2015 University of the Virgin Islands Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

The people of the U.S. Virgin Islands continue to have economic challenges due to the closure of one of the major cooperations, Hess Oil, which use to employ about 4,000 people. This has caused a domino effect on the other business on the island, which has closed their doors. The overall rate of unemployment in the territory in 2015 was 13% with the district of St. Croix having the highest level of 14%. As a result of this, the residents are desirous of developing new marketable skills and enhancing their skill levels. The Extension Service provided seminars, short courses, workshops, and demonstrations so that residents can acquire and improve their skills for future employment. The programs planned and executed by the Extension Service were designed to transform the lives of Virgin Islanders by addressing their high unemployment. A total of 16 short courses, 51 workshops, and 15 demonstrations were conducted for residents. The Extension Service co-sponsored two Agricultural Fairs on St. Thomas and St. Croix; Woodworkers Expo and a Mango Melee Festival. We broadcasted and appeared on 77 radio and TV shows and wrote 9 newspaper articles for the local media. The Cooperative Extension Service awarded a total of 867 certificates during this period.

The Virgin Islands Cooperative Extension Service reached most of its projected goals and objectives. Responses from our clientele indicated that the training initiatives, exhibits, workshops, short courses, and other outreach efforts positively impacted the life of Virgin Islands residents. Through these activities the CES staff engaged a total of 32,625 Virgin Islanders and awarded 867 certificates of program completion to clientele. This summary is grouped under the five national priorities of the National Institute of Food and Agriculture.

Goal 1: Global Food Security and Hunger

Programs under this initiative promote agriculture production and their improvement in the capacity to meet growing food demand in the Virgin Islands and the fight against hunger by addressing food security issues.

The small livestock and beef production program conducted workshops, demonstrations, and training in order to help farmers develop their pastures after the major drought they experienced. Producers were also given training in management of their flocks. Animal identification continued to be demonstrated to farmers to assist them in identifying all their animals for better management practices. We continue to assist them to achieve a successful breeding program. CES in collaboration with the Virgin Islands Department of Agriculture continues to promote local meat and fresh livestock products through 'Fresh from the Farm," a local program developed to assist farmers in the Virgin Islands. This program continues to assist farmers by increasing their income and creating a high demand for locally produced meat products. A recent survey conducted by the Department of Agriculture indicated that local livestock producers increased their farm income by $654.00. In collaboration with the Agricultural Experiment Station, four new and improved pastures were established; three on the island of St. Croix and on St. Thomas. This establishment have increased animal productivity and increased farm income.

The Sustainable Agriculture Program conducted short courses, workshops, and demonstrations to inform producers of sustainable agricultural practices including composting, drip irrigation, and soil preparation. The demonstration gardens on both islands are frequented by farmers, visitors, and students to learn about agricultural practices. Approximately 180 people visited the garden on St. Croix and about 247 people visited the garden on St. Thomas. These gardens attract cruise visitors who come to learn about

local herbs and sustainable garden practices.
The Urban Gardening Program conducted classes, workshop and demonstrations to educate and inform the public about how to create gardens, proper garden management, and low-cost efficient technology practices and principles in gardening. The local television station, PBS, continues to broadcast garden programs hosted by Cooperative Extension Service personnel to the general public on how to start, maintain, and harvest products from your garden. A total of 4,765 people increased their level of knowledge on the benefits of creating and maintaining a garden for themselves and their family. A survey conducted by PBS, showed that 75% experienced a savings of $400.00 in their monthly household grocery bills as a result of producing some of their vegetable in their home gardens.
Urban Forestry Program continues to assist local residents in the proper maintenance and use of trees in public places. The annual Woodworkers Expo was held on St. Croix to showcase the economic benefits of recycling trees. A total of 1,200 people became aware of the economic benefits of turning felled trees into potential income-generating products. A survey conducted during the Expo showed that 80% of attendees reported that there are now more aware of the economic and environmental benefit of trees. Participants in the Expo generated an average of $4,500 each.
Goal 2: Climate Change
Projects under this goal generate knowledge to develop an agricultural system that maintains high productivity in the face of climatic changes. These programs assist the producers to plan for and make decisions to adapt to changing environment and sustain economic vitality.
The Natural Resource and Environmental Management Program facilitated the interaction of community groups and leaders to address resource conservation and management issues, pollution prevention and the establishment of an eco-tourism industry based on the incorporation of the Virgin Islands natural and cultural history and low-impact tourism concepts. The St. Croix Environmental Repository which is housed at the Cooperative Extension Service continued to expand its holdings and increase its use by the local environmental community. The Water Quality Program continues to focus on transmitting information on water quality protection and household cistern water management. Workshops and demonstrations on the use of toxic household products were given to schools, corporate groups, government agencies and the general public. Cistern maintenance continues to be a top issue on the islands and during presentations cistern care and maintenance were presented. CES continues to promote the implementation of best management practices to protect water quality at coastal public parks, hotels, and large sub-divisions with intensive coastal and offshore resources.
Goal 4: Childhood Obesity
Program in this area ensures that nutritious foods are affordable and available and provide guidance so that individuals and families are able to informed, science-based decision about their health and well-being. The nutrition program developed culturally-sensitive nutrition and health related products and resources that were made available to professionals, students, and the general public. A major publication, "Tropical Fruits of the U.S. Virgin Islands and their Nutritional Values," was published and distributed throughout the territory. The Tropical Fruits poster continues to be a popular item for individuals, organizations, and schools in the Virgin Islands. There have been positive indicators relative to improvement related to children and their families' awareness of the importance of healthy lifestyles in the prevention of childhood obesity. Nutrition records indicate that there were positive outcomes that children acquire knowledge about healthy living and healthy lifestyle. Children gained knowledge on healthy eating and the importance of physical activity.
Goal 5: Food Safety
These programs work to reduce the incidence of food borne illness and provide a safer food supply by addressing and eliminating cause of microbial resistance to contaminants, educating consumers and food safety professionals and developing food processing techniques to improve safety. The food safety program focused its attention on the importance of safe handling and preparation by food vendors as well as educating low-income families about basic nutrition and behavior change practices. Basic safety information was disseminated through classes, demonstrations, experiential activities and lectures. The EFNEP program continues to target low-income, at-risk clientele and they were featured in a USDA publication. Low-income individuals enrolled in EFNEP were educated about the importance of proper

hygiene, food storage and preparation, and food handling to prevent food borne illness. The food safety program continues to evaluate the results of its activities which demonstrated that children receiving information continue to improve on their knowledge gained.
The other programs that were conducted during this period include 4-H Youth and Volunteer Development. This program continue to recruit and develop volunteers to lead and establish 4-H clubs in the community. Volunteers and 4-H youth ambassadors receive training on leadership styles, strategies and skills. As a result, they were expected and encourage to model and foster leadership in their respective clubs and programs. A total of 26 adults and 28 teen leaders provided leadership for ten 4-H clubs and special interest groups on St. Croix.
The Computer Training and Technology program continue to positively impact the Virgin Islands community by clientele utilizing the knowledge and skills gained from the computer classes. Clientele continue to take computer literacy classes to help them acquire new skills for job placement and to advance in their present career. A total of 215 graduated from the computer classes and received certificates to assist in future employment.
The Marketable Skills program continued to train people on the art of Batik making, clothing construction, and designing pillows, towels and other items for sale to the tourist industry. During the Agriculture and Food Fair, the clientele from the class sold Batik products, generating an average income of $611 per person. Two businesses have been established producing Batik materials for local and tourism consumption.
CES continued to establish professional linkages with other organizations in the Eastern Caribbean. Short courses, workshops, and training sessions were conducted for agricultural specialists, youth leaders and volunteers. A regional meeting for agricultural economists was held for the Caribbean Agro-Economic Society. Fifty scientists discussed the effects of climate change in the Caribbean region. To assist other producers in the Caribbean region, 100 layers and 100 broilers were exported to St. Eustatius for breeding purposes, thereby increasing the quality of breeding animals on the island.
The Agricultural Experiment Station (AES) scientists conducts production oriented research. AES, with 2.6 faculty FTE, is comprised of four programs: Agronomy, Animal Science, Biotechnology & Agroforestry, and Horticulture & Aquaculture. The limited faculty, physical, and fiscal resources inhibit the expansion into new areas of research. However, AES has taken advantage of collaboration developed between CES, other UVI departments and institutions. Collaboration with CES has resulted in the Agronomy faculty with a 80/20 AES/CES split. The Director of AES has an 80/20 split between administration and research (Animal Science). The Assistant Director has a 40/60 split between administration and research (Biotechnology & Agroforestry). AES has been active with insular institutions and has used grant funding to support student research. During 2015, eight students conducted research projects and three students presented their results at national conferences.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	33.3	{No Data Entered}	9.7	{No Data Entered}
Actual	27.5	0.0	9.7	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

2. Brief Explanation

The Agricultural Experiment Station (AES) uses internal reviewers from academic faculty and Cooperative Extension Service as well as external professionals from the VI Dept. of Agriculture to review Hatch proposals. The AES has an advisory council of active farmers and stakeholders in the community that provide input on the research being conducted and ideas of areas to focus on to resolve agronomic challenges in the US Virgin Islands.
The CES programs that were developed by agents and specialists were sent to the state Program Leaders for their review, input, approval and were then submitted to the Associate Director for his input and budget allocation. After the Associate Director approved the programs, they were sent to the State Director for his review and approval. The programs were then forwarded to the Vice Provost for Research and Public Service, the Provost, and the University's Office of Sponsored Programs for comments and approval. The programs that were accepted were then forwarded to the Extension Advisory Council for its input and approval. Approved programs were shared with specific Commissioners for their comments and inputs. The final programs were sent to the State Director for final approval and implementation.

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

Brief explanation.

AES stakeholder participation is encouraged through our advisory council and interaction at workshops, yearly agricultural fair and World Food Day activities. AES actively engages our stakeholders also through on-farm research projects.
CES encouraged participation by the general public by announcing all its public meetings, listening sessions and town hall meetings through the local radio stations, television stations, and two local newspapers. Information was also sent to the UVI Public Information Specialist for distribution to the general UVI community and the general public bulletin board. Invitations were also sent to various farmers' groups such as St. Croix Farmers Cooperative, We Grow Food Inc., and St. Croix Farmers in Action to encourage their members to participate in all extension programs and activities. Invitations were also sent to individuals who had attended any programs or activities conducted by CES or had contact with a specialist or agent, to participate in extension programs and activities. Volunteer groups, homemakers club, and other focus groups were sent special invitation to participate in extension program activities.

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
- Other ((Individual, direct contacts from the community))

Brief explanation.

Input was received from the CES Advisory Council and the Virgin Islands Farmers Cooperative. Input was also received from the Advisory Council of the Research and Public Service. A needs assessment was conducted on CES clientele. CES evaluated its programs by giving participants of all seminars, meetings, and workshops survey forms to complete. Farm and clientele visits were made to determine the impact of the programs and suggestions made by clientele, were recorded and used to make improvements in CES educational programs and activities. CES conducted listening sessions and public meetings that were used to upgrade programs. These listening sessions and program activities were advertised through local newspapers, the University's Research and Public Service Newsletter, and the local television and radio stations. An assessment was also conducted on CES programs to assess its value to its clientele and the general public.

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)
- Survey of the general public
- Survey specifically with non-traditional groups
- Meeting with invited selected individuals from the general public
- Other (Clients contact AES with specific requests)

Brief explanation.

CES collected information and recommendations from its stakeholders at the Advisory Council's meeting. The Research and Public Service Advisory Council also provided recommendations for CES. Surveys of CES stakeholders were conducted by program staff during CES programming to get stakeholders involvement in setting priorities and addressing emerging issues in the community. CES held two general public meetings where information was advertised on the local radio stations, televisions, and newspapers to ensure that the Virgin Islands population has an equal chance of recording their concerns. This enabled CES to upgrade its programs and ensure that community needs were met.

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 Action Plans
- To Set Priorities

Brief explanation.

AES uses stakeholder input to assist in designing research projects that benefit the farmers and local agricultural community. This input may result in on-farm trials to assist in resolving the local issue. Stakeholders' input was considered in the budget allocation of programs. Stakeholders' involvement helped CES in setting its priorities and addressing emerging issues in the community. During the year, CES strengthen its collaboration with the Virgin Islands Departments of Agriculture, Health, Labor, Education, Human Services, the Virgin Islands Housing Authority, and the Office of the Governor in addressing at-risk issues in the community. Stakeholders' input was also used in redirecting extension programs.

Brief Explanation of what you learned from your Stakeholders

CES stakeholders assisted the Extension Service in focusing on the needs of the community and also helped in focusing CES' activities on emerging issues. They enhanced CES programs and increased the number of participation in CES programs.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1189586	0	1260049	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	1189586	0	527035	0
Actual Matching	594793	0	248778	0
Actual All Other	207000	0	0	0
Total Actual Expended	1991379	0	775813	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: Small Livestock and Beef Production
2	Climate Change - Livestock production
3	Computer Training and Technology Program
4	Eastern Caribbean Extension Outreach and Interchange
5	Global Food Security and Hunger: Sustainable Agriculture
6	Global Food Security and Hunger: Urban Gardening
7	Climate Change: Urban Forestry Program
8	Marketable Skills for Limited Resource Families, Youth and Comunities
9	Food Safety Education-EFNEP and EFNEP Youth
10	A Healthy, Well-Nourished Population
11	4-H Youth and Volunteer Development
12	Climate Change: Water Quality Program
13	Climate Change: Natural Resources and Environmental Management

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger: Small Livestock and Beef Production

☑ 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
301	Reproductive Performance of Animals	20%		5%	
302	Nutrient Utilization in Animals	10%		0%	
303	Genetic Improvement of Animals	0%		20%	
306	Environmental Stress in Animals	0%		20%	
307	Animal Management Systems	30%		35%	
311	Animal Diseases	10%		0%	
312	External Parasites and Pests of Animals	10%		10%	
313	Internal Parasites in Animals	5%		10%	
315	Animal Welfare/Well-Being and Protection	10%		0%	
603	Market Economics	5%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	2.5	0.0	3.1	0.0
Actual Paid	2.0	0.0	3.1	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
90000	0	143564	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
60000	0	59904	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
10000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• A "Buy Local, Eat Fresh" program continued to further promote the purchase and consumption of locally produced animal products

• A parasite monitoring program continued for all livestock farms to document parasite populations and concentrations, with data being used in tick control programs

• Test sites were set up and monitored for enhanced forage evaluation in pasture and drought conditions

• A program will be continued to demonstrate to producers the health and financial advantages of proper and adequate housing for livestock

• Methods of nutrition evaluation were demonstrated to producers so that they can determine the effects of reproduction and performance

• Developed an information exchange between established and developing farmers through farm visits to see what can be done to improve management and protection
• Regular radio programs focused on different areas of livestock production
• Conduct research
• Publish results
• Present data at conferences
• Collaborate with other members of multistate research project

Research was conducted to evaluate reproductive traits of yearling Senepol heifers and bulls.
Tick burdens of Senepol cattle was evaluated at various point in the production cycle.
The effect of weaning age on intestinal parasites of ewes, lambs and rams was evaluated in an accelerated lambing system.

2. Brief description of the target audience

• Virgin Islands Livestock Producers
• Virgin Islands Consumers
• Virgin Islands Youth
• Livestock producers in the tropics, greater Caribbean, Central and South America and the southern

US.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1000	3100	900	1100

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Workshops/demonstrations would be conducted on management, nutrition, housing, and identification of livestock.

Year	Actual
2015	8

Output #2

Output Measure

- Pasture testing and demonstration sites would be set up for forage evaluation.

Year	Actual
2015	2

Output #3

Output Measure

- Farms would be visited for general evaluation of management techniques and counseling.

Year	Actual
2015	120

Output #4

Output Measure

- Farms would be visited for parasite monitoring and evaluation.

Year	Actual
2015	12

Output #5

Output Measure

- Farms would be visited to weigh animals to monitor performance.

Year	Actual
2015	8

Output #6

Output Measure

- Continue to implement a "Buy Local' campaign with local farmers cooperative for use by producers in the community.

Year	Actual
2015	2

Output #7

Output Measure

- Provide training to farmers in identification methods.

Year	Actual
2015	3

Output #8

Output Measure

- Number of farmers using late weaning of hair lambs

Year	Actual
2015	2

Output #9

Output Measure

- Using tick burdens as a selection criteria in Senepol cattle

Year	Actual
2015	1

Output #10

Output Measure

- Identifying traits of adapted livestock

Year	Actual
2015	1

Output #11

Output Measure

- Using new method of artificial insemination with liquid semen as opposed to frozen semen
  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	Establish and/or monitor (5) sites annually to demonstrate the use of drought-resistant and nutritional forages for pastured livestock.
2	Decrease animal losses due to parasites and poor nutrition by 5%.
3	Increase the sales and consumption of locally produced livestock products such as meat and eggs by 5%.
4	Increase the number of livestock herds/flocks using complete identification and recordkeeping practices by 10%
5	Increase the number of pig farmers that are raising their livestock in recommended facilities by 5%.
6	Using tick burdens as a selection tool in Senepol cattle
7	Using late weaning to help control parasites
8	Develop methods to distribute germplasm

Outcome #1

1. Outcome Measures

Establish and/or monitor (5) sites annually to demonstrate the use of drought-resistant and nutritional forages for pastured livestock.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The excessive drought requires a drought resistant forage to withstand the prevailing conditions to provide enough forage for livestock.

What has been done
Two producers plots were seeded with a mobasa guinea grass and buffel grass.

Results
These two grasses were able to withstand the drought to five farmers who have cleared their land and are ready to plant these drought resistant variety

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
312	External Parasites and Pests of Animals
315	Animal Welfare/Well-Being and Protection

Outcome #2

1. Outcome Measures

Decrease animal losses due to parasites and poor nutrition by 5%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Internal parasite are a problem in the Virgin Islands hair sheep causing decrease in productivity.

What has been done
Five workshops were held on internal parasite control.

Results
Seven farmers have seen an increase in productivity by following a deworming schedule to eliminate internal parasites

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
312	External Parasites and Pests of Animals
315	Animal Welfare/Well-Being and Protection

Outcome #3

1. Outcome Measures

Increase the sales and consumption of locally produced livestock products such as meat and eggs by 5%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	10

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Most consumers do not buy locally produced meat and eggs.

What has been done
Campaign of buying local products especially meat and eggs was initiated. This campaign called VI fresh was geared towards the local consumers.

Results
There has been a remarkable increase in local meat and egg production. Most consumers will buy local fresh produce.

4. Associated Knowledge Areas

KA Code	Knowledge Area
603	Market Economics

Outcome #4

1. Outcome Measures

Increase the number of livestock herds/flocks using complete identification and recordkeeping practices by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Most producers do not place identification on their animals thereby violating VI laws.

What has been done
Three animal identification workshops were conducted.

Results
Most animals in the VI are easily identified with ear tags and tattoos.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

Outcome #5

1. Outcome Measures

Increase the number of pig farmers that are raising their livestock in recommended facilities by 5%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual

2015	10

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The majority of swine producers in the Virgin Islands allowed their animal to roam about in their pastures.

What has been done
Two workshops on swine feeding and proper management were held for beginning livestock farmers.

Results
Six swine farmers was producing trim animals in confinement; utilizing concrete floods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection

Outcome #6

1. Outcome Measures

Using tick burdens as a selection tool in Senepol cattle

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The cattle industry and, to a lesser extent, the sheep and goat industry in the Virgin Islands is affected by the brown cattle tick - Boophilus microplus - which carries several diseases, including anaplasmosis and several strains of babesiosis (piroplasmosis), all commonly referred to as "tick fever." The presence of these ticks can cause illness and death in a producer's herd or flock and

significantly impacts growth and production. An eradication program has been implemented for the second variety of tick found on St. Croix (Amblyoma varegatum). They also impact the ability of producers to move animals within and off the island during sales.

What has been done
Tick burdens of Senepol cattle were evaluated at various point in the production cycle birth to weaning and weaning to yearling.

Results
On-going research

4. Associated Knowledge Areas

KA Code	Knowledge Area
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
311	Animal Diseases
312	External Parasites and Pests of Animals

Outcome #7

1. Outcome Measures

Using late weaning to help control parasites

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	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
301	Reproductive Performance of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
313	Internal Parasites in Animals

Outcome #8

1. Outcome Measures

Develop methods to distribute germplasm

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a demand for the unique genetic material of the local livestock breeds

What has been done
Started to investigate the development of methods to transport livestock germplasm off the island for use in breeding programs elsewhere.

Results
Project is in its infancy.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Natural disasters (drought, weather extremes, etc.)
economy
appropriation changes

V(I). Planned Program (Evaluation Studies)

Evaluation Results

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Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change - Livestock production

☑ 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
305	Animal Physiological Processes	0%		50%	
306	Environmental Stress in Animals	0%		50%	
	Total	0%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	1.1	0.0
Actual Paid	0.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
0	0	67693	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	33341	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

- Conduct Research Experiments

- Publish results
- Present data at conferences

2. Brief description of the target audience

Target audience is livestock producers in areas of heat stress and collaborators on the multistate research project.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	27	15	0	0

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	1	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Abstracts presented at conferences

Year	Actual
2015	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Continued use of heat tolerant breeds in local livestock operations

Outcome #1

1. Outcome Measures

Continued use of heat tolerant breeds in local livestock operations

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
305	Animal Physiological Processes
306	Environmental Stress in Animals

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Computer Training and Technology Program

☑ 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
903	Communication, Education, and Information Delivery	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	1.6	0.0	0.0	0.0
Actual Paid	3.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
150000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40010	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
20000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Advertised the Computer Training and Technology Program. Conducted eight weeks Basic Computer Training Courses that taught participants how to use Microsoft Windows, Microsoft Word, E-

mail, and search for information using the World Wide Web.

2. Brief description of the target audience

The population consisted mainly of computer illiterate adults in the USVI that are from low income households. Also members of the clothing construction and EFNEP classes.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	578	742	195	247

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Conduct a seven-weeks basic computer training course designed to increase the participants' knowledge and usage of computer in Basic Computer Maintenance, Microsoft Word, and E-mail/Internet.

Year	Actual
2015	12

Output #2

Output Measure

- Conduct two-day workshops on Internet communication.

Year	Actual
2015	12

Output #3

Output Measure

- Conduct four-day workshops on Microsoft Excel

Year	Actual
2015	5

Output #4

Output Measure

- Conduct four-day workshops on Microsoft PowerPoint

Year	Actual
2015	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants will acquire/increase their knowledge and usage of Microsoft Window by 70%.
2	Participants will acquire/increase their knowledge and usage of Microsoft Word by 70%.
3	Participants will acquire/increase their knowledge and usage of E-mail by 70%.
4	Participants will acquire/increase their knowledge and usage of the Internet by 70%.
5	Participants will acquire/increase their knowledge and usage of Microsoft Excel by 70%.
6	Participants will acquire/increase their knowledge and usage of Microsoft Powerpoint by 70%.

Outcome #1

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of Microsoft Window by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	97

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population of computer illiterate adults. Some of these individuals need to acquire these computer skills in order to get employment to better their household income and to take advantage of new technology.

What has been done
Twelve of the UVI CES seven-week Basic Computer Training Courses were conducted. These classes teach participants how to use Microsoft Windows, Microsoft Word, E-mail, and how to search for information using the World Wide Web.

Results
Of the 218 participants 97% of individuals who participated indicated that they acquired/increased their knowledge and usage of Microsoft Windows.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of Microsoft Word by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	92

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population that does not know how to use MS Word. Microsoft Word is the most widely used word processing software. By acquiring or increasing their skills in MS Word, these individuals will be better equipped to seek employment or a promotion. They can also use MS Word in their day to day lives to make their tasks easier.

What has been done
Twelve of the UVI CES seven-week Basic Computer Training Courses were conducted. In these classes, Microsoft Word was taught for four class sections.

Results
Of the 218 participants 92% of individuals who participated indicated that they acquired/increased their knowledge and usage of Microsoft Windows.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of E-mail by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	94

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population that does not have and/or does not know how to use an e-mail account. These individuals can benefit from learning how to use an e-mail account as it can lead to saving money on postage stamps and the ability to send information faster.

What has been done
Twelve of the UVI-CES seven-week Basic Computer Training Courses were conducted. In these classes, e-mail was taught to participants. Participants also learned how to create e-mail accounts, and send and receive messages.

Results
Of the 218 participants 94% of individuals who participated indicated that they acquired/increased their knowledge and usage of Microsoft Windows.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #4

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of the Internet by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	95

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population that does not know how to use the internet. The benefits of using the internet are various, and the broad range of information it provides makes the internet a valuable too in an individual's life. Individuals also can perform a variety of tasks using the internet such as shopping, banking, and paying bills.

What has been done
Twelve of the UVI-CES Usefulness of Internet workshops were conducted.

Results
Of the 171 participants 95% of the individuals who participated in the workshops indicated that they acquired/increased their knowledge and usage of the internet.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #5

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of Microsoft Excel by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	91

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population that does not know hot to use Microsoft Excel. MS Excel is a very useful application when creating budgets, keeping track of loan payments, and a number of other useful mathematical calculations.

What has been done
Five workshops were conducted that focused solely on the uses of MS Excel.

Results
Of the 57 participants 91% of the individuals who participated indicated that they acquired/increased their knowledge and usage of MS Excel.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #6

1. Outcome Measures

Participants will acquire/increase their knowledge and usage of Microsoft Powerpoint by 70%.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a large population that does not know how to use MS PowerPoint. Ms PowerPoint is a very useful tool when giving presentations and can also be used for learning within the classroom. Individuals who utilize PowerPoint are often more captivating and engaging with their audience versus and individual who uses standard note cards.

What has been done
Six workshops were conducted that focused solely on the uses of Ms PowerPoint.

Results
Of the 78 participants 98% of the individuals who participated indicated that they acquired/increased their knowledge and usage of MS PowerPoint.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Participants fill out a Pre and Post-Evaluation that focus on the knowledge they acquired in

the class.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Eastern Caribbean Extension Outreach and Interchange

☑ 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
603	Market Economics	10%		0%	
606	International Trade and Development	10%		0%	
903	Communication, Education, and Information Delivery	80%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	1.2	0.0	0.0	0.0
Actual Paid	1.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
70000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
64673	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
5000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Professional linkages were established with other agricultural organizations in the Eastern Caribbean. Shortcourses, workshops, and training sessions were conducted for agricultural specialists, youth leaders and volunteers. Extension specialists provided consultations on food and nutrition programs, sustainable agriculture, horticulture, and livestock production and management. Breeding animals were exchanged with other islands through the Breeders Exchange Program. A directory of individuals and institutions in agricultural research and development in the Eastern Caribbean will be expanded and updated. UVI/CES telecommunication systems for collaborative training with other regional institutions will be utilized to train extension specialists and agents. Proceedings, newsletters and other publications will be published for CFCS, CACHE, and CARAPA. CES assisted in the planning and execution of international and regional meetings for CFCS, CACHE, and CARAPA.

2. Brief description of the target audience

The target audience of this program will be extension specialists, extension agents, district supervisors, extension educators and research scientists in the Eastern Caribbean. Producers and farm operators will also be targeted for this program. Regional institutions, homemakers and youth will also be targeted.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	350	800	250	500

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Agricultural linkages will be established with five organizations in the Eastern Caribbean countries.

Year	Actual
2015	5

Output #2

Output Measure

- International and regional workshops will be coordinated.

Year	Actual
2015	1

Output #3

Output Measure

- Proceedings, newsletters and other publications will be published for CFCS, CACHE, and CARAPA.

Year	Actual
2015	2

Output #4

Output Measure

- Update and expand directory of individuals and institutions in agricultural research in the Eastern Caribbean.

Year	Actual
2015	1

Output #5

Output Measure

- Animal breeding stock will be exchanged between countries in the Eastern Caribbean.

Year	Actual
2015	300

Output #6

Output Measure

- Extension specialists will provide consultation on sustainable agriculture, horticulture and livestock production and management.

Year	Actual
2015	5

Output #7

Output Measure

- Provide forum for training youth leaders and volunteers (amount of youth trained).

Year	Actual
2015	20

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Agricultural linkages established with regional organizations
2	International and regional workshops coordinated
3	Amount of animal breeding stock exported to Eastern Caribbean countries
4	Directory of individuals and institutions in agricultural research in the Eastern Caribbean
5	Proceedings, newsletters and other publications published for CFCS, CACHE, and CARAPA

Outcome #1

1. Outcome Measures

Agricultural linkages established with regional organizations

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a need for agricultural scientists to network and share information on new research and technology.

What has been done
One regional conference was held for Caribbean Agricultural Economic Society.

Results
One hundred twenty people exchanged ideas and networked.

4. Associated Knowledge Areas

KA Code	Knowledge Area
606	International Trade and Development
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

International and regional workshops coordinated

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
More international and regional workshops need to be conducted.

What has been done
One regional workshop was conducted.

Results
Participants gained a lot of knowledge and shared information.

4. Associated Knowledge Areas

KA Code	Knowledge Area
606	International Trade and Development
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Amount of animal breeding stock exported to Eastern Caribbean countries

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
It is very difficult to get breeding stock on some islands.

What has been done
Two hundred breeding layers and 100 broiler chicks were exported to the island of St. Eustatius.

Results
These breeding animals were distributed to producers for genetic improvement.

4. Associated Knowledge Areas

KA Code	Knowledge Area
603	Market Economics
606	International Trade and Development

Outcome #4

1. Outcome Measures

Directory of individuals and institutions in agricultural research in the Eastern Caribbean

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture scientist and researchers need an avenue for scientific exchange.

What has been done
Directory of agricultural scientists and researches was updated.

Results
Directory available for scientists and researchers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #5

1. Outcome Measures

Proceedings, newsletters and other publications published for CFCS, CACHE, and CARAPA

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Proceedings of conferences needs to be published in a timely basis.

What has been done
Two proceedings were completed for CFCS and Caribbean Ag conference.

Results
Proceedings were distributed.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger: Sustainable Agriculture

☑ 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%		15%	
111	Conservation and Efficient Use of Water	20%		0%	
204	Plant Product Quality and Utility (Preharvest)	0%		35%	
205	Plant Management Systems	20%		50%	
307	Animal Management Systems	20%		0%	
403	Waste Disposal, Recycling, and Reuse	20%		0%	
601	Economics of Agricultural Production and Farm Management	20%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	4.1	0.0	6.0	0.0
Actual Paid	4.1	0.0	1.8	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
150000	0	53931	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
60000	0	26563	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
20000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

1. Shortcourses, workshops, and demonstrations were conducted to disseminate information about recommended, research-based sustainable production practices, including composting, drip irrigation, etc.
2. Publications (e.g. fact sheets) and newsletter articles were developed and published to disseminate information regarding sustainable production and marketing practices.
3. Announcements were made through the print and electronic media to promote educational activities and disseminate information about sustainable agricultural practices.
4. Farm visits and telephone contacts were made to address clientele problems and to disseminate information about the program.
5. Workshops and other projects were conducted in partnership with other entities to implement strategies to increase farm water supply and enhance the efficient use of this resource.
Monocultures of sunn hemp were planted as a cover crop in late 2014 due to a delayed arrival of the 2014 rainy season. In February, 2015 the SH cover crop was terminated using a roller-crimper. Experiments were conducted to further develop the use of SH as a cover crop to produce surface mulch (grown in-situ) in vegetable cropping systems to reduce herbicide reliance in conventional cropping systems and to provide alternative weed suppression strategies in organic cropping systems. Studies were conducted to compare cropping systems where the SH cover crop was soil incorporated followed by three common weed management practices (plastic film mulch, cut and carry hay mulch, and bare ground with no mulch) to SH surface mulch produced from SH terminated with a no-till roller-crimper. Peppers (Capsicum annum) and kale (Brassica oleracea) were evaluated to determine cropping system productivity. Weeds were evaluated to determine mulching system effects on weed population dynamics.
Sunn hemp (Crotalaria juncea) was planted in monoculture and in polyculture with sunflower (Helianthus annus) and sesame (Sesamum indicum) in May, August, and September (2015). The purpose of the comparisons between the sunn hemp monoculture and polyculture cover crop plantings is to determine effective monoculture seed planting rates for sunn hemp monocultures compared to polyculture planting to maximize cover crop biomass. It is also necessary to determine proper termination time for cover crop polycultures based upon plant maturity and physiology. Cover crop polycultures in tropical climates need to be evaluated to determine optimal termination strategies.

2. Brief description of the target audience

The program's general target audience will consist of crop and livestock producers, outreach professionals from government and academic institutions, students, and young adults who aspire to be farmers. The primary audience will be farmers who are typically socially disadvantaged, limited resource individuals who lack the necessary technical training, technological tools, and infrastructure for optimum farm production that are local farmers, the greater Caribbean and southern USA.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	390	2750	163	350

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	1	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of shortcourses, workshops, demonstrations, annual fairs and exhibits

Year	Actual
2015	9

Output #2

Output Measure

- Nulmber of publications

Year	Actual

2015	3

Output #3

Output Measure

- Number of announcements through print and electronic media

Year	Actual
2015	4

Output #4

Output Measure

- Number of farm visits and telephone contacts

Year	Actual
2015	640

Output #5

Output Measure

- Projects to increase farm water supply and water use efficiency
  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	Increase the number of farmers who become more aware of sustainable agriculture practices by 5%
2	Increase the number of farmers who become more aware of value-added strategies to increase farm profitability by 10%
3	Increase the number of farmers who increase or enhance their knowledge of recordkeeping practices by 10%
4	Outcomes will be measured by the number of crop farmers that utilize cover crop technologies in vegetable cropping systems and the number of farmers who reduce tillage practices and utilize cover crop residue as part of a conservation agroecosystem.

Outcome #1

1. Outcome Measures

Increase the number of farmers who become more aware of sustainable agriculture practices by 5%

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	508

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Some farmers, particularly the older farmers, in the Virgin Islands still rely on practices that are unsustainable. They continually need to be educated in current best management practices and encouraged to adopt these practices. Beginning farmers need to immediately be made aware of the sustainable agriculture practices that they should be utilizing for their farm enterprises to be successful. This is important because we are depending on the success of these beginning farmers to attract other persons into starting their own farm enterprises.

What has been done
The 31st West Indies Agricultural Economics Conference (CAES) was held at The Buccaneer Hotel, St. Croix, U.S. Virgin Islands. Over 50 agricultural scientists, agricultural economists, and policymakers from around the Caribbean and other countries were in attendance and made presentations based upon the theme: 'Mitigating Climate Change Effects to Ensure Food Security'. There was excellent participation, especially at the special session on local agriculture in the Virgin Islands, which in addition to local farmers, featured youth from both St. Croix and St. Thomas.

Local farmers benefited from a Farmers Market and Local Food Promotion Program Grant Writing Workshop where they learned about the essential elements of writing and submitting grant applications for funding. There were approximately ninety persons in attendance.

At both the St. Thomas/St. John Agriculture and Food Fair and the Virgin Islands Agriculture and Food Fair opportunities were provided for farmers and the general public to obtain information related to sustainable agriculture through demonstrations, one-on-one discussions and educational handouts.

The annual local observance of World Food Day included a number of workshops on crop production practices. This year the featured crops for these workshops were eggplant, beef and passion fruit. Approximately 60 attendees increased their knowledge about the production of these crops.

The Cooperative Extension Service held an Agricultural Enrichment Summer Program for youth between the ages of 14-15. The six-week program was designed to increase knowledge and create awareness of careers and work opportunities in the field of agricultural science. There were 18 participants in the program.

Results

Local farmers benefitted from their interactions with over 50 regional, national and international scientists and policymakers at the CAES Conference. Through these interactions and sharing of information, especially during the session on Virgin Islands agriculture, approximate 15 local farmers increased their knowledge of production strategies to mitigate climate change.

Virgin Islands youth were exposed to best management practices by participating and making presentations at the CAES Conference. They also benefited from the Agricultural Enrichment Summer Program.

Through our major outreach and educational activities many farmers were educated about production strategies to make their farm enterprises successful.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
111	Conservation and Efficient Use of Water
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Increase the number of farmers who become more aware of value-added strategies to increase farm profitability by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	400

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Because of the inability to sell all of their crops or livestock products on the fresh market, farmers at times have decide what to do with the surplus. They have several options including dumping, donating, composting, or adding value to the product and selling it in a different form. The latter is the best option and has the potential of increasing the overall income of the farmer. It also brings to the market place more choices for the consumer.

What has been done
During the annual World Food Day event, selected crops and livestock were featured through demonstrations and educational opportunities for the general public. Eggplant, beef and passion fruit were the featured commodities this year. Along with the production seminars, there were classes in which participants observed post-harvest processing and handling such as cooking, drink making, baking, preserving and drying of one or more of the featured commodities. Additionally, the annual Mango Melee and Tropical Fruit Festival, along with two agriculture and food fairs were used for the dissemination and display of value added information, demonstrations, and products.

Results
Approximately 300 farmers, agriculture professionals, home gardeners, and other residents learned how to grow and maintain eggplant and passion fruit plants and were provide with handouts on each subject. They also became more aware of the potential for increased income by converting unsold crops into value-added products.
Thousands of residents increased their knowledge of the various uses and ways of preparing value-added products from mango and other tropical fruits at Mango Melee and Tropical Fruit Festival. They also became aware of the various flavors of different types of mangoes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
205	Plant Management Systems
307	Animal Management Systems

601 Economics of Agricultural Production and Farm Management

Outcome #3

1. Outcome Measures

Increase the number of farmers who increase or enhance their knowledge of recordkeeping practices by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Natural and man-made disasters occur almost each year in the Virgin Islands. In providing assistance from both federal and local agencies, production records of activity prior to the disaster are required in order to qualify for aid. If a farmer wants to borrow money for operation or expansion, he/she is required to produce documentation of the farms profitability. However, many farmers fail to keep proper records and in some instance no records at all and thus disqualifying them from disaster aid and/or denying them the opportunity to expand their enterprises. Farmers need the knowledge and skills for preparing records and documents that would satisfy the requirements of public and private sector agencies and institutions.

What has been done
Three farm financial planning, management, and analysis training initiative introductory level instructional sessions were conducted on a wide variety of topics including Farm enterprise operation activities, farm family household operation activities and farmers associations/farmers cooperatives operation activities. The total duration of the three sessions was 23 weeks.

Results
Eight farmers increased their probability to qualify for financial and/or technical assistance from various territorial and federal agencies, public and private financial institutions through loans, grants, subsidies and disaster relief. These farmers can also have better overview of their farm enterprises and make better management decisions.

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

Outcomes will be measured by the number of crop farmers that utilize cover crop technologies in vegetable cropping systems and the number of farmers who reduce tillage practices and utilize cover crop residue as part of a conservation agroecosystem.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Tropical smallholder farmers that operate under low external input (LEI) conditions often have integrated agricultural systems that include different combinations of agronomic, horticultural, and livestock interests. Agroecosystems that include cover crop technologies are complex and in need of further study. Cover crops are crops planted during fallow periods in between cash crop rotations to provide a variety of ecosystem services. Ecosystem services include serving as a soil cover to reduce soil erosion, serve to increase soil quality, increase soil water holding capacity, increase biodiversity, and provide alternative pest management to decrease pest populations in subsequent crop rotations. Sunn hemp (Crotalaria juncea L.; [SH]) is an important warm season cover crop that has the potential to provide ecosystem services and cover crop legacy effects to subsequent vegetable crop rotations. Farmers rely heavily upon mechanized soil disturbance and hand labour for weed control. These farmers have little incentive to reduce tillage events and minimize soil disturbance when faced with extreme weed pressure. One alternative conservation management strategy is to terminate SH with a roller-crimper and utilize the SH residue to form a dense weed suppressive mulch layer in which vegetables may be grown via no-till transplanting. Adoption of this practice by farmers could reduce soil disturbance, provide extended weed suppression, and increase the soil?s water holding potential.

What has been done
Monocultures of sunn hemp were planted as a cover crop in late 2014 due to a delayed arrival of

the 2014 rainy season. In February, 2015 the SH cover crop was terminated using a roller-crimper. Experiments were conducted to further develop the use of SH as a cover crop to produce surface mulch (grown in-situ) in vegetable cropping systems to reduce herbicide reliance in conventional cropping systems and to provide alternative weed suppression strategies in organic cropping systems. Studies were conducted to compare cropping systems where the SH cover crop was soil incorporated followed by three common weed management practices (plastic film mulch, cut and carry hay mulch, and bare ground with no mulch) to SH surface mulch produced from SH terminated with a no-till roller-crimper. Peppers (Capsicum annum) and kale (Brassica oleracea) were evaluated to determine cropping system productivity. Weeds were evaluated to determine mulching system effects on weed population dynamics.

Results

Cut and carry hay mulch systems provided a high level of weed suppression and resulted in the greatest pepper yields compared to either the no mulch or plastic mulch systems. Sunn hemp surface mulch served as an effective means to suppress weeds and produced comparable yields to conventional systems when adequate SH biomass was present. However, the weed suppressive potential of the SH surface mulch and corresponding pepper yields were reduced due to less than 4,500 kg ha-1 biomass production. In previous experiments in the USVI, when SH biomass exceeded 5,000 kg ha-1 and was terminated with a roller-crimper to produce surface sheet mulch, subsequent pepper yields were similar to or in excess of yields produced in conventional production systems. Sunn hemp terminated with a roller-crimper, followed by no-till vegetable transplanting can reduce soil disturbance as part of a greater conservation tillage approach and can provide adequate weed suppression in vegetable cropping systems. However, the success of the system is dependent upon adequate cover crop biomass, careful planning, and intensive farm management. Due to an extreme drought in 2015, research is still being conducted and results will be compiled after cover crop trial completion. Preliminary results from 2014 indicate that sunn hemp planting densities need to be significantly reduced from monoculture seeding rates. Optimum monoculture seeding rates for sunn hemp when used as a cover crop range from 35 to 45 lbs per acre. At this rate light penetration of the canopy is effectively reduced eliminating or severely reducing weed development within the sunn hemp monoculture. At this seeding rate it is feasible to produce 7 to 9 tons per acre of vegetative biomass. Sunn hemp is highly competitive and drought tolerant and will outcompete sunflower and sesame at higher planting rates. Therefore, in polyculture, it is recommended to reduce sunn hemp seeding rates to 10 to 15 lbs per acre when planted with sesame and sunflower. No Results were obtained in 2015 for this portion of the study due to crop failure that resulted from an extreme drought that affected St. Croix, USVI and the greater Caribbean region.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

The external factors listed can seriously affect the outcomes of the program. Natural disasters such as drought, hurricanes, flooding, etc. negatively impact life in the islands. Priorities of the government as determined by the economy, policy changes and regulations will determine priorities for funding.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Information regarding knowledge gained and change in behavior was collected formally and informally.
The responses indicated that approximately 95% increased their knowledge, 70% positively changed their attitude, and 90% improved their skills.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Global Food Security and Hunger: Urban Gardening

☑ 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
202	Plant Genetic Resources	0%		15%	
205	Plant Management Systems	95%		55%	
307	Animal Management Systems	0%		15%	
403	Waste Disposal, Recycling, and Reuse	5%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	2.2	0.0	0.0	0.0
Actual Paid	2.2	0.0	4.6	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
80000	0	261847	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40000	0	128970	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

Educational classes, workshops, seminars
Development of publications, resource materials, curriculum guides
Conducting field days, field demonstrations, exhibits and tours
One-on-one counseling
On-site visits
Use of electronic and social media
Website development
Micro-irrigation studies, vegetable variety trials, fruit and vegetable breeding, micropropagation and aquaponics

2. Brief description of the target audience

• Home owners •Horticultural Organizations •Public Housing Residents •Senior citizens homes •School teachers •Policy Makers •Master Gardeners Candidates •Youth groups Local farmers

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1500	12000	600	2000

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	3	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes to help residents to plan and create a garden

Year	Actual
2015	7

Output #2

Output Measure

- Number of workshops/demonstrations using low cost, efficient, technologies, practices and principles in gardening

Year	Actual
2015	4

Output #3

Output Measure

- Number of educational classes in the benefits of proper gardening

Year	Actual
2015	8

Output #4

Output Measure

- Number of consultations with residents, public and private agencies, about gardening

Year	Actual
2015	66

Output #5

Output Measure

- Number of articles/publications on urban gardening management

Year	Actual
2015	2

Output #6

Output Measure

- Number of fairs and exhibits displaying best management practices and other information pertaining to the Urban Gardening program

Year	Actual
2015	4

Output #7

Output Measure

- Number of print, electronic, and social media appearances/programs promoting urban gardening

Year	Actual
2015	10

Output #8

Output Measure

- Number of demonstration sites developed using urban gardening principles and practices

Year	Actual
2015	2

Output #9

Output Measure

- Number of public and private entities and individuals establishing gardens

Year	Actual
2015	12

Output #10

Output Measure

- Number of residents, non-profit organizations, and public and private entities becoming more aware of the benefits of composting.

Year	Actual
2015	240

Output #11

Output Measure

- Number of vegetable variety trials conducted

Year	Actual
2015	3

Output #12

Output Measure

- Number of new hybrids from plant breeding

Year	Actual
2015	654

Output #13

Output Measure

- Number of virus-free germplasm maintained in vitro

Year	Actual
2015	185

Output #14

Output Measure

- Number of systems for micro-irrigation

Year	Actual
2015	4

Output #15

Output Measure

- Number of plant types evaluated under aquaponics

Year	Actual
2015	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase the number of residents who will become more aware of the benefits of gardening by 10%
2	Increase the number of residents,who increase their knowledge of more efficient low cost technologies, practices, and principles by 10%
3	Increase the number of home gardeners who realize a reduction in their cost of living resulting from urban gardening by 10%
4	Increase the number of residents, public and private agencies who will establish gardens by 10%
5	Increase the number of residents, public and private agencies who start composting by 10%
6	Number of new farmers adopting aquaponic technology
7	Number of farmers adopting irrigation strategies based on soil moisture
8	Number of pest and disease resistant cultivars
9	Number of new varieties developed
10	Number of virus-free sweetpotatoes maintained in vitro

Outcome #1

1. Outcome Measures

Increase the number of residents who will become more aware of the benefits of gardening by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	4765

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Exercise, increased flexibility, stress relief, the consumption of fresh fruits and vegetables and the associated money savings are good reasons to garden. Virgin Islands residents are reminded every day of the high cost of living, along with the negative effects of poor health practices as is evident in the increased cases of heart disease, diabetes, high blood pressure, and obesity. Virgin Islanders continue to seek information and educate themselves on how they can make lifestyle changes that not only benefit them physically, but economically as well. Exposing the youth to the benefits of gardening and actively engaging them in the cultivation of vegetables, herbs and fruits is a sure way of preparing the next generation to make healthy choices.

What has been done
Extension staff participated in a radio shows on the University of the Virgin Islands radio station WUVI and a call in radio talk show called The Food and Health Connection on radio station WGOD 97.9 FM. Extension staff spoke about gardening and answered questions from the listening audience.

Urban gardening demonstrations were conducted at the Virgin Islands Agriculture and Food Fair and the St. Thomas/St. John Agriculture and Food Fair.

CES maintains demonstration gardens on both campuses of the University. Residents are encouraged to visit these gardens and interact with Extension staff.

Extension agriculture staff presented information on how gardening can be incorporated into the school's curriculum at the annual Youth Gardening Workshop sponsored by CES 4-H program held on the UVI Albert Sheen Campus. There were 80 attendees.

Extension staff participated in the "Destined for Greatness Summer Enrichment Program" where 30 students and 5 counsellors were taught about the different types of containers for germinating seeds. The participants were also taught how to transplant seedlings to a larger container for longer growth period.

Additionally the local PBS Television station continues to rebroadcast the "Home Grown" gardening series show hosted by CES.

Results
Thousands of listeners to The Food and Health Connection talk show and WUVI radio broadcasts increased their knowledge of the many benefits of building and maintaining their own garden. Thousands also viewed rebroadcasts of the Home Grown television program. Approximately, 80 participants from various schools on St. Croix participated in workshops designed to help them incorporate gardening into their course work. Participants of the summer camp increased their knowledge about the benefits of gardening. Many other persons also increased their knowledge and skillsfrom interacting with Extension staff and viewing demonstrations at CES major educational and outreach activities and visiting the CES demonstration gardens

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #2

1. Outcome Measures

Increase the number of residents,who increase their knowledge of more efficient low cost technologies, practices, and principles by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	6000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Most homeowners, youth garden groups, and public and private agencies still use inefficient and costly growing practices in their gardens. With the high cost of living and limited water resources, gardeners of all types need to find ways to use the latest technologies and most effective

gardening practices in order to reduce cost. Even though current technologies such as woven weed barriers, micro-irrigation, and irrigation timers, have been recommended for many years, there are some residents who have never seen or used them before. Some homeowners experiment with practices that they have seen online, in magazines or have been passed on by neighbors or family members. The inconsistent results they experience can be frustrating and discouraging. Some are just do-it-yourself persons and only need literature and/or personal contact in order to be successful.

What has been done
The annual Agriculture and Food Fair of the Virgin Islands and the St. Thomas/St. John Agriculture and Food Fair provided CES with the opportunity to interact with a wide range of Virgin Islands residents who may or may not have utilized our services before.

Extension staff continued to provide residents with information on growing their own vegetables through direct and indirect contact methods.

Extension staff also appeared regularly on two local radio stations to discuss a wide range of agriculture topics including gardening. During National Agriculture Week, CES partnered with the VI Department of Agriculture (VIDOA) on various educational events. Extension staff presented lectures and answered questions from youth participating in the Destined for Greatness Summer Enrichment Program. Similarly, the annual Youth Gardening Workshop sponsored by the 4-H program was held on the Albert Sheen Campus of UVI.

CES maintains demonstration gardens on both campuses of the University. Residents are encouraged to visit these gardens and interact with Extension staff.

Additionally the local PBS Television station continues to rebroadcast the "Home Grown" gardening series show hosted by CES.

Results
Approximately, three hundred fifty (350) persons became more aware of various kinds of efficient growing systems they can use to raise fresh vegetables. Factsheets were provided as a resource for interested residents.
Thousands of radio listeners and television viewers across the territory and beyond have increased their knowledge of building and maintaining efficient growing systems around their homes and landscape.
Thirty five participants from the summer camp increased their knowledge of growing and managing vegetables in the garden.
Approximately, 80 persons participated in hands on workshops on planning a gardening, soil fertility and fertilizer, pest identification, and transplanting at the Youth gardening Workshop.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #3

1. Outcome Measures

Increase the number of home gardeners who realize a reduction in their cost of living resulting from urban gardening by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	45

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Ninety-five (95%) to ninety-nine (99%) of food consumed in the Virgin Islands is imported. Virgin Islands residents pay extremely high prices for food due to the additional cost of shipping and handling, store owners mark up, and high utility costs. Home gardening is a way to reduce the cost of food, whereby residents could save money and possibly shift financial resources to other aspects of their life.

What has been done
Extension staff provided technical information at major outreach/educational activities; conducted numerous home visits, demonstration garden tours and one-on-one consultations; and responded to many telephone/email inquiries and requests.

Results
No formal surveys were conducted to determine the actual cost savings that residents realized. Anecdotal information and unsolicited information from many residents indicated that they realized savings as a result of creating a garden or enhancing a cultural practice.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #4

1. Outcome Measures

Increase the number of residents, public and private agencies who will establish gardens by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	24

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Virgin Islands residents have been exposed to gardening either from practical experience or from visiting other gardens. Some may have had gardens but gave them up for one reason or another. Some persons who might never had a garden before, probably wanted to have one, but did not know how and where to begin. Youth need to experience the benefits of gardening as well. Obesity in our youth and adults is one of the concerns of healthcare professionals.

What has been done
Extension staff provided schools, non-profit organizations, public and private agencies with information on the benefits of gardening through visits and one-on-one contacts. Demonstration garden tours provided students and other interested residents with an opportunity to see a developed garden plot and what is involved in starting and maintaining a garden.

Results
Two (2) elementary schools and a senior citizen residential facility started gardens with the assistance of CES staff. Twenty four (24) other residents began cultivating a garden with assistance from Extension staff.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #5

1. Outcome Measures

Increase the number of residents, public and private agencies who start composting by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Virgin Islanders discard tons of materials, including large amounts of yard-waste, each year. These materials can be recycled into compost and used to improve the health of the soil and grow better and healthier plants, while reducing the negative impact on our landfills. Exposing young people to this type of information at an early age will help them to make sound decisions regarding the management of natural resources.

What has been done
Extension staff conducted one-on-one consultations, provided technical information, facilitated tours of our demonstration site, and conducted outreach activities.

Results
Three (3) elementary schools and two individuals began composting activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
403	Waste Disposal, Recycling, and Reuse

Outcome #6

1. Outcome Measures

Number of new farmers adopting aquaponic technology

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
To overcome environmental constraints and increase local food supplies new production technology such as aquaponics is needed. The UVI Aquaculture Program has developed small and commercial aquaponic systems that are reliable, productive and well suited for the Virgin Islands. The UVI aquaponic commercial-scale system is capable of producing more approximately 12,000 lbs. of fish and vegetables on 1/8th acre of land with water supplied solely through rainwater harvesting. Adoption of aquaponic technology in the Virgin Islands would increase the local supply of fish and vegetables, improve the economy and provide health benefits to consumers.

What has been done
This program has studying the develop of profitable aquaponic systems that are adopted by Virgin Islands farmers and used to increase the local supply of fresh fish and vegetables. Short courses are conducted to train participants in the use of aquaculture technology.

Results
Program has a successful history of conducting research and disseminating the results through publications, conference presentations, seminars, and workshops. There is considerable interest in aquaponics. In 17 years, a 1-week course has attracted over 800 participants from around the world. Currently, the Aquaculture Program offers a 3-day workshop for 15 - 20 participants. The Aquaculture Program is inundated with requests for information about aquaponic systems and receives numerous requests to speak at conferences about aquaponic systems.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

403 Waste Disposal, Recycling, and Reuse

Outcome #7

1. Outcome Measures

Number of farmers adopting irrigation strategies based on soil moisture

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Water is the most limiting constraint to agricultural production in the USVI. Existing ponds and dams are not sufficient to effectively store water for agricultural purposes. Underground water is used primarily for urban consumption together with desalinized seawater which makes it very expensive for the horticultural industry. Growers are aware of the benefits of micro-irrigation technology. However, water costs and availability as well as irrigation strategies have shown to be the limiting factor for crop production and hence for adoption. Knowledge about automatic control systems and water management strategies as well as water requirements (crop coefficients) will contribute to improve irrigation efficiency and water use efficiency for crop production in the USVI.

What has been done
Irrigation strategies based on soil water availability and plant requirement are being used to improve irrigation efficiency. In the case of shade crops, less water will be needed to dissipate the reduced solar energy reaching the plant canopy. In addition, ground and air temperature, as well as wind, will decrease and the relative humidity will increase under shade reducing evapo-transpiration.

Results
Soil moisture levels maintained slightly below field capacity and amount of water applied according to evapo-transpiration reduces the water loss by percolation and run off.
Low pressure irrigation system reduces energy (electricity) cost for horticulture crops production.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #8

1. Outcome Measures

Number of pest and disease resistant cultivars

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The horticulture industry in the U.S. Virgin Islands (USVI) is in the state of continuous decline attributed to a decreasing number of farmers over the years. Presently, 99% of the agriculture commodities consumed in the territory is imported. Crop production is constrained by poor soil and water characteristics, high incidence of pests and diseases, poor crop management practices including the use of old and low yielding crop cultivars, and high costs of imported inputs. Vegetables can be produced all year round and there is high market demand for them, but farmers fail to meet this demand due to inefficient cropping system and management method that restrict crop performance. High quality produce demands good market prices, which can be achieved only if farmers use improved crop management practices.

What has been done
This program focuses on the selection of pest and disease resistant cultivars integrated with crop rotation and cover crops to improve soil quality and fertility for year-round production of high quality fruits and vegetables. Development of sustainable production systems for vegetable crops is important to reduce production costs and increase profitability of USVI farmers, and to reduce the dependency of imported agricultural commodities.

Results
Cultivars of edible pod peas and snap peas have been selected for production potential in the USVI. This is a new fresh crop that can used fresh or cooked to increase the vegetable consumption by both youth and adults.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources

205 Plant Management Systems

Outcome #9

1. Outcome Measures

Number of new varieties developed

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Purple sweetpotatoes contain beneficial bioflavonoids not found in the orange and white fleshed varieties. However, the tuberous root shape is irregular and set near the soil surface making it most susceptible to sweetpotato weevils.
Sorrel, Hibiscus sabdariffa, is photoperiodic and mainly produces the savory fleshy bioflavonoid rich calyx in December and January. New varieties are needed to develop day neutral varieties for year-round production.

What has been done
Reciprocal crosses have been made with a purple skin and flesh sweetpotato and six other commercial varieties with superior tuberous shape or weevil resistance.
A day neutral sorrel has been found and breeding work has involved large calyx varieties and deep crimson bioflavonoid-rich varieties. Three-way and four-way hybrids hve been developed.

Results
Seedlings, from reciprocal sweet potato crosses, resulted in a wide range of skin and flesh color. Of the 184 seedlings, 60 had been selected for further evaluation in replicated field trials to investigate harvest dates of 95 or 120 days. Weevil pressure at 120 days is very high and lines were found with resistance.
Selections from F3 and F4 generation of three-way and four-way crosses have produced larger calyxes. However, the lines continued to segregate for off characteristics.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources

205 Plant Management Systems

Outcome #10

1. Outcome Measures

Number of virus-free sweetpotatoes maintained in vitro

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	152

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Sweetpotato is asexually propagated and easily accumulates viruses in the field which reduced production and tuberous root quality. Virus-free sweetpotatoes are available from the USDA germplasm repository and Land Grant institutions with breeders. Virus-free sweetpotato varieties, maintained in vitro, are a clean source of planting material for farmers and backyard gardeners.

What has been done
Virus-free sweetpotato in vitro cultures have been obtained from the USDA germplasm repository and researchers at LSU. Once a year, propagules are removed from in vitro to establish clean material in the field plots used in varietal evaluation. Explants from seedlings of the breeding results were also established in vitro to maintain clean material and back-up.

Results
Sweetpotato grows well in vitro with standard nutrients and sugar but no plant growth regulators. Following subculture, in vitro plants can be removed within three weeks and establish in situ quickly. However, the rooted plants when transplanted from seedling trays develop irregular tuberous roots. By taking cutting from these virus-free plants in the seedling trays, they naturally root in the field and develop normal and productive tuberous roots.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

The external factors listed can seriously affect the outcomes of the program. Natural disasters such as drought, hurricanes, floods, etc. that negatively impact all aspects of life in the islands. Priorities of the government as determined by the economy, policy changes and regulations will determine priorities for funding.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Information regarding knowledge gained and change in behavior was collected informally and indicated that a significant number of persons increased their knowledge and their skills. Research results are statistically evaluated for significance and interactions.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Climate Change: Urban Forestry Program

☑ 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	20%		0%	
124	Urban Forestry	80%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	1.6	0.0	0.0	0.0
Actual Paid	1.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
60000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
50000	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

Partnerships were established and strengthened with public and private agencies, and community leaders and groups to provide education, information, and technical advice to the general population. This was achieved through the use of publications, seminars, mass media, field days and exhibits as well as personal contacts.

2. Brief description of the target audience

The targeted audience was public and private landowners and agencies, community leaders and organizations, youth groups, and civic organizations.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	720	3500	210	540

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

Patent Applications Submitted

Year: 2015

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes in tree identification Number of educational classes on the benefits of tree.

Year	Actual
2015	3

Output #2

Output Measure

- Number of workshops/demonstrations on tree care including pruning, planting, selection etc.

Year	Actual
2015	2

Output #3

Output Measure

- Number of one-on-one consultation with residents about tree care.

Year	Actual
2015	46

Output #4

Output Measure

- Number of articles/publications on tree care and urban forest management

Year	Actual
2015	0

Output #5

Output Measure

- Number of fairs and exhibits displaying best management practices and other information pertaining to the Urban Forestry

Year	Actual
2015	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase the number of homeowners, landowners, policy makers who become more aware of the potential economic, social, and environmental contributions of the urban and suburban forest by 10%
2	Increase the number of homeowners, residents and landowners, public and private agencies, and nonprofit organizations who increase their knowledge of the care and management of the urban forest by 10%
3	Increase the number of landowners, public agencies and residents who that plant trees in the urban and suburban forest by 10%

Outcome #1

1. Outcome Measures

Increase the number of homeowners, landowners, policy makers who become more aware of the potential economic, social, and environmental contributions of the urban and suburban forest by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1290

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As urban expansion continues to reduce forested areas, public education regarding the role of trees in the environment and particularly in urban communities is important. The VI economy continues to show signs of a very slow recovery; residents are still looking for opportunities to supplement their income. Trees and tree parts (trunks, stems and branches) that can be turned into saleable art pieces are being sent to the landfill to be destroyed. Educating young people is strategic to ensuring that the next generation can be involved in the management of trees in urban and large forest communities.

What has been done
Extension staff set up displays and provided one-on-one consultations with attendees at both the Agriculture and Food Fair of the Virgin Islands and the St. Thomas/St. John Agriculture and Food Fair.
The 9th annual Virgin Islands? Woodworkers? Expo was held at Yacht Haven Grande on St. Thomas, from Dec. 5 to 7, 2014 and from Dec, 19 through 21, 2014 at the Market Place on St. John. The Expo featured works by the finest woodworkers from St. Croix, St. Thomas and St. John. It offered the opportunity to view and purchase the exquisite quality work of some of the finest woodworkers in the Virgin Islands. Demonstrations were conducted by master woodworkers.
Composting workshops and demonstrations were conducted for agriculture professionals and other adults and youth. The emphasis was on the composting process and the benefits of using compost.

Results

Through personal contact and anecdotal information a majority of the attendees reported that they are now more aware of the economic and environmental benefits of trees.
Approximately two hundred (200) attendees at the agriculture fairs learned of the economic potential for products from tree and tree parts.
Woodworkers representing all three islands participated in the Woodworker Expo which drew approximately 700 persons to the events. The attendees became more aware of the economic potential of recycling forest products.
Attendees at the composting workshops increased their knowledge about composting and the benefits of using compost.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

Outcome #2

1. Outcome Measures

Increase the number of homeowners, residents and landowners, public and private agencies, and nonprofit organizations who increase their knowledge of the care and management of the urban forest by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	573

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Planting the right tree in the right place reduces the likelihood of trees coming in contact with utility lines and buildings. Correcting these problems can be costly, not only to the homeowner but could also spell the demise of trees. Homeowners, businesses, and organizations who plant trees for symbolic, therapeutic, environmental, and others reasons should care about appropriate tree care and management. Proper planting of trees ensures a good establishment of the tree and increases the likelihood of the root system adapting favorably to the soil environment in which it is growing.

What has been done

The annual Agriculture and Food Fair of the Virgin Islands provided CES the opportunity to impact a large clientele over a three-day period in a concentrated effort. Extension staff provided literature and conducted one-on-one consultation with attendees on the subject of planting the right trees in the right places.
Home visit and one-on-one contact with residents, and public and private landscape crews continued to be used to provide them with current tree management information. Radio appearances have also been used to provide general information to a broad audience. On-site visits provided additional opportunities for hands-on practical demonstration and providing information.
Tree pruning and tree risk assessment training was conducted for arboriculture and agriculture professionals.

Results
Twenty three persons - including staff of the University of the Virgin Islands, the VI Department of Agriculture, certified arborists and other arboriculture/forestry professionals attended training on tree pruning and tree risk assessment. Information was provided on guidance from new research on better pruning treatments for trees, in storm prone areas like the Virgin Islands.

Approximately three hundred fifty (350) individuals were directly impacted and thousands more indirectly by displays and interaction with Extension staff at the annual agriculture fairs.
Many other persons benefited from home visits and one-on-one consultations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
124	Urban Forestry

Outcome #3

1. Outcome Measures

Increase the number of landowners, public agencies and residents who that plant trees in the urban and suburban forest by 10%

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	105

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Elected and other public officials, arborists, forestry professionals, landscape architects, public planners and residents should all be concerned and care about planting trees in the urban and suburban forests. They should all recognize the importance of trees and other vegetation for improving communities through the social, economic and ecological benefits especially in this era of climate change.

What has been done
During informal meetings in offices, classrooms, and on sites, CES provided technical information about conserving and incorporating native and non-invasive exotic plants in public landscapes to government personnel, new business operators, engineers-architects-contractors, students-faculty, and the general public. In response to requests by Smith Bay Territorial Park management, CES made recommendations regarding wetlands protection and the planting of native trees in the park as part of the implementation of a master management plan.
CES staff participated in ongoing projects to plant native trees at Isaac Bay and Salt River Bay National Historic Park and Ecological Reserve.

Results
CES assisted the VI Economic Development Agency, neighborhood activists and environmental groups to develop and implement plans to beautify a St. Thomas (Savan) inner city area with trees and gardens, including conserving and incorporating native trees. CES information about native plant identification and maintenance was utilized by Rotary club members and business property managers located in urban areas. The Smith Bay Territorial Park management planted native tree species recommended by CES along access roads and drainage areas near coastal wetlands.
A total of two hundred native trees were planted as part of tree planting projects on St. Croix and 75 saplings of native trees were distributed to the public for planting.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

UVI-CES budget cuts and staff reductions continue to create challenges in program delivery. Elected officials have been working on tree laws for Virgin Islands for a very long

time and still have not revised the existing ordinances. Turnover is high in some VI Government agencies and among elected officials. It is difficult at times to establish effective long-term relationships that can result in policy changes or effective training. Political pressures can impede enforcement and the development of new regulatory policies. However, CES maintains some long-term partnerships with individuals in VI environmental regulatory agencies resulting in client referrals and shared resource management initiatives.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Clients responded favorably to the informal evaluation methods used by CES, especially in-person, one-on-one conversations. Attendees verbally indicated interest in, endorsement of, and benefits derived from presentations and other information shared.

Key Items of Evaluation

All key items of evaluation were used.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Marketable Skills for Limited Resource Families, Youth and Comunities

☑ 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
801	Individual and Family Resource Management	75%		0%	
802	Human Development and Family Well-Being	15%		0%	
806	Youth Development	10%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	1.9	0.0	0.0	0.0
Actual Paid	2.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
80000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40000	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

• Conducted workshops and demonstrations to promote the different Family and Consumer Sciences (FCS) program offerings. Set up volunteer recruitment booths at World Food Day, St. Thomas/St. John Agriculture and Food Fair, and the V.I. Agriculture and Food Fair (St. Croix).
• Provided orientation, training and professional development for volunteers, partners, 4-H/Family and Consumer Sciences/CYFAR staff, and CES personnel.
• Utilized multi-media outlets to promote FCS programs to attract potential clientele.
• Conducted workshops and short courses that help low-income, at-risk audiences build knowledge, skills and attitudes that will positively impact their quality of life.
• Collaborated with government departments, non-profit agencies, community-based programs, and special interest groups to recruit, train and support 4-H volunteer development.

2. Brief description of the target audience

• Current and newly recruited FCS participants,

• Low-income, at-risk, un- or underemployed adults residing in public/federally subsidized housing communities, and Children, Youth & Families at-Risk clientele.

• Clientele and staff being served through fellow UVI, CES and AES programs.

• Clientele referred from Department of Human Services, Department of Labor - Unemployment Office; V.I. Housing Authority- Tenant Services Office, and other agencies working with similar audiences.

• Parents of current 4-H club members and summer program participants.

• Youth and adults (general public) responding to multi-media 4-H volunteer campaign,

• Youth and adults indicating interest in FCS programs at World Food Day and fairs.

• Departments, agencies, clubs, and programs working with FCS.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	600	2000	80	725

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

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of short courses conducted

Year	Actual
2015	6

Output #2

Output Measure

- Number of workshops facilitated as part of "Women at the Crossroads" short course

Year	Actual
2015	25

Output #3

Output Measure

- Number of special interest workshops conducted

Year	Actual
2015	6

Output #4

Output Measure

- Number of youth, volunteers, staff and partners trained

Year	Actual
2015	140

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Through participation in Basic Clothing Construction Short Courses, participants will develop knowledge and awareness of sewing machine parts, basic tools and equipment, fabric line and design, measuring techniques, use of patterns, and glossary of terms.
2	Through participation in Basic Clothing Construction Short Courses, participants will learn how to baste, stitch, trim and finish seam allowances using a serger, put in hems and waist bands, apply zippers, insert elastic, insert darts, and make button holes. Acquisition of these skills will allow participants to construct at least one simple outfit resulting in personal savings
3	As a result of completing the Basic Clothing Construction Short Course, 75% of participants will enroll in the Intermediate/Advanced level of this course. In addition to using basic skills developed in the basic course, participants will learn how to apply pockets and collars, put in linings, use more detailed patterns, and incorporate more difficult fabrics. Their skills and interest level will allow them to realize a savings and to use their skills to enhance their personal income by sewing for others
4	Through participation in the Basic Batik Short Courses, participants will become aware of the various types of batiik designs. Participants will learn how to design and develop batik designs for their fabric; hot to work with various methods of creating these designs and learn the steos in creating a batik fabric.
5	As a result of their training and interest in this area, participants will provide outreach to and train church, school and youth group members about how to create batik designs.
6	Through participation in Batik Short Courses, participants will learn how to make batik projects that can be used to beautify the home and serve as gifts. Additional personal income will be generated through either word-of-mouth sales or by establishing their own small home-based business.
7	Through 'Women at the Crossroads', participants will develop knowledge of workforce preparation,personal development, personal finances, women's health and wellness issues, leadership and volunteerism
8	Through 'Women at the Crossroads' participants will prepare a letter of application, build a personal resume, conduct a mock interview, complete a job application template and assemble a personal portfolio in preparation for an actual entry level employment interview.
9	Through 'Women at the Crossroads', participants will explore the impact that poise, personality,personal appearance, positive attitude and self-confidence have on enhancing family and workforce dynamics. As a result of their experiences, participants will select and model appropriate dress, and prepare and present a personal goals statement:
10	Through 'Women at the Crossroads', participants will develop a personal budget, establish a checking account, develop a living will and explore the benefits of investing
11	Through 'Women at the Crossroads', participants will learn about health issues impacting women,complete personal health screenings, identify nutritious foods and practice healthy eating habits
12	Through 'Women at the Crossroads', participants will build leadership skills needed to become effective volunteer leaders
13	As a result of graduating and being certified through the 'Women at the Crossroads' series,participants will successfully enter the workforce and/or improve their quality of living

Outcome #1

1. Outcome Measures

Through participation in Basic Clothing Construction Short Courses, participants will develop knowledge and awareness of sewing machine parts, basic tools and equipment, fabric line and design, measuring techniques, use of patterns, and glossary of terms.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The improvement in sewing and craft skills increases the likelihood of generating additional income and increasing buying power in a fragile economy.

What has been done
Workshops, short courses and educational sessions were offered throughout the year.

Results
More advanced classes requested by participants.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Through participation in Basic Clothing Construction Short Courses, participants will learn how to baste, stitch, trim and finish seam allowances using a serger, put in hems and waist bands, apply zippers, insert elastic, insert darts, and make button holes. Acquisition of these skills will allow participants to construct at least one simple outfit resulting in personal savings

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	62

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The participants benefit their community through development of more diverse skills and the potential to enhance the local economy by making and selling clothing and decorative products.

What has been done
Workshops, educational sessions, summer camp and individual instruction were provided.

Results
Participants completed basic course and requested more advanced courses.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

As a result of completing the Basic Clothing Construction Short Course, 75% of participants will enroll in the Intermediate/Advanced level of this course. In addition to using basic skills developed in the basic course, participants will learn how to apply pockets and collars, put in linings, use more detailed patterns, and incorporate more difficult fabrics. Their skills and interest level will allow them to realize a savings and to use their skills to enhance their personal income by sewing for others

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	63

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Batik classes continue to be in demand on St. Thomas where participants use their skills and entertain marketing and selling products.

What has been done
Participants continue in advanced classes when available.

Results
Requirements for completion of the short courses were satisfied.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

Through participation in the Basic Batik Short Courses, participants will become aware of the various types of batiik designs. Participants will learn how to design and develop batik designs for their fabric; hot to work with various methods of creating these designs and learn the steos in creating a batik fabric.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	35

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Participants enhance their skills in making attractive items for their homes and others which increase their ability to garner additional income.

What has been done
Six weeks classes were conducted.

Results
Participants completed all requirements in project development to acquire new skills.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #5

1. Outcome Measures

As a result of their training and interest in this area, participants will provide outreach to and train church, school and youth group members about how to create batik designs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	125

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
All members of the community benefit from conservation of resources.

What has been done
Participants were encouraged to share the message of recycling with family, neighbors, church members and others in the community, especially the youth.

Results
All participants learned the value of recycling.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
806	Youth Development

Outcome #6

1. Outcome Measures

Through participation in Batik Short Courses, participants will learn how to make batik projects that can be used to beautify the home and serve as gifts. Additional personal income will be generated through either word-of-mouth sales or by establishing their own small home-based business.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The entire community benefits from better trained and variously skilled residents.

What has been done
Educational sessions were provided to enhance the earning potential of low income residents.

Results
Low income residents acquired skills to enhance their earning potential.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #7

1. Outcome Measures

Through 'Women at the Crossroads', participants will develop knowledge of workforce preparation,personal development, personal finances, women's health and wellness issues, leadership and volunteerism

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The better educated the workplace, the more benefit to the general community.

What has been done
Workshops and individual instruction were provided.

Results
Participants developed the confidence to seek employment and prepare for all aspects of the process.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #8

1. Outcome Measures

Through 'Women at the Crossroads' participants will prepare a letter of application, build a personal resume, conduct a mock interview, complete a job application template and assemble a personal portfolio in preparation for an actual entry level employment interview.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The general community benefits from enhanced skills which lead to employment.

What has been done
Educational sessions were held to prepare participants for gainful employment.

Results
Participants completed requirements to prepare them for gainful employment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #9

1. Outcome Measures

Through 'Women at the Crossroads', participants will explore the impact that poise, personality,personal appearance, positive attitude and self-confidence have on enhancing family and workforce dynamics. As a result of their experiences, participants will select and model appropriate dress, and prepare and present a personal goals statement:

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The more prepared residents become, the more productivity experienced by the general community.

What has been done
Workshops and educational sessions were provided to prepare participants for employment.

Results
All requirements for completion of sessions were done successfully.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #10

1. Outcome Measures

Through 'Women at the Crossroads', participants will develop a personal budget, establish a checking account, develop a living will and explore the benefits of investing

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Family survival is predicated on sound financial operations so the more prepared residents are the better to handle the downturn in the local economy.

What has been done
Workshops on investing, budgeting and establishment of checking accounts were held.

Results
Participants developed a living will, prepared budgets and started investing small amounts in stocks.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #11

1. Outcome Measures

Through 'Women at the Crossroads', participants will learn about health issues impacting women,complete personal health screenings, identify nutritious foods and practice healthy eating

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
High incidences of diabetes, high blood pressure, heart disease and related illnesses continue to plague the community therefore it is imperative to disseminate and encourage healthy eating practices.

What has been done
Workshops, educational sessions/presentations targeting low income residents and their families were offered along with emphasis on the need to exercise.

Results
Improved food preparation and safety practices were reported by participants with more emphasis being placed on utilization of healthier dietary practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #12

1. Outcome Measures

Through 'Women at the Crossroads', participants will build leadership skills needed to become effective volunteer leaders

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	16

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The importance of developing good leadership is critical for the entire community so that all residents have an opportunity to realize their fullest potential.

What has been done
Workshops emphasizing relationship of volunteerism and leadership were held.

Results
Participants participated in a number of community initiatives as volunteers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
806	Youth Development

Outcome #13

1. Outcome Measures

As a result of graduating and being certified through the 'Women at the Crossroads' series,participants will successfully enter the workforce and/or improve their quality of living

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The general community is concerned with full employment and its benefits.

What has been done
Educational sessions were conducted to improve opportunities for gainful employment.

Results
Participants explored various employment opportunities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Natural Disasters (drought, weather extremes, etc.)
- Economy

Brief Explanation

The continuing stagnation of the economy has adversely affected growth in the territory. The impact of the closing of the oil refinery is reverberating several years after that occurrence which hurt St. Croix more than the sister islands.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Pre/post results have been favorable.

Key Items of Evaluation

Anecdotal information has been favorable as well as follow-up interview sessions.

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Food Safety Education-EFNEP and EFNEP Youth

☑ 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
703	Nutrition Education and Behavior	65%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	25%		0%	
724	Healthy Lifestyle	10%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	3.8	0.0	0.0	0.0
Actual Paid	3.5	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
70000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40100	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
100000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Identified new locations to conduct classes- Bouchette Middle School; Sweat Program-Crown Bay;TANF; Strive Center; SCEP

• Recruited and trained staff and volunteers to deliver food safety information to EFNEP participants (adults and youth). On-going training and information given to staff on food safety

• Developed and/or obtained culturally sensitive food safety curriculum appropriate for EFNEP participants (adults and youth). This is done through handouts

• Developed and maintained relationships with partners including government agencies, clinics, places of worship, public and private schools, senior citizen centers, and day care centers. Working with Dept. of Ed. Department of Health; Department of Human Services

2. Brief description of the target audience

The program targets all U.S. Virgin Islanders but especially low income individuals who are responsible for preparing the family's meal, school age children, and pregnant teens and adults.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	132	500	1011	500

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total

Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of 6-8 week class series conducted for EFNEP participants (adults and youth)

Year	Actual
2015	63

Output #2

Output Measure

- Number of volunteers recruited and trained to deliver food safety program

Year	Actual
2015	1

Output #3

Output Measure

- Number of fair-type settings in which food safety information will be presented

Year	Actual
2015	2

Output #4

Output Measure

- Number of web sites developed and maintained

Year	Actual
2015	0

Output #5

Output Measure

- Number of partnerships with agencies and organizations that will assist in improving the food safety practices of U.S. Virgin Islanders

Year	Actual
2015	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of adults learning basic food safety information
2	Percentage of adults adopting and maintaining at least one food safety practice
3	Number of school age children learning basic food safety information
4	Percentage of children adopting and maintaining at least one food safety practice
5	Increase awareness among the EFNEP participants about food safety issues related to personal hygiene, food storage, food preparation, and food handling
6	Increase awareness among the EFNEP participants about food safety issues related to eating away from home (e.g., restaurants, mobile food vans, food booths) and purchasing food from street vendors (e.g., fish)

Outcome #1

1. Outcome Measures

Number of adults learning basic food safety information

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators and health educators because of the warm climate and the number of street vendors, etc.

What has been done
Classes, workshops, demonstrations, handouts.

Results
Clients have demonstrated their knowledge and awareness of food safety practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Percentage of adults adopting and maintaining at least one food safety practice

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, health educators

What has been done
Classes, workshops, demonstrations, handouts on food safety

Results
132 clients demonstrated their knowledge of food safety

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

Number of school age children learning basic food safety information

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, health educators, department of education

What has been done
6-8 week classes in the schools

Results
Children demonstrated knowledge through written test and verbal demonstration

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #4

1. Outcome Measures

Percentage of children adopting and maintaining at least one food safety practice

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, health educators

What has been done
6-8 week classes

Results
Youth demonstrate their knowledge of food safety

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #5

1. Outcome Measures

Increase awareness among the EFNEP participants about food safety issues related to personal hygiene, food storage, food preparation, and food handling

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators; health educators

What has been done
6-8 week classes; pre-post tests

Results
increase in knowledge

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #6

1. Outcome Measures

Increase awareness among the EFNEP participants about food safety issues related to eating away from home (e.g., restaurants, mobile food vans, food booths) and purchasing food from street vendors (e.g., fish)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
nutrition educators; health educators

What has been done
classes for the youth

Results
Pre-post tests show an increase in knowledge; youth demonstrate verbal knowledge

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Other (Cultural Environment)

Brief Explanation

The islands have street vendors serving food and due to the hot climate food is subjected to temperatures that can cause food borne illnesses.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Pre- post tests demonstrate a gain in knowledge

Key Items of Evaluation

Questions as related to food safety on evaluation instrument; verbal demonstration of knowledge.

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

A Healthy, Well-Nourished Population

☑ 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
701	Nutrient Composition of Food	20%		0%	
703	Nutrition Education and Behavior	60%		0%	
724	Healthy Lifestyle	20%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	3.7	0.0	0.0	0.0
Actual Paid	1.5	0.0	0.0	0.0
Actual Volunteer	1.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
89586	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40000	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

Developed culturally sensitive nutrition and health education products and resources to be made available to professionals, students, and the public. The following are examples of the products and resources to be developed and made available for distribution:

a beverage poster, brochure and/or flyer that lists the sugar and calorie content of commonly consumed beverages in the territory;

vegetable nutrient composition poster, brochure and/or flyer that highlights the nutritional value of local vegetables--it will include the vitamin, mineral, and fiber content of local vegetables;

a poster, brochure, and/or flyer detailing the sodium, fat, cholesterol, carbohydrate, and fiber content of commonly consumed local foods;

a diabetes exchange list booklet that include local foods and beverages; and

a culturally sensitive cookbook using local and familiar produce.

- Conducted disease specific workshops, short courses, seminars, and other educational activities focusing on nutrition education and behaviour change modification.

- Recruited and trained staff and volunteers to deliver nutrition, diet, and health relevant information to the community.

- Developed and/or obtained culturally sensitive nutrition/health curriculum appropriate for school age children at all grade levels.

- Developed and maintained relationships with partners including government agencies, clinics, places of worship, public and private schools, senior citizen centers, and day care centers.

2. Brief description of the target audience

This program is directed at all U.S. Virgin Island residents. However, special attention is given to high risk groups such as residents diagnosed with diseases such as diabetes, hypercholesterolemia, hypertension, and obesity; senior citizens; and school age children.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	132	500	1011	500

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

Patent Applications Submitted

Year: 2015

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- a. Number of 6-8 week class series conducted for EFNEP participants (youth & adults)

Year	Actual
2015	63

Output #2

Output Measure

- b. Number of volunteers recruited and trained to deliver nutrition education program.

Year	Actual
2015	1

Output #3

Output Measure

- c. Number of fair-type settings in which nutrition/health information will be presented.

Year	Actual

2015	2

Output #4

Output Measure

- d. Number of web sites developed and maintained.

Year	Actual
2015	0

Output #5

Output Measure

- e. Number of nutrition and health education materials developed and made available to professionals, students, and the public.

Year	Actual
2015	0

Output #6

Output Measure

- f. Number of partnerships with agencies and organizations that will assist in improving the health practices of U.S. Virgin Islanders.

Year	Actual
2015	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of individuals who have indicated benefits from developed educational materials.
2	Percentage of adults adopting and maintaining at least one healthy lifestyle practice. Percentage of adults helping youth to practice healthy lifestyles in order to prevent childhood obesity
3	Number of school age children learning basic nutrition information and physical fitness
4	Percentage of children adopting and maintaining at least one healthy eating habit and exercise activity
5	Increase awareness among the general public of the relationship between food intake, physical fitness, stress management and disease prevention.
6	Number of individuals who report improvement in health status (e.g., lower blood sugar, and/or cholesterol level). & increase awareness of participants about prevention of childhood obesity.

Outcome #1

1. Outcome Measures

Number of individuals who have indicated benefits from developed educational materials.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1143

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, Department of Health, Department of Education, Human Services

What has been done
Classes, workshops, give handouts

Results
Positive results as shown by evaluation instruments

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #2

1. Outcome Measures

Percentage of adults adopting and maintaining at least one healthy lifestyle practice. Percentage of adults helping youth to practice healthy lifestyles in order to prevent childhood obesity

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1143

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, Department of Health, Department of Human Services, Department of Education

What has been done
Classes, workshops, handouts

Results
Positive feedback from clients as related to improving healthy eating and living

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

Number of school age children learning basic nutrition information and physical fitness

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual

2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition Educators, Human Services, Department of Education, Department of Health

What has been done
Classes

Results
Positive feedback from pre-post testing

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

Percentage of children adopting and maintaining at least one healthy eating habit and exercise activity

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1011

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, Department of Health, Department of Education, Department of Human Services

What has been done

Classes

Results
Improvement of eating styles by youth as reflected in pre-post evaluation instruments; verbal discussion in class.

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

Increase awareness among the general public of the relationship between food intake, physical fitness, stress management and disease prevention.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, Department of Health, Department of Human Services

What has been done
Workshops, fairs, handouts, classes

Results
Positive feedback from the public

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

Number of individuals who report improvement in health status (e.g., lower blood sugar, and/or cholesterol level). & increase awareness of participants about prevention of childhood obesity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition educators, Department of Health, Department of Human Services

What has been done
Classes, workshops, demonstrations

Results
Positive feedback from the public

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Other (Cultural Environment)

Brief Explanation

V.I. lies in a hurricane prone zone. How to continue to eat healthy during a natural disaster.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Positive results from clients as reflected in the pre-post test instrument and verbal conversation with clients.

Key Items of Evaluation

Do you know how to eat healthy during a natural disaster on a limited budget?

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

4-H Youth and Volunteer Development

☑ 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
802	Human Development and Family Well-Being	15%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%		0%	
806	Youth Development	80%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid	2.0	0.0	0.0	0.0
Actual Volunteer	6.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
100000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
60000	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
52000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Recruited 26 adult volunteers and 28 teens; conducted one (1) in-service training for 4-H/F&CS staff and partners (VING); conducted one volunteer leader training for 15 4-H volunteers and 9 military 4-H leaders

• Conducted two workshops: 1) teen leadership for 16 youth; 2) demonstration for 12 military youth
• Organized eight (8) programs, events and activities to include: 4-H National Youth Science Day; Hunger Banquet; 4-H Youth Super Chef Competition; 4-H Youth Garden Workshop; 4-H Christmas Ornament Festival; V.I. Agriculture and Food Fair; 4-H for the Health of It Fair, and Fridays with 4-H

• Conducted 14 presentations, facilitated 5 displays, authored two articles and appeared in six radio shows
• Support volunteers, counselors and clubs - see above
• Wrote, and received funding in the amount of $65,500 for 4-H Military Partnership and 4-H Healthy Living initiatives.
• Participated in annual 4-H Military Partnership meeting

2. Brief description of the target audience

School-aged youth residing in the Virgin Islands

• 4-H members,volunteer leaders and their parents

• Public and non-public high school students needing community service hours to fulfill graduation requirements,

• Clientele and staff being served through fellow UVI, CES and AES programs

• High school and college students seeking summer employment

• Educators interested in summer employment

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	400	1200	1500	1500

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

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of volunteers serving

Year	Actual
2015	54

Output #2

Output Measure

- Number of volunteers trained

Year	Actual
2015	24

Output #3

Output Measure

- Number of clubs operating

Year	Actual
2015	8

Output #4

Output Measure

- Number of youth enrolled

Year	Actual
2015	466

Output #5

Output Measure

- Number of positive youth development events organized

Year	Actual
2015	8

Output #6

Output Measure

- Number of counsellors hired

Year	Actual
2015	0

Output #7

Output Measure

- Number of campers enrolled

Year	Actual
2015	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of volunteers serving
2	Number of volunteers trained
3	Number of clubs operating
4	Number of youth enrolled as reported on ES-237
5	Number of positive youth development events organized
6	Number of counsellors hired for summer camp
7	Number of campers enrolled in summer camp

Outcome #1

1. Outcome Measures

Number of volunteers serving

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	54

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Caring, competent, compassionate volunteers form the backbone of any successful 4-H program.

What has been done
In spite of several challenges, we have been able to maintain a team of adult volunteers augmented by a dedicated groups of teen leaders.

Results
A total of 26 adults and 28 teens provide critical support and leadership for ten 4-H clubs and eight annual 4-H programs, events, and activities.

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

Number of volunteers trained

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	44

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Empowering a team of caring, competent, compassionate adult and teen leaders are necessary to have high-functioning 4-H clubs.

What has been done
4-H 101 and 4-H 102 have been used to conduct training. The fundamentals of establishing a 4-H club with special emphasis on how to incorporate the essential elements of positive youth develop, and how to employ the experiential learning model have been covered to support exemplary club programming.

Results
A total of 24 adults and 20 teen leaders were trained and now lead and/or support 4-H clubs throughout the territory.

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

Number of clubs operating

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	10

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The community-based club along with the school-affiliated club are the most common 4-H models in the territory. Together they provide members with a safe, nurturing environment in which they can learn, grow and explore interests in partnership with caring, competent, adult leaders.

What has been done
Twenty-six adult volunteers and 28 teens support ten 4-H clubs and eight positive youth development programs, events and activities.

Results
4-H enrollment has increased 7%; $10,500 supports two Military 4-H clubs - one on each island.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #4

1. Outcome Measures

Number of youth enrolled as reported on ES-237

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	466

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The Virgin Islands has over 19,000 school-aged youth representing a sizeable target audience for 4-H.

What has been done
Although there is seemingly a large pool of youth available, there are many competing activities. The in-school or school-affiliated club model has proven to be successful and should be tapped further.

Results
A total of 466 (an increase of 7%) youth are enrolled in ten 4-H clubs throughout the territory.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #5

1. Outcome Measures

Number of positive youth development events organized

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The 4-H Calendar of Events replete with exemplary positive youth development programs, events and activities, is a proven method to identify and connect potential new volunteers and members.

What has been done
The 4-H office organizes programs, events and activities designed to engage both currents 4-H members and potential new youth and leaders.

Results
Eight (8) programs, events and activities have resulted in over 1,000 direct youth contacts of which 46% are 4-H members.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #6

1. Outcome Measures

Number of counsellors hired for summer camp

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Number of campers enrolled in summer camp

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

Brief Explanation

The current economic climate continues to adversely impact the territory. This has been manifested in budget cuts across the university, with vacant positions remaining unfilled. Volunteers are also feeling the impact resulting in increasing difficulty attracting new leaders, and in some cases, retaining current leaders.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No formal evaluation of this program is planned.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Climate Change: Water Quality Program

☑ 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	10%		0%	
104	Protect Soil from Harmful Effects of Natural Elements	10%		0%	
111	Conservation and Efficient Use of Water	10%		0%	
112	Watershed Protection and Management	10%		0%	
133	Pollution Prevention and Mitigation	60%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	1.9	0.0	0.0	0.0
Actual Paid	1.9	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
125000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
50010	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

Trained local government agency personnel, maintenance professionals, community group and non-governmental organization representatives, and volunteers to deliver information on water quality protection to their respective audiences and the general public utilizing the V.I. Home & Farm Water Quality Assessment (VI*A*Syst) program.

Developed and disseminate locally-oriented outreach materials related to water conservation, drinking water protection, wastewater disposal and best management practices for pollution prevention for delivery through the VI*A*Syst program, with particular emphasis on materials targeted towards youth and under-served audiences.

Educated homeowners and renters about residential environmental management including use of least-toxic household products and non-point source pollution control to protect aquatic ecosystems utilizing VI*A*Syst materials.

Developed publications, workshops, and presentations that relay information on the issues of watershed protection, non-point source pollution control, drinking water protection, and wastewater disposal and best management practices to reduce impacts to the general public.

Utilized the media to promote Water Quality programs through various methods, including, but not limited to, radio and television PSAs, television video spots, local talk shows (radio & TV), and videotapes of workshops, presentations, and symposia.

Identified and/or develop technical materials related to water conservation, drinking water protection, watershed planning, and non-point source pollution control practices and systems for use by policymakers and regulatory personnel, and disseminate information related to these topics.

Provided technical assistance on a variety of topics, including but not limited to, erosion, sediment, and stormwater control; xeriscaping - incorporating native, drought-tolerant plants into the landscape; watershed planning; water quality assessment; drinking water protection; and environmental assessment, to government agencies, community groups, various areas of the private sector, and the general public.

2. Brief description of the target audience

Policy-makers and regulatory personnel, community groups, teachers and students, business community, non-governmental organizations, and the general public.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	560	1310	180	500

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

Patent Applications Submitted

Year:	2015
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Education/Classes/Training in water quality protection and VI * A * Syst Program

Year	Actual
2015	9

Output #2

Output Measure

- Workshops / Presentations about water quality protection, less toxic household products and NPS BMP's through the VI * A * Syst Program, on-site wastewater treatment, cistern care, and watershed protection.

Year	Actual
2015	25

Output #3

Output Measure

- One-on-one consultations with residents, government employees, students

Year	Actual
2015	120

Output #4

Output Measure

- Tours of VI natural areas with students, community groups and others to raise awareness about watersheds and water quality protection.

Year	Actual
2015	25

Output #5

Output Measure

- Educational/research publications, articles, posters, newsletters, GIS maps related to non-point source pollution, on-site wastewater treatment, watersheds, VI * A * Syst, and protection of VI native plant communities.

Year	Actual
2015	32

Output #6

Output Measure

- Fairs

Year	Actual
2015	2

Output #7

Output Measure

- TV/Media

Year	Actual
2015	3

Output #8

Output Measure

- PSA's

Year	Actual
2015	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Awareness of the health risks associated with water quality impairment and water and wastewater treatment systems will increase, and one hundred fifty (150)homeowners will learn how various household substances (i.e. Fat/Oil/Grease & Pharmaceuticals and Personal Care Products, etc.) can potentially negatively affect onsite wastewater treatment systems (OWTS), water resources, marine life and human health.
2	Thirty five (35) VI OWTS designers, wastewater practitioners and regulatory personnel will learn about OWTS designs and management practices recommended in CES training classes.
3	Requests for site visits and VI*A*SYST assessments and presentations will increase. 75 clients or more will each adopt at least one VI*A*SYST recommended practice such as the use of non-toxic household products, etc.
4	Fifty (50) homeowners will improve cistern water quality by following CES recommendations.
5	Over 250 VI youth will become aware of the vital connections between human activities and water quality, how land-based activities affect coastal water quality, and why watershed protection is important to them and their well-being. Youth and volunteer involvement in water quality protection and resource conservation will increase.

Outcome #1

1. Outcome Measures

Awareness of the health risks associated with water quality impairment and water and wastewater treatment systems will increase, and one hundred fifty (150)homeowners will learn how various household substances (i.e. Fat/Oil/Grease & Pharmaceuticals and Personal Care Products, etc.) can potentially negatively affect onsite wastewater treatment systems (OWTS), water resources, marine life and human health.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	115

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
All persons who can be impacted by nutrification and contamination of surface, groundwater and coastal waters from leaking septic systems. This is considered to be a major problem in the VI. due to Nonpoint Source Pollution from defective septic systems which can impact human health and marine resources.

What has been done
On several occasions, CES provided a St. John watershed association (Coral Bay Community Watershed Association) with technical advice and educational information about alternative on-site wastewater treatment systems (AOWTS). CES staff served as consultants to a UVI chemistry professor and students who are conducting research in a St. Thomas watershed to determine whether pathogenic levels of bacteria from leaking septic systems are present in gut pools and likely draining into coastal waters.

Results
Coral Bay Community Watershed Association (CBCWA) provided residents with information provided by CES. This information was also incorporated into a 319 NPS grant-funded workshop sponsored by (CBCWA) held at the VI Dept. of Planning and Natural Resources that focused on on-site wastewater treatment and potable water desalinization technologies. UVI students incorporated CES information about a St. Thomas watershed into their research plans to determine whether pathogenic bacteria from watercourses impact coastal waters. Students adopted CES?s recommendation that one of the ultimate objectives of this project is to raise awareness about possible risks to coastal water quality caused by substandard wastewater treatment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #2

1. Outcome Measures

Thirty five (35) VI OWTS designers, wastewater practitioners and regulatory personnel will learn about OWTS designs and management practices recommended in CES training classes.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Requests for site visits and VI*A*SYST assessments and presentations will increase. 75 clients or more will each adopt at least one VI*A*SYST recommended practice such as the use of non-toxic household products, etc.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	67

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Custodial professionals, business owners, school students, the general public and the natural environment can be exposed to negative effects caused by the use of toxic household products. Many residents on rely on maintaining healthy cistern catchments for their water supplies.

What has been done
CES promoted the use of non(or less)-toxic household products through VI*A*SYST program presentations to individuals, schools, churches, scouts, businesses, housekeeping staff, government agencies, environmental groups, etc. CES constantly updates this information through various sources (webinars, etc.) CES also distributes publications (Help Yourself to a Healthy Caribbean Home [new], Recipes for a Non-toxic Household) and also promotes cistern

care during presentations and consultations.

Results
Based on responses from the general public, VI*A*SYST program presentations continue to be very popular with all segments of the VI community resulting in many requests for additional presentations and updates about new products. After attending these presentations or viewing CES TV interviews about VI*A*SYST, many individuals indicated that they would stop using toxic household products. Several attendees have referred others to CES for VI*A*SYST information. CES clients indicate that they are following CES?s instructions about the importance of reading product labels, as well as purchasing more non-toxic products. Clients also notify CES when these products have run out of stock in various local stores.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #4

1. Outcome Measures

Fifty (50) homeowners will improve cistern water quality by following CES recommendations.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	105

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Custodial professionals, business owners, school students, the general public and the natural environment can be exposed to negative effects caused by the use of toxic household products. Many residents on rely on maintaining healthy cistern catchments for their water supplies.

What has been done
CES promoted cistern care through the VI*A*SYST program and Water Ambassadors Project presentations to individuals, schools, churches, etc. CES constantly updates this information through various sources (webinars, etc.) CES also distributes publications (i.e. Help Yourself to a

Healthy Caribbean Home, Recipes for a Non-toxic Household) and also promotes cistern care during presentations and consultations, as well as CES?s VI Cistern Health factsheet (also available on line).

Results
Based on responses, VI*A*SYST program presentations and recommendations continue to be popular with the VI community resulting in many requests for additional presentations and updates. CES?s VI Cistern Health factsheet, available on line, continues to provide standard information to VI residents about basic cistern WQ management, and this information has been promoted by associations like the Coral Bay Watershed Assoc. (CBWA). CES also provided this watershed association with additional technical information about cistern management that contributed to a workshop sponsored by CBWA and the VI Dept. of Planning and Natural Resources. After attending these presentations or viewing CES TV interviews about VI*A*SYST, individuals have referred others to CES for VI*A*SYST information about cistern care. CES continues to investigate the safest methods for maintaining cistern catchments to preserve healthy WQ, and clients are interested in learning about CES findings.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation

Outcome #5

1. Outcome Measures

Over 250 VI youth will become aware of the vital connections between human activities and water quality, how land-based activities affect coastal water quality, and why watershed protection is important to them and their well-being. Youth and volunteer involvement in water quality protection and resource conservation will increase.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
VI youth and their instructors need basic scientific information about the unique connections between land and sea and how human activities affect water quality. With the rapid urbanization in the VI, the youthful population will be the most affected by land-use impacts degrading water

quality.

What has been done
CES provided graduate students in marine and environmental management programs with technical assistance and information relating to research projects, and CES conducted watershed tours for students. CES worked closely with VIMAS to raise student-awareness of land-sea inter-relations. Publications co-authored by CES continued to be used for instruction by educators and librarians. CES made presentations to students and designed educational displays that focused on land-sea connections.

Results
Outreach strategies developed in partnership by VIMAS (VI Marine Advisory Service) and CES stimulated interest and increased awareness in VI youth (K-12), VI EPScoR interests (STEM development) were also represented in these outreach efforts. UVI?s MMES (Marine and Environmental Management Program) and Yale?s Coastal and Watershed Management Program graduate students continue to utilize information provided by CES in watershed research projects on St. Thomas, focusing on water quality monitoring in impacted St. Thomas guts and watershed analysis pertaining to the effects of watershed activities on near shore resources, mainly coral reefs. Librarians in various VI schools continue to introduce CES publications focusing on critical marine and terrestrial interconnections to students and teachers. VI teachers (grades3-6) requested CES for ?land-sea? information, especially after viewing CES exhibits. CES and its partners conducted over 50 field tours related to the coastal and terrestrial environment and the connection between land-based and marine resources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
104	Protect Soil from Harmful Effects of Natural Elements
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Turnover is high in some VI Government agencies, mainly due to political elections and recent fiscal constraints at the local governmental level. It is difficult to establish very effective long-term relationships that can result in policy changes or effective training. Employees in these agencies acknowledge the need for more comprehensive enforcement

of environmental laws, but they are overextended and need additional staff support to effectively enforce existing regulations. They also acknowledge the need to produce new regulations regarding the onsite wastewater system installation and protection of various native forest communities in watersheds. Political pressures can impede enforcement and the development of new regulatory policies. However, CES maintains some long-term partnerships with individuals in VI environmental regulatory agencies resulting in client referrals and shared resource management initiatives. CES continues its productive association with the local EPA office.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Positive verbal evaluations were received following all VI*A*SYST presentations. Numerous requests for follow-up presentations indicated the program's popularity .CES communicated closely with VI governmental partners, NGOs, environmental groups and the business community. These clients responded favorably to the informal, mostly verbal, evaluation methods used by CES during all stages of program implementation. Post workshop evaluations were distributed, and evaluations were favorable. Research project reports and publications were formally reviewed.

Key Items of Evaluation

All key items of evaluation were used.

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Climate Change: Natural Resources and Environmental Management

☑ 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
112	Watershed Protection and Management	35%		0%	
123	Management and Sustainability of Forest Resources	35%		0%	
134	Outdoor Recreation	15%		0%	
136	Conservation of Biological Diversity	15%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	2.8	0.0	0.0	0.0
Actual Paid	2.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
125000	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
50000	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

• Continued participation with the development and implementation of environmental management, habit protection and restoration plans for territorial parks and recreation areas.

• Continued participation with the development and implementation of environmental management master plans for Magens Bay, Estate Adventure Trail, and Great Pond Park recreation areas and a Magens Bay watershed advisory committee. Habitat protection and restoration plans/procedures will also be used to restore and/or protect other critical habitats, areas of particular concern in the territory, and areas designated as part of the VI Territorial Park initiative established by the Legislature of the VI in 2004.

• Developed resource conservation education outreach materials to engage the islands' growing immigrant populations and disseminate materials and information utilizing an innovative approach that incorporates and builds upon indigenous knowledge and practices.

• Developed websites, educational materials, workshops, presentations and demonstrations (informal learning sites) that relay information regarding native plants, ecosystems and habitats; naturalized, exotic, endangered and threatened plant species; urban forestry and other resource conservation issues.

• Utilized the media to promote Natural Resources programs through various methods, including, but not limited to, radio and television PSAs, television video spots, E-education, local talk shows (radio & TV), and presentations.

• Identified and/or develop technical materials related to resource conservation; pollution control practices; and native, medicinal, naturalized, exotic, endangered and threatened plant species for use by researchers, policy-makers and regulatory personnel.

• Provided technical assistance on a variety of topics, including but not limited to, plant identification, selection and maintenance; native, naturalized, exotic, endangered and threatened plant species; natural products development, environmental assessment; ecotourism development and other resource conservation issues to government agencies, community groups, various areas of the private sector, students and the general public.

• Played a lead role in facilitating the interaction of community groups and leaders to address natural resource conservation and management issues, as well as pollution control and prevention.

• Conducted ecotours for local schools and groups (mostly on St. Croix) to stimulate interest in careers in science, ecotourism or environmental management and to provide students and others with a general introduction to VI natural and cultural resources.

2. Brief description of the target audience

• Policy-makers and regulatory personnel, community groups, teachers and students, business community, non-governmental organizations, and the general public.

• Those charged with managing public recreation areas including the Magens Bay Authority, VI Territorial Park Advisory Committee, St. Croix East End Marine Park Committee, and Great Pond Park.

• Local environmental associations and Rotary Clubs that engage in activities to conserve and manage the VI environment.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	350	750	250	700

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

Patent Applications Submitted

Year: 2015

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Education/Classes in natural resources management, VI forest ecosystems

Year	Actual
2015	16

Output #2

Output Measure

- Workshops -VI forests, medical plants, environmental landscaping, watershed awareness, VI cultural and natural history, ecotourism, in-door air quality

Year	Actual
2015	5

Output #3

Output Measure

- One on One consultation with residents, government employees, students

Year	Actual
2015	652

Output #4

Output Measure

- Tours of VI natural areas for students and community groups

Year	Actual
2015	12

Output #5

Output Measure

- E-education - NREM websites updated

Year	Actual
2015	2

Output #6

Output Measure

- Publications, articles, posters related to natural resources and environmental management

Year	Actual
2015	5

Output #7

Output Measure

- Demonstration site relating to native plants, environmental management

Year	Actual
2015	3

Output #8

Output Measure

- Fairs

Year	Actual
2015	2

Output #9

Output Measure

- TV/Media

Year	Actual
2015	15

Output #10

Output Measure

- PSA's

Year	Actual
2015	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	The recommended BMP's in environmental management master plans will be adopted by one natural resource manager annually. Successful plans will be used as prototypes for other critical habitats, parks and areas designated as part of the VI Territorial Park.
2	After attending non-formal education programs, 150 persons will adopt recommended landscaping practices, incorporate native plants into their landscapes, protect and/or enhance soil resources for agriculture, construction, and landscaping.
3	As a result of direct and indirect contacts the number of adults and students who adopt practices that protect native plants and their habitats because of their increased understanding of the human effects on native ecosystems will increase by 200
4	Increase the number of stakeholders (government personnel, developers, community groups and students) who became more aware of the connections between terrestrial and marine communities, how watersheds function, and the importance of watershed protection by 500.
5	Based upon watershed research, the number of projects within targeted watersheds which protect water quality will increase by one, annually.
6	The number of Virgin Islands youth who increase their awareness of VI natural and cultural resources, and careers in environmental management and ecotourism will increase annually by 300

Outcome #1

1. Outcome Measures

The recommended BMP's in environmental management master plans will be adopted by one natural resource manager annually. Successful plans will be used as prototypes for other critical habitats, parks and areas designated as part of the VI Territorial Park.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The Magens Bay Authority and other local government agencies, Forest Stewardship Advisory Committee (U.S. Dept. of Forestry), St. Croix Environmental Assoc. and the Nature Conservancy (NGOs), or private landowners with conservation areas manage natural areas but are limited in their management resources. Hotel managers and developers are also responsible for implementing sound environmental management practices to protect their properties and critical natural resource habitats.

What has been done
In response to requests by Smith Bay Territorial Park management, CES made recommendations regarding wetlands protection and the planting of native trees in the park as part of the implementation of a master management plan. During meetings with stakeholders, CES and the VI Marine Advisory Service established foundations for the development of management plans at two St. Thomas popular public beaches, as well as Mandahl Bay, a recent VI government public land acquisition and potential territorial park.

Results
The Smith Bay Territorial Park management implemented CES recommendations including both the installation of porous pave parking/roads and the planting of native trees along access roads and drainage areas. Outreach efforts of CES and the VI Marine Advisory Service increased cooperation with stakeholders in the development of basic management plans at two public beaches without centralized management agencies, resulting in actions taken to protect terrestrial and off-shore resources at both locations as well as Mandahl Bay, a recent VI government public land acquisition and potential territorial park.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
134	Outdoor Recreation
136	Conservation of Biological Diversity

Outcome #2

1. Outcome Measures

After attending non-formal education programs, 150 persons will adopt recommended landscaping practices, incorporate native plants into their landscapes, protect and/or enhance soil resources for agriculture, construction, and landscaping.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	205

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Developers, engineers, architects, environmental groups, resource managers, businesses and property owners requested technical information to protect landscapes and the environment, comply with the VI government permitting requirements for earth-change operations and construction or to develop urban landscape plans.

What has been done
During informal meetings in offices, classrooms, and on sites, CES provided technical information about conserving and incorporating native and non-invasive exotic plants into landscapes, to government personnel, new business operators, engineers/architects/contractors, students/faculty, and the general public.

Results
With technical assistance from CES, a long-time CES client opened a commercial botanical garden on St. Thomas conserving the existing native forest plants and implementing recommended environmental landscaping practices. CES plant identifications and information were also used to develop educational materials, and CES helped the client complete a management plan that enabled her to obtain VI Economic Development Agency (VI EDA) support. Following CES guidelines, UVI faculty and students incorporated native plants into a

demonstration garden utilized by several science classes on the UVI St. Thomas campus. CES recommendations about native plant conservation and planting were utilized by the project planners of a 25 acre solar installation on St. Thomas. CES assisted VI EDA, neighborhood activists and environmental groups to develop and implement plans to beautify an inner city area with trees and gardens, including conserving and incorporating native trees.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
136	Conservation of Biological Diversity

Outcome #3

1. Outcome Measures

As a result of direct and indirect contacts the number of adults and students who adopt practices that protect native plants and their habitats because of their increased understanding of the human effects on native ecosystems will increase by 200

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	210

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Many educators, resource managers, students, environmental groups, developers, environmental professionals, architects, engineers and the general public want to increase their understanding of V.I. native plants/natural ecosystems and the effects of human alterations to natural ecosystems.

What has been done
Through direct contacts, CES provided technical assistance to project engineers, development contractors, business property managers, commercial garden developers, watershed associations, farmers, property owners, educators and students about how to protect, maintain and restore native various VI plant communities including: littoral, riparian, wetland, dry forest, and moist forest types.

Results
CES technical recommendations about how to maintain and preserve over 30 acres of native forest were incorporated into the project bidding requirements for those competing to install a large solar installation on St. Thomas. CES also provided UVI staff and the VI Div. of Fish and Wildlife with similar information about 5+ forested acres on the St. Thomas campus selected for a solar installation. Over 40 UVI students and faculty followed CES advice when selecting and planting native plants on the campus, and two watershed associations requested and utilized information about maintaining native plant communities in critical drainage areas. CES information about native plant identification and maintenance was utilized by Rotary club members and business property managers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
136	Conservation of Biological Diversity

Outcome #4

1. Outcome Measures

Increase the number of stakeholders (government personnel, developers, community groups and students) who became more aware of the connections between terrestrial and marine communities, how watersheds function, and the importance of watershed protection by 500.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1016

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Developers, engineers, architects, environmental groups, resource managers, businesses and property owners requested technical information to protect landscapes and the environment, comply with the VI government permitting requirements for earth-change operations and construction or to develop urban landscape plans.

What has been done
Responding to the requests of the VI EDA and residents of Solberg, St. Thomas, CES met several times with clients (including VI Dept. of Planning and Natural Resources personnel) to

provide information about the native forest and ecosystems of the Solberg Ghut where a communications company was seeking permission to install a communication tower. CES provided area residents and VI EDA with information about other VI watershed associations.

Results
Over 160 Solberg area residents were opposed to the installation of a communication tower on the banks of the Solberg Ghut and agreed after consultations with CES that it would be beneficial to establish a watershed association to protect the natural resources of the ghut and surrounding areas. Based on the well-organized written arguments of the Solberg group including information provided by CES, VI DPNR disapproved the installation of a tower in the environmentally sensitive area.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
136	Conservation of Biological Diversity

Outcome #5

1. Outcome Measures

Based upon watershed research, the number of projects within targeted watersheds which protect water quality will increase by one, annually.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Stakeholders (government personnel, developers, community groups, resource managers, educators, students) requested information about the connections between terrestrial and marine communities and watershed protection. Reasons for requests included: concern about environmental degradation, environment management in Territorial Parks, protection of coastal resources on hotel and private properties, DPNR requirements that permit applicants consult CES for technical information, class assignments.

What has been done
CES provided information about terrestrial resources and assisted UVI chemistry faculty and student researchers with the development of a project to test and monitor the water quality of samples from watercourses in the watershed that drain into John Brewer?s Bay on the St. Thomas UVI campus. Presentations and Tours for educators and students were conducted to evaluate human impacts on native plant ecosystems.

Results
Findings from the John Brewer?s Bay watershed research project were presented in a poster presentation by graduating UVI students at a conference in New Orleans, LA. Students indicated that they learned about the importance of protecting and documenting VI native plants during CES herbarium tours. CES publications and Facebook interactions have prompted requests for additional information about native plant communities in watersheds. The UVI Master of Environmental Science Program and Yale University continued to use the field guide, Island Peak to Coral Reef (2008), produced by UVI Conservation Data Center and CES. This book also was recommended on ecotour and VI National Park websites. As a result of CES site visits, tours and other direct consultations, clients indicated that their awareness of the issues affecting terrestrial resources increased. Developers and the UVI Administration incorporated CES recommendations about how to reduce impacts to native plant communities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #6

1. Outcome Measures

The number of Virgin Islands youth who increase their awareness of VI natural and cultural resources, and careers in environmental management and ecotourism will increase annually by 300

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	1300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

CES continued to provide clients opening commercial botanical gardens and nursery owners on St. Thomas with technical information to be used in educational tours. VI tour company websites continued to advertise and recommend CES natural resource publications. CES provided taxi-drivers and developers of ecotourism destinations with information and assisted with conserving VI properties suitable for ecotourism.

What has been done

CES continued to provide clients opening commercial botanical gardens and nursery owners on St. Thomas with technical information to be used in educational tours. VI tour company websites continued to advertise and recommend CES natural resource publications. CES provided taxi-drivers and developers of ecotourism destinations with information and assisted with conserving VI properties suitable for ecotourism.

Results

With CES assistance, a St. Thomas architect opened a 2.5 acre ?botanical? garden that preserves native forest, non-invasive exotic plants, and CES-recommended BMPS, making it a novel ecotourism attraction and a good location for St. Thomas students/residents to learn about native plants and environmental landscaping. Tour directors incorporated CES information into tours and indicated that it improved the educational value of their tours. CES publications about native plants and ecosystems were used and promoted by VI tourism personnel and the VI Nat?l Park. Through its involvement with the Forest Stewardship and Forest Legacy Programs, CES helped preserve forests and cultural features on St. Croix properties with ecotourism potential. CES assisted the VI Economic Development Agency, State Historic Preservation Society, local businesses and landscape architects with the development of a plan to restore natural landscapes in Charlotte Amalie to increase its ecotourism value.

4. Associated Knowledge Areas

KA Code	Knowledge Area
134	Outdoor Recreation

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

UVI-CES budget cuts and staff reductions contributed to challenges in program delivery.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Clients responded favorably to the informal evaluation methods used by CES, especially in-person, one-on-one conversations. Clients and viewers verbally indicated interest and approval after NREM presentations or media appearances. Standard evaluation forms are used during workshops and training programs, and Research project reports and publications are formally reviewed. UVI students and faculty involved with CES in environmental research projects have indicated that they value CES's guidance and technical assistance; they also indicate that they wish to continue partnering with CES on new projects.

Key Items of Evaluation

All key items of evaluation were used.

VI. National Outcomes and Indicators

1. NIFA Selected Outcomes and Indicators

Childhood Obesity (Outcome 1, Indicator 1.c)	
1143	Number of children and youth who reported eating more of healthy foods.
Climate Change (Outcome 1, Indicator 4)	
8	Number of new crop varieties, animal breeds, and genotypes whit climate adaptive traits.
Global Food Security and Hunger (Outcome 1, Indicator 4.a)	
0	Number of participants adopting best practices and technologies resulting in increased yield, reduced inputs, increased efficiency, increased economic return, and/or conservation of resources.
Global Food Security and Hunger (Outcome 2, Indicator 1)	
0	Number of new or improved innovations developed for food enterprises.
Food Safety (Outcome 1, Indicator 1)	
0	Number of viable technologies developed or modified for the detection and
Sustainable Energy (Outcome 3, Indicator 2)	
0	Number of farmers who adopted a dedicated bioenergy crop
Sustainable Energy (Outcome 3, Indicator 4)	
0	Tons of feedstocks delivered.