge or skills gains regarding community approaches to family care.

Not Reporting on this Outcome Measure

Outcome #22

1. Outcome Measures

(6.4c) # of program participants reporting to have been involved in community level assessments of family care needs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	717

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #23

1. Outcome Measures

(6.4d) # of communities documented to have taken action to address family needs that can be related to educational programs and/or critical community collaborations provided.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	151

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

- 803 Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 Community Institutions, Health, and Social Services
- 806 Youth Development

Outcome #24

1. Outcome Measures

(6.5b) # parents, grandparents and other adults providing parental care gaining who demonstrate knowledge or skills gains regarding developmentally appropriate and effective parenting methods.

Not Reporting on this Outcome Measure

Outcome #25

1. Outcome Measures

(6.5c) # parents and other adults providing parental care adopting development-ally appropriate and effective parenting methods.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	7065

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #26

1. Outcome Measures

(6.5d) # parents/relative caregivers reporting to have experienced positive change in parent-child relationships and child nurturance that they attribute to implementing new parenting behaviors learned in educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	7443

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #27

1. Outcome Measures

(6.6b) # participants who demonstrate knowledge or skill gains and/or can articulate specific actions they will take related to spending and saving concepts, appropriate use of money, setting financial goals, tracking expenses, budgeting, credit management, financial planning, and/or wealth generation strategies.

Not Reporting on this Outcome Measure

Outcome #28

1. Outcome Measures

(6.6c) # of program participants reporting they are practicing improved money management skills such as comparison shopping, paying bills on time, paying more than minimum payment, checking credit report, and reviewing and understanding bills/statements as a means to meeting financial goals.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1995

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #29

1. Outcome Measures

(6.6d) # of program participants reporting to have met day-to-day financial obligations while also progressing on future goals for homeownership, savings, retirement accounts, etc.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	945

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #30

1. Outcome Measures

(6.6e) # of program participants reporting to have reduced debts and/or increased savings.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1015

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #31

1. Outcome Measures

(6.7b) # of consumers and property managers gaining awareness and knowledge of indoor air quality issues and remediation options.

Not Reporting on this Outcome Measure

Outcome #32

1. Outcome Measures

(6.7c) # of program participants documented to have taken measures to prevent or remediate indoor air quality issues.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3642

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #33

1. Outcome Measures

(6.7d) # of program participants documented to have reduced short-term health effects of indoor air pollutants (such as irritation of the eyes, nose, and throat, headaches, dizziness, and fatigue) as a result of participating in educational programs.

Not Reporting on this Outcome Measure

Outcome #34

1. Outcome Measures

(6.7e) # of participants reducing risks of respiratory diseases, heart disease, and cancer by implement measures such as radon remediation, controlling indoor triggers of asthma: secondhand smoke, dust mites, pet dander, and pests.

Not Reporting on this Outcome Measure

Outcome #35

1. Outcome Measures

(6.8b) # of residents, community leaders, entrepreneurs, economic development professionals demonstrating knowledge/ skill gains re: workforce, entrepreneurial climate, diversification, economic impact analysis, e-commerce, market development, business planning, partnerships.

Not Reporting on this Outcome Measure

Outcome #36

1. Outcome Measures

6.8c) # of residents and/or community leaders, demonstrating knowledge/skill gains about enhancing facilities and/or other community resources or services.

Not Reporting on this Outcome Measure

Outcome #37

1. Outcome Measures

(6.8d) # of communities who plan for and implement initiatives on community based agricultural economic development, workforce development, business and entrepreneurial development and assistance, non-profit sector development and/or other elements of sustainable growth.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	129

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #38

1. Outcome Measures

(6.8e) # of residents and/or community leaders, who plan for and initiate steps to enhance facilities, and/or other community resources or services.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2278

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #39

1. Outcome Measures

(6.8f) # of communities establishing an infrastructure and climate to support entrepreneurs, local farms and agribusinesses attributable at least in part to initiatives of the program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #40

1. Outcome Measures

(6.8g) # of communities documenting improvements in facilities and/or other community resources or services.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	115

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

Outcome #41

1. Outcome Measures

(6.9b) # of community members demonstrating knowledge or skills gains related to community decision-making, public participation, planning and monitoring processes, collaborative approaches, and/or emergency preparedness.

Not Reporting on this Outcome Measure

Outcome #42

1. Outcome Measures

(6.9c) # of communities instituting new or enhanced participatory processes related to economic development.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	46

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

Outcome #43

1. Outcome Measures

(6.9d) # of collaborative partnerships established within and across communities for issue resolution and collective action and/or to improve community services.

Not Reporting on this Outcome Measure

Outcome #44

1. Outcome Measures

(6.9e) # of documented instances in which a community effectively resolves a need or strengthens community assets attributable at least in part to participation in the program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	213

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

Outcome #45

1. Outcome Measures

(6.9f) # of communities reporting specific improvements in quality or scope of community services.

Not Reporting on this Outcome Measure

Outcome #46

1. Outcome Measures

(6.10b) # of workforce professionals, economic developers and/or entrepreneurs demonstrating knowledge gains related to "green" workforce and business opportunities.

Not Reporting on this Outcome Measure

Outcome #47

1. Outcome Measures

(6.10c) # of new workers trained and "green" businesses established at least in part due to participation in the program.

Not Reporting on this Outcome Measure

Outcome #48

1. Outcome Measures

(6.10d) # of communities that report increased diversification of their local economies attributable at least in part to participation in the program.

Not Reporting on this Outcome Measure

Outcome #49

1. Outcome Measures

(6.11b) # of residents and/or community leaders demonstrating knowledge or skill gains related to community sustainability, community assets, property rights, land use, environmental conservation, interaction between environmental, economic issues, quality of life indicators.

Not Reporting on this Outcome Measure

Outcome #50

1. Outcome Measures

(6.11c) # of community leaders documented to apply community economic development and quality of life indicators to support decision-making.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	254

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
134	Outdoor Recreation
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

Outcome #51

1. Outcome Measures

(6.11d) # of communities implementing projects that enhance community sustainability and/or protect public health and community well being through sound environmental management.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	110

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #52

1. Outcome Measures

(6.12b) # of agriculture/horticulture/natural resource business persons demonstrating knowledge or skill gains related to potential environmental, health, social, and cultural impacts of their operations from the perspective of the community.

Not Reporting on this Outcome Measure

Outcome #53

1. Outcome Measures

(6.12c) # of instances in which producers/ horticulture businesses/ natural resource enterprises, residents and community leaders work together to address issues.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	763

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #54

1. Outcome Measures

(6.12d) # documented instances in which agriculture/community conflicts are resolved locally.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #55

1. Outcome Measures

(6.13c) # of community members and/or local leaders demonstrating knowledge or skill gains related to the roles of agriculture/horticulture/ natural resource enterprises in the local community, tax base, and environment and how they are affected by local policy.

Not Reporting on this Outcome Measure

Outcome #56

1. Outcome Measures

(6.13e) # of communities that assess how current policies and infrastructures sustain or impede agriculture/ horticulture/natural resource enterprises (such as farmland protection or including such enterprises in economic development planning) and how the enterprises are affected by public policy.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	84

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #57

1. Outcome Measures

(6.13f) # of communities that initiate specific plans to address agriculture/ horticulture/ natural resource enterprise related issues or capitalize on new opportunities including community agriculture initiatives.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	54

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
511	New and Improved Non-Food Products and Processes
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #58

1. Outcome Measures

(6.13g) # communities documented to adopt, maintain, or expand policies supportive of appropriate agriculture/horticulture/ natural resource enterprise development and/or community agriculture.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	55

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

- 803 Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 Community Institutions, Health, and Social Services

Outcome #59

1. Outcome Measures

(6.15e) # of youth and adults demonstrating knowledge gains related to Youth/Adult Partnerships and Youth Community Action Initiatives.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #60

1. Outcome Measures

(6.15f) # of youth documented to have practiced life skills necessary to meet challenges of adolescence and adulthood in authentic decision-making partnerships with adults as a result of participating in the program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	18036

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
806	Youth Development

Outcome #61

1. Outcome Measures

(6.15g) # of adults documented to have applied knowledge, skills and abilities and behaviors necessary as they assist youth developing into productive community members as a result of participating in the program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4780

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
806	Youth Development

Outcome #62

1. Outcome Measures

(6.15h) # of documented instances in which youth and adults partner to improve quality of life within a community as a result of participating in the program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3361

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
806	Youth Development

Outcome #63

1. Outcome Measures

(6.14c) # of community residents gaining knowledge and skill in weighing the environmental impacts and consequences of management actions taken in residential landscapes and homes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
134	Outdoor Recreation
608	Community Resource Planning and Development

801	Individual and Family Resource Management
802	Human Development and Family Well-Being
806	Youth Development

Outcome #64

1. Outcome Measures

(6.14d) # of community residents enhancing knowledge and skill in using research-based information to make plant and management choices among alternatives.

Not Reporting on this Outcome Measure

Outcome #65

1. Outcome Measures

(6.14e) # of community residents gaining knowledge and skill in choosing and growing food crops for home, school and community gardens.

Not Reporting on this Outcome Measure

Outcome #66

1. Outcome Measures

(6.14f) # of community residents practicing management tactics in residential landscapes and homes that work to sustain or enhance a healthy community and environment.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	27979

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
802	Human Development and Family Well-Being
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #67

1. Outcome Measures

(6.14g) # of community residents with improved availability and access to fresh fruits and vegetables.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	15920

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #68

1. Outcome Measures

(6.14h) # of community education/demonstration food gardens established or maintained.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	109

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
802	Human Development and Family Well-Being
806	Youth Development

Outcome #69

1. Outcome Measures

(6.13d) number of youth demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	5479

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
806	Youth Development

Outcome #70

1. Outcome Measures

(6.14e) number of adultss demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
608	Community Resource Planning and Development
806	Youth Development

Outcome #71

1. Outcome Measures

Does the Income Achievement Gap Begin in Infancy? Casasola

Not Reporting on this Outcome Measure

Outcome #72

1. Outcome Measures

Balancing Natural Resource Recreation Management, Human Well-Being, and Community Resilience Tidball

Not Reporting on this Outcome Measure

Outcome #73

1. Outcome Measures

Linking Community Information Needs with Information Resources to Support Community Capacity and Regional Cooperation Brown

Not Reporting on this Outcome Measure

Outcome #74

1. Outcome Measures

Partnerships for STEM Education: 4-H Robotics with Lego Mindstorm Technology

Not Reporting on this Outcome Measure

Outcome #75

1. Outcome Measures

4-H Club Choose Health Officers Help Youth Embrace Healthy Snacks and Active Play

Not Reporting on this Outcome Measure

Outcome #76

1. Outcome Measures

4-H Food Science Camp Increases Interest in Science Among Youth

Not Reporting on this Outcome Measure

Outcome #77

1. Outcome Measures

Parenting the Second Time Around (PASTA) - NYC - Year One

Not Reporting on this Outcome Measure

Outcome #78

1. Outcome Measures

Understanding Non-Suicidal Self Injury in Adolescence

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Youth Fiscal pressures internal to Extension and among community organizations influence the scope and quality of programming available to youth. Increasing diversity of our populations creates need for a broader array of program materials, strategies and for a focus on multicultural competencies. Changing educational standards influence acceptability of existing curricula.

Regional

demographic differences and differences across communities influence both needs and program strategy.

Family The economic, political and governmental sectors affect the quality, availability and accessibility of infant and child care. The growth of aging and minority populations in the US means

more diverse cultures and values related to parenting, child care, and family care giving. Natural disasters such as major flooding experienced in many areas of New York in 2011 and the continued

weak economy affected household financial status and impacted energy issues. Public and private

funders and CCE had fewer fiscal resources and other resources to devote to the quality of life in

financial, human development, energy and indoor air quality matters.

Community Communities operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, land uses demands and shifting

development patterns, evolving consumer demands and globalization related economic factors. Weather related disasters, flooding in particular, greatly impacted many communities in terms

of infrastructure damage and direct costs. The global, statewide, and regional economies directly

impacted local economies. Fundamental change is occurring in the state and regional economies. The specific implications of these external factors varied greatly by locale

and across
regions.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The evaluation approach included in our plan can be more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders.

Cornell Cooperative Extension works with the Cornell Office of Research and Evaluation (CORE) to influence our evaluation patterns and procedures. CORE has piloted the Evaluation Partnership Project (EPP) over the last decade documenting processes that work for Cornell Cooperative Extension and teaching process. The CORE Evaluation Partnership Project has included intensive program development and evaluation planning with a number of targeted programs and counties.

We employ a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities for each of our planned programs. The results are aggregated in a statewide accountability system, which leads to the summary results reported in the State Defined Outcomes in each plan including selected impact statements and success stories from a pool of more than 400 documented narratives.

Several of the program areas including Parenting in Context and Family Economics and Resources Management have created an evaluation plan and resources for statewide evaluation efforts. 4-H is moving in that direction with the staff working closely with National 4-H Headquarters and Council to use national outcomes and measures systematically.

Key Items of Evaluation

See cross cutting outcomes in State Defined Outcomes.