

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Irrigation

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships			15%	
111	Conservation and Efficient Use of Water			25%	
132	Weather and Climate			15%	
205	Plant Management Systems			20%	
405	Drainage and Irrigation Systems and Facilities			25%	
	Total			100%	

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	2.0	0.0
Actual	0.0	0.0	2.0	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	26152	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	12987	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 projects
- Present data at conferences
- Publish results in scientific journals

2. Brief description of the target audience

The target audiences are the local crop farmers and back yard growers. These producers normally have less than two acres under production. The Virgin Islands has only three producers with total production acreage over two acres.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	0	0	0	0
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2010
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Abstract presented at conference

	Year	Target	Actual
	2010	1	0

Output #2

Output Measure

- Research publications

	Year	Target	Actual
	2010	1	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of farmers adopting irrigation strategies based on soil moisture

Outcome #1

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	Quantitative Target	Actual
2010	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Water is a rare commodity on a semiarid island and the Virgin Islands stakeholders are concerned to use this precious resource as efficiently as possible. Fertigation and chemigation are new technologies for utilizing a drip irrigation system to apply fertilizer and pesticides.

What has been done

Cucumbers and honeydew style melons were grown in a variety trial that incorporated fertigation and chemigation. All fertilizer was applied through the drip irrigation system during the production of the crop. Chemigation was used when the pesticide needed could be applied through the irrigation stream.

Results

Using fertigation was an efficient method of applying low fertilizer dosage over the life of the crop. This resulted in better plant growth and production during the crop life over a single application of granular fertilizer at planting. Also the fertigation allowed for changing the fertilizer formulation over time to more efficiently meet the needs of the growing plants. Chemigation was useful, effective and safer to apply than the regular spray application. However, this technology is limited in pesticides available to use and timing of application.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
132	Weather and Climate
205	Plant Management Systems

405 Drainage and Irrigation Systems and Facilities

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 and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)

Evaluation Results

Stakeholders came to see and ask questions regarding the fertigation and chemigation system. The initial investment is higher but the management of water and fertilizer is more efficient.

Key Items of Evaluation

Two stakeholders purchased an injector system to incorporate into their drip irrigation system in order to utilize fertigation and chemigation.