

<b>Title:</b>	<b>Enhancement of Competitiveness and Sustainability of Beginning Virgin Islands Farmers Using a Value-Chain Agribusiness Delivery System</b>		
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**Program Code:** BFRDP

**Program Name:** Beginning Farmer and Rancher

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{NO DATA ENTERED}  
Cooperative Extension Service  
Agricultural Experiment Stn

**Non-Technical Summary**

This project aims to ensure that there will be a sustainable new generation of beginning farmers in the Virgin Islands by enhancing their competitiveness and potential for success. Even though the tropical climate in the Virgin Islands allows year-round crop production, most of the food consumed is imported. The agricultural industry needs to be stimulated, strengthened and enhanced for vital economic development. The target audience of the project, beginning crop and small livestock farmers, is comprised predominantly of limited resource and socially disadvantaged farmers (African-American, Hispanic, and Female). Their inexperience, lack of access to finance, reduced exposure to training and technical information, combined with their social and educational challenges make them a group with special needs. These farmers will be provided with the information, know-how, skills, and techniques needed to make informed decisions to enhance the success of their farm enterprise. This will be achieved through education and training in crop production, small livestock production and farm financial management. The project will focus on: production and management strategies that enhance land stewardship; business management and decision support strategies that enhance financial viability; and marketing strategies that enhance competitiveness. It is expected that as a result of the project the target audience will be able to make sound decisions in acquiring and successfully operating their farms while attracting other beginning farmers to operate sustainable agribusiness enterprises.

**Accomplishments**

**Major goals of the project**

The project will achieve the following measurable objectives. Objective (1): To increase the participation of beginning farmers in small livestock and crop production and marketing in the Virgin Islands. The project will: promote technical assistance and training in areas such as whole farm planning, marketing planning and management, and community supported marketing; develop and implement a practical mentor program for procedures engaged in crop production, small livestock production, apiculture and; create a facilitation program which links selected producers with various state and federal programs. Objective (2): Develop a comprehensive agribusiness management and entrepreneurship program for beginning farmers. The project will: promote whole farm planning and enterprise development which will allow the beginning farmers to manage their resources such as land, water and inventory in an environmentally sound manner, thereby improving sustainability; resolve issues in a logical manner, with achievable, clear long term goals related to seasonal, annual, monthly, weekly and daily activities; implement agribusiness development and entrepreneurship programs; develop programs to promote business planning and management to beginning farmers in the Virgin Islands; provide educational material for beginning farmers and

ranchers; assist farmers in developing business plans, loan and agricultural credit applications, training in developing and implementing farm operations and; introduce appropriate farm management, access to capital and contractual leasing programs with a focus on land acquisition, farm planning, recordkeeping and service management Objective (3) Develop training material and implement workshops in programs such as conservation, risk management and direct marketing. The project will: introduce conservation practices which are important in assisting with the long term viability and profitability of beginning farming operations including, water harvesting and cross fencing, soil conservation on marginal lands, watershed management and micro-irrigation; expand the network for direct marketing programs and; provide technical assistance and show them how to link into established farmers' markets, and roadside stands, the development of community supported agriculture , direct marketing to restaurants, neighborhood stores and ethnic groceries. In order to strengthen food safety, farmers will be trained in good agricultural practices, good handling practices, and on-farm best management practices. The overall goal of this project is to provide the targeted beginning farmers with the knowledge, skills and tools needed to make informed decisions for their operations, improve their income and enhance their sustainability. In order to achieve these aims, the project specifically will provide resources to support the implementation of sustainable educational outreach workshops, training and technical assistance, and asset acquisition programs to assist beginning farmers. The project will engage the diverse local population with sustainable agricultural and community development programs; through collaborations with Farmer Based Organizations.

### **What was accomplished under these goals?**

The program provided training to 304 participants in the Virgin Islands. The training made participants familiar with the know-how, skills and techniques needed to make informed decisions to enhance the success of a farm enterprise. The special emphasis placed on demonstrations and hands-on activities enabled participants to acquire and successfully perform all necessary farm-related skills. The shortcourses/workshops, face-to-face classroom sessions, hands-on demonstrations and farm tours were conducted on a wide variety of topics including: Income Tax Preparation for Farmers; Basic Computer Literacy; Vegetable Crop Production; Tropical Fruit Production; Small Livestock Production; Farm Business Planning; Integrated Pest Management; Beekeeping; Post-harvest Handling; Post-harvest Processing; Organic Farming; Marketing; Whole Farm Planning; and Good Handling Practices. The number of participants served in the program greatly exceeded the total, of 120, that was initially targeted. Participants in the training activities have been linked to state and federal agencies which provide assistance to farmers in the territory.

(1) To increase the participation of beginning farmers in small livestock and crop production and marketing in the Virgin Islands. The participation of beginning farmers in crop and livestock production in the Virgin Islands has increased since the program started. Data obtained from the Virgin Islands Department of Agriculture indicates that the number of registered farmers increased by 20% and the value of production by 11% since the start of the project. The next Census of Agriculture, when conducted by NASS, will provide the best long-term data to determine the impact of the program. Training materials were developed, handsouts were distributed, and workshops implemented in a number of crop production, small livestock production and farm business related topics. An emphasis was placed on reducing losses and adding value to farm products through training in post-harvest processing and post-harvest handling including Good Handling Practices. A number of participants in the Integrated Pest Management class took and passed the CORE exam, which is the basic pesticide training (the first of a two-part process) required to become a certified pesticide applicator. The results of a survey indicated that: 96% (98/102) of the participants increased their knowledge; 74% (75/102) positively changed their attitude; and 92% (93/102) improved their skills. Veterans comprised 11% (11/102) of the participants. Fifty-eight percent (59/102) of the participants are presently farming. Of those participants who are presently not farming, 28% previously farmed and 72% plan to start farming. Participants expressed that they have benefitted tremendously from the many hands-on opportunities afforded to them in conjunction with the classroom instructions. Their experiential learning has resulted in changes in the adoption and application of their newly acquired knowledge and skills in their decision making. This has resulted in improved farm management and behavioral changes. The poster for the 2013 Virgin Islands Agricultural and Food Fair, one of the two biggest events in the Virgin Islands, featured a photo of a training program participant at one of the program's demonstration plots. At this same event another program participant won First Place for the 'Best Vegetable Crop Farmer Exhibit' in the Farmers' Market. In 2014, a program participant was awarded the 'Crop Farmer of the Year' at the Virgin Islands Agricultural and Food Fair. Some of the Beekeeping Training Program participants have established hives on their farms and are involved in other aspects of beekeeping such as selling honey and removing hives (from locations where they are either a danger or nuisance). (2) Develop a comprehensive agribusiness management and entrepreneurship program for beginning farmers. Participants received extensive training in computerized farm financial recordkeeping, farm financial business planning, whole farm planning and were encouraged to write business plans for their enterprise. Sixty-three business plans were submitted to the Virgin Islands Department of Agriculture as a requirement to obtain land leases. To date 20 farmers have been successful in obtaining land leases for a total of 68.5 acres. This is a very significant accomplishment taking into consideration that access to land in the Virgin Islands is one of the main limiting factors affecting agricultural production. The processing of business plans is ongoing. During the training, other family members (mainly children and spouses) participated so that they can be intimately involved in the business planning and recordkeeping aspects of the farm, in particular. As a result of these farmers attending the training classes: 58% have developed a farm plan; 68% have changed their farming practices; and 53% have changed their business practices. (3) Develop training material and implement workshops in programs such as conservation,

risk management and direct marketing. Training materials were developed, workshops conducted and handouts provided for topics including whole farm planning, good handling practices and marketing (inclusive of direct marketing). Following the training 49% of the participants have changed their marketing practices. Additionally, they have adopted practices to increase the following: productivity 81%; profitability 80%; environmental sustainability 80%; and social well-being 81%. An important aspect of the program is that it contributed tremendously to build the capacity of collaborating Farmer Based Organizations, in particular. Farmers are now using improved technologies for weed management practices, resulting in a larger acreage of micro-irrigated lands with increased water use efficiency, and better fertilizer management through the use of fertigation.

#### What opportunities for training and professional development has the project provided?

Experienced farmers shared their proficiencies and experiences with participants. Members of collaborating Farmer Based Organizations, along with other participants, were afforded opportunities to attend local and national conferences, including workshops and educational tours. These conferences served to provide training and exposure to various modern technologies and management systems. Faculty members and other subject matter specialists from U.S. universities were utilized to conduct training activities. Farm visits and hands-on demonstrations were also conducted as a part of training activities.

#### How have the results been disseminated to communities of interest?

Information related to the program has been disseminated through all of the major outreach activities conducted by the University of the Virgin Islands (UVI), the Virgin Islands Department of Agriculture and collaborating Farmer Based Organizations. Each entity has its own communications methods to disseminate information. These include radio programs, promotional flyers/brochures, text messages, email, social media, websites and presentations at events such as UVI Research Day, World Food Day Observance activities, three annual agricultural fairs and regionally at the Caribbean Food Crops Society Annual Meetings. The State Commissioner of Agriculture had disseminated information about the program on numerous occasions to a wide variety of audiences ranging from scientific meetings to presentations before the State Legislature.

#### What do you plan to do during the next reporting period to accomplish the goals?

{Nothing to report}

#### Participants

##### Actual FTE's for this Reporting Period

Role	Non-Students or faculty	Students within Staffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	1.1	0	0	0	1.1
Professional	1.3	0	0	0	1.3
Technical	0	0.1	0	0	0.1
Administrative	0.2	0.6	0	0	0.8
Other	0	0	0	0	0
Computed Total	2.6	0.7	0	0	3.3

##### Student Count by Classification of Instructional Programs (CIP) Code

Undergraduate	Graduate	Post-Doctorate	CIP Code
1			52.99 Business, Management, Marketing, and Related Support
1			24.01 Liberal Arts and Sciences, General Studies and Humanities.
1			26.01 Biology, General.

#### Target Audience

The audience reached was comprised primarily of vegetable, tropical fruit and small livestock producers in the Virgin Islands. The majority of the persons who participated in the training activities fit the definition of limited resource/socially disadvantaged farmers. The participants were diverse in their educational background, race and ethnicity. There was a total of 304 participants (171 males and 133 females).

The participants included a number of retirees, who stated that they were always interested in agriculture but were too busy with their careers. Now that they have retired they have the time to be involved in farming, to grow their own food and generate additional income to supplement their retirement earnings. Also participating were a number of former employees of the shuttered HOVENSA oil refinery in the Virgin Islands (which was one of the 10 largest refineries in the world). Some of the participants were also veterans.

### Products

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2013	YES

### Citation

Enhancement of Competitiveness and Sustainability of Beginning Virgin Islands Farmers Using a Value-Chain Agribusiness Delivery System.

S. Crossman, T.W. Zimmerman, E. Chichester, K. Boateng, C. Robles and M. Wilson.

Program and Abstracts Booklet. University of the Virgin Islands Research Day, St. Croix, VI April 2013 p.3

Type	Status	Year Published	NIFA Support Acknowledged
Conference Papers and	Published	2014	YES

### Citation

The Virgin Islands Beginning Farmer Training Program - Enhancing the Competitiveness and Sustainability of Beginning Virgin Islands Farmers.

S. Crossman, T.W. Zimmerman, E. Chichester, K. Boateng, C. Robles and M. Wilson.

In Proceedings of the Caribbean Food Crops Society 49th Annual Meeting, Port of Spain, Trinidad and Tobago, July 2013. 49: 187-194.

### Other Products

#### Product Type

Other

#### Description

Demonstration sites for vegetable crops, tropical fruits and small livestock production were established in collaboration with the Farmer Based Organizations. Management practices featured at the sites included pasture establishment, cross fencing, vegetable crop production and management, tropical fruit orchard layout, irrigation and variety selection. Field visits were conducted to an established tropical fruit orchard and several small livestock farms featuring poultry, pigs, goats, improved forages and the abattoir.

### Changes/Problems

{Nothing to report}