



Food and Agriculture Organization
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SUPPORT TO THE DEVELOPMENT OF THE SOURSOP VALUE CHAIN IN GRENADA

February 2020

SDGs:



Countries:

Grenada

Project Codes:

TCP/GRN/3601

FAO Contribution

USD 232 000

Duration:

22 January 2018 – 31 December 2019

Contact Info:

FAO Representation in Grenada

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Implementing Partners

Ministry of Agriculture and Lands (MoAL).

Beneficiaries

Staff of the Grenada Marketing and National Importation Board, the Bureau of Standards and MoAL planning and extension units, as well as processing enterprises, including enterprises managed by women.

Country Programming Framework (CPF) Outputs

Government Priority 1: Sustainable Agriculture, Forestry and Fisheries Production.



BACKGROUND

In recent decades, soursop has become an integral part of the food and culture of Grenada, and has developed into a profitable and marketable commodity. Because of its health properties and Grenada's quarantine status, exports have increased considerably, above all to the United States. Increasing the production and marketing of soursop has been identified by the Government as an important means of increasing agricultural diversity and creating opportunities for improved livelihoods in rural areas, especially among small farmers. Market opportunities also exist for processed soursop products. The increased production, processing and marketing of soursop and its processed products can contribute to increasing decent rural employment, helping to reduce poverty and increase food security among a vulnerable segment of the rural population. Finally, there is potential for the expansion of export markets.

Currently, however, soursop production is not achieving its potential, primarily because of a lack of coordination between stakeholders, a limited framework in which to undertake policy direction, stakeholders' inability to develop strategies to take advantage of market opportunities, and quality issues in the production and post-harvest handling of the product. The objective of the project was to create conditions for the sustainable development of an inclusive soursop industry.

IMPACT

The soursop industry has the potential to make a significant contribution to food nutrition and security, the growth of the agricultural sector and improved smallholder livelihoods. The project contributed to the inclusive development of soursop value chains to ensure that all stakeholders in the sector benefit more equitably from the commercial success of the industry.

ACHIEVEMENT OF RESULTS

The project developed an improved governance and management structure of the soursop value chain and promoted market development to support the effective production of planting material to drive the expansion of the industry. It clarified export regulations and the licensing processes of exports of high-quality produce for overseas market destinations. Domestic and export potential were assessed and the soursop value chain analysed. Training in value chain analysis (VCA) was provided and a national Value Chain Coordination Committee (VCCC) established. The project also produced a manual on soursop propagation and production, and provided training in production practices to 31 MoAL personnel and farmers, and in pest surveillance to 18 participants. Finally, assistance was given to upgrading selected processing facilities for value-added products.

IMPLEMENTATION OF WORK PLAN

For reasons beyond the control of FAO, delays in the start-up of the project were experienced and activities began in January 2018. Delays were also experienced in the completion and validation of the market assessments and VCA. As the results of the VCA were required to re-design some activities, this had a minor effect on other project activities. All activities were implemented within the planned budget.

Potential risks included natural disasters, pest and disease outbreaks, the contamination of produce and industry disputes. The most important part of the risk management strategy adopted was to combat the entry of two pests, the presence of which would jeopardize exclusive access of produce to the United States. Hands-on training in monitoring and surveillance was provided, along with the necessary equipment.

FOLLOW-UP FOR GOVERNMENT ATTENTION

Value chain coordination activities involve negotiation to align public and private actors in a sector that often has diverging interests. FAO and development partners can facilitate but not control this process. A strong national presence is imperative and national staff need to be trained in the specific skills required for value chain facilitation if the process is to yield results. In this context, it is recommended that MoAL take over the secretariat and chairmanship of the VCCC.

SUSTAINABILITY

1. Capacity development

The training provided in best practices, complemented by the provision of pruning equipment, should lead to improved lifelong production and productivity of both existing and new trees. It is also expected that the Plant Protection Unit will build on the monitoring and surveillance training given, putting the equipment provided by the project to good use.

2. Gender equality

Although gender aspects were not specifically targeted in the overall project design, activities were implemented in accordance with FAO's gender policy.

3. Environmental sustainability

The project design did not include explicit environmental sustainability issues.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

The Human Rights-based Approach was not included in the project design.

5. Technological sustainability

The best practices introduced to improve the production and productivity of soursop trees were both relevant and appropriate. As well as enhancing production capacities and best practices, the project strengthened the Plant Protection Unit by providing training and equipment for monitoring and surveillance activities. The capacity and skills of the national consultant were enhanced by production-related training activities, as well as by the compilation of a manual and information leaflets.

6. Economic sustainability

The soursop sector is one of the most lucrative agricultural sub-sectors in Grenada, generating significant foreign exchange earnings and attracting investment by farmers, exporters, processors and buyers. It is anticipated that the production-related activities conducted by the project will be disseminated by MoAL personnel as part of their regular work and will not incur additional costs to beneficiaries or stakeholders.





DOCUMENTS AND OUTREACH PRODUCTS

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- ❑ Ministry of Agriculture and Lands. Facebook. 10 July 2019. Developing the Soursop Value Chain.
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<https://www.freshplaza.com/article/9125515/grenada-wants-to-maintain-us-soursop-market/>
- ❑ Soursop Market Analysis and Trade Study - Grenada. Research study. F. James. Barbados. August 2018. 90 pp.
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- ❑ Grenada Soursop Value Chain Committee: Proposed Immediate Plan of Work. Work plan. B. Romuld and L. St. Louis. Grenada. July 2019. 5 pp.
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- ❑ Real FM. 8 November 2019. MoAL Builds Capacity in Monitoring and Surveillance for Two Insect Pests of Quarantine Importance.
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- ❑ Now Grenada. 9 November 2019. Emphasis on Surveillance Methods for Insect Pests of Quarantine Importance.
<https://www.nowgrenada.com/2019/11/emphasis-on-surveillance-methods-for-insect-pests-of-quarantine-importance/>
- ❑ Manual for Soursop Propagation and Production in Grenada. December 2019. 29 pp.
- ❑ Soursop Propagation. Leaflet. L. St. Louis. Grenada. December 2019. 2 pp.
- ❑ Soursop Nursery Establishment. Leaflet. L. St. Louis. Grenada. December 2019. 3 pp.
- ❑ Soursop Field Management. Leaflet. L. St. Louis. Grenada. December 2019. 7 pp.
- ❑ Soursop Pollination and Fruit Development. Leaflet. L. St. Louis. Grenada. December 2019. 3 pp.
- ❑ Soursop Harvest. Leaflet. L. St. Louis. Grenada. December 2019. 2 pp.



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	The Grenada soursop industry provides healthy food to domestic markets, employment and income opportunities and regular foreign exchange earnings to the country	
Outcome	Soursop value chain actors and enablers manage the sustainable development of an inclusive and efficient commercially driven soursop value chain	
	Indicator	<ol style="list-style-type: none"> 1. Volume and value of soursop produced, sold domestically and exported. 2. Number of farmers, exporters and processors in the soursop sub-sector. 3. Soursop Value Chain Coordination Committee (VCCC) institutionalized and functioning.
	Baseline	<ol style="list-style-type: none"> 1. Based on 2017 production and export statistics collected as part of Output 1.5. 2. Based on 2017 production and export statistics collected as part of Output 1.5. 3. 0
	End Target	<ol style="list-style-type: none"> 1. Increased by 20% at the end of the project. 2. Increased by 10% at the end of the project. 3. Functional committee.
	Comments and follow-up action to be taken	<ol style="list-style-type: none"> 1. Soursop is one of Grenada's most competitive agricultural sub-sectors based on its exclusive access to the United States markets. The value chain demonstrates profitability at all stages, with acreage, number of trees, production volumes and export figures all trending upward, irrespective of project activities. Current trends indicate that the target of 20% increase in both volume and value of production and export is feasible, more so once the best practices for improved field production and productivity are implemented. It is believed that this should contribute to the expected increase in productivity at farm level in the coming years. 2. The soursop sector in Grenada is expanding, largely because of market opportunities. Although it is difficult to track the precise number of producers in the sector, as many are smallholders with backyard production, it is estimated that the number of producers will grow incrementally in the coming years. Project activities helped to support dissemination of best practices to improve the production and productivity of existing (and new) trees, which it is hoped will attract new entrants, as well as expand the production of existing farmers. The VCA completed under the project highlighted that the exporter base is consolidating rather than expanding, generating greater efficiencies to the chain, but with tensions among competing players. Given these dynamics, it is unlikely that the number of exporters in the sub-sector will increase. Processors of value-added soursop products are marginal in the industry, although this is likely to grow gradually in the coming years as entrepreneurs experiment with new products and find new markets. It is likely that more collaboration between producers, exporters and processors will occur. Although the sector is on a natural expansion trajectory, the project activities, as well as sector upgrading recommendations, are valuable contributions and outline a clear path for MoAL, FAO and other development partners to continue supporting development of the sector. 3. A Soursop VCCC was established and two meetings were conducted towards the end of the project. A term of reference for the VCCC was developed to provide a governance structure, as well as an immediate plan of work to implement the key recommended activities to support upgrading of the sector. At the end of the project, the VCCC required more support from MoAL with regard to convening, leadership and direction. It is recommended that MoAL take over the secretariat and chairmanship of the platform as soon as possible.

Output 1	Evidence base for transparent decision-making for the development of soursop value chain created		
	Indicators	Target	Achieved
	Market assessments, studies and analyses conducted.	Six activities.	Partially
Baseline	0		
Comments			
Activity 1.1	Define domestic market potential		
	Achieved	Yes	
	Comments	A market assessment for fresh and value-added soursop products in Grenada was completed as part of a Market Analysis and Trade Study. This outlined the size, requirements and conditions of local demand for fresh soursop and value-added products. The outcomes of the study were integrated into the Grenada Soursop VCA.	
Activity 1.2	Define export potential		
	Achieved	Yes	
	Comments	An export market assessment for current and potential fresh and value-added soursop products in Grenada was completed as part of the Market Analysis and Trade Study, which investigated and outlined the size, characteristics, trends, requirements and conditions of export. The outcomes of the study were integrated into the Grenada Soursop VCA.	
Activity 1.3	Clarify export licensing		
	Achieved	Yes	
	Comments	Export regulations, licensing and legal requirements for the export of soursop from Grenada were clarified and discussed in the Soursop Market Analysis and Trade Study and integrated into the Soursop VCA Report.	
Activity 1.4	Determine domestic market size		
	Achieved	Yes	
	Comments	The vast majority of the trade in Grenadian soursop products is orientated to export markets. The domestic market is marginal. The general characteristics of the domestic market for fresh and value-added soursop products were established in the Market Analysis and Trade Study. However, owing to the small size and relatively informal domestic trading environment, official data on domestic demand and sales were not available; domestic market opportunities for fresh and processed products in Grenada were estimated as precisely as possible.	
Activity 1.5	Analyze the soursop value chain		
	Achieved	Yes	
	Comments	A comprehensive VCA of the Grenada soursop sector was completed in August 2018. The VCA included a mapping of the value chain, actor analysis, strengths, weaknesses, opportunities and threats, production base and quantities and value of soursop products marketed through the different channels, and governance analysis components.	
Activity 1.6	Monitor and evaluate project impact		
	Achieved	No	
	Comments	During project implementation, it was decided that a repeat VCA at the end of the project would not be a useful instrument to track project impact. Aggregate level production and export statistics are captured by official statistics and can be used to track changes in volume, values, acreage and number of actors in the sector. It was determined that project funds could be better used in applied capacity-building activities with farmers and stakeholders.	

Output 2	Governance structure for the sustainable growth of the soursop value chain established		
	Indicators	Target	Achieved
	Structure set up to support soursop value chain approach.	VCCC established.	Yes
Baseline	0		
Comments			
Activity 2.1	Project start-up workshop		
	Achieved	Yes	
	Comments	A half-day workshop was conducted in February 2018 to establish the purpose and aim of the soursop support initiative with relevant value chain actors and stakeholders. The workshop, which adopted a participatory approach, presented and explained how the value chain approach would be applied and how it would assist in achieving sustainable growth of the industry.	
Activity 2.2	National soursop stakeholder workshop and value chain training		
	Achieved	Yes	
	Comments	A two-day stakeholder workshop was completed in June 2018 in St. George. The workshop sensitized staff of MoAL and related agencies on the value chain approach and trained participants in basic analytical tools. The preliminary findings of the VCA, legal and market studies were also presented. The feedback and outcomes of the workshop with stakeholders were integrated into the final version of the Soursop VCA Report	
Activity 2.3	Formation meeting of the national Value Chain Coordination Committee		
	Achieved	Yes	
	Comments	The role, purpose and function of a VCCC for Grenada was discussed at the project inception meeting and value chain training in Activities 2.1 and 2.2 respectively. The objective of a VCCC was introduced to and discussed with a broader range of public and private-sector stakeholders during the value chain stakeholder workshop in February 2019. With ongoing support from the national coordinator, key stakeholders were nominated and approached individually to participate in the Committee. The first National Soursop VCCC meeting was held in July 2019, attended by over 25 stakeholders. The purpose, governance structure and tasks were discussed at length, and the VCCC was established. Draft Terms of Reference for the Committee were discussed and circulated to provide a governance structure, and a cursory work plan of activities was presented based on the value chain upgrading strategy and feedback from stakeholders.	
Activity 2.4	Regular meetings of the VCCC		
	Achieved	Partially	
	Comments	Following the formation of the Soursop VCCC, the Committee met twice before the end of the project. Membership of the Committee declined over time and MoAL counterparts indicated the low likelihood of its survival. Establishing and gaining traction with VCCCs is challenging and relies on strong facilitation and soft skills of support consultants. More time, resources and leadership were needed to ensure regular meetings of the VCCC under this project, as well as more effort in aligning members behind a plan of action to achieve momentum and retain interest. It is recommended that MoAL take over the secretariat and chairmanship of the VCCC as soon as possible and work with the national coordinator, who has been a part of the process from the outset. There is a need to ensure an improved exit strategy and hand-over process of the VCCC platform from one that is led by FAO to one led by relevant MoAL counterparts. Ultimately, VCCCs should be driven by private-sector actors as they move towards an industry association. However, the interest and motivation to do this are generally low in the initial stages, which makes MoAL and development partners critical to the process at the outset.	
Activity 2.5	Final national soursop value chain stakeholder workshop		
	Achieved	Yes	
	Comments	A national value chain stakeholder workshop, attended by 45 public and private-sector stakeholders, was held in St. George in February 2019. The final results of the VCA, including main opportunities and challenges for the industry, were presented. Based on this information, a participatory work session was facilitated to develop a Plan of Action for sector development. The role and purpose of the VCCC was introduced during the session to generate forward momentum for the project. Following the event, a draft outline of the proposed Action Plan was circulated to participants, as well as an invitation to join the VCCC.	

Output 3	Increased field production and productivity of soursop for supply to local markets and for exports		
	Indicators	Target	Achieved
	Increased soursop propagation and production for local and export markets.	Strategy and manual prepared for increased soursop propagation and production, and introduction of a Systems Approach.	Yes
Baseline	0		
Comments			
Activity 3.1	Review existing nursery production systems (seedlings and grafts) and orchards in different stages of growth. Prepare a Strategy and Plan for increased soursop propagation and production over a five to ten year period		
	Achieved	Yes	
	Comments	One section of the Market Analysis and Trade Study reviewed the soursop production system in Grenada at input and farm levels. The Study proposed a strategy and plan for increased soursop production (including propagation) over the medium to long term. The outcomes of this work were integrated into the Grenada Soursop VCA.	
Activity 3.2	Preparation of a manual on best practices for soursop nursery production and manual for soursop orchard management and training of nursery producers and farmers in their use		
	Achieved	Yes	
	Comments	<p>The national consultant compiled a comprehensive, draft version of a manual (Manual for Soursop Propagation and Production in Grenada) covering current production practices, including nursery propagation, field establishment and management (including pests and diseases), pollination, harvest and post-harvest handling of fruits. The training, conducted by an international expert from Brazil with specific hands-on experience in soursop production in the Caribbean and elsewhere, was delivered to 31 participants (10 females, 21 males), including MoAL personnel (technical and extension) and 12 farmers. It focused on improved techniques for all aspects of soursop production, in particular:</p> <ul style="list-style-type: none">– pruning of both young and mature trees for improved productivity;– hand pollination based on the biology of the soursop flower and– harvesting methods that stimulated the formation and perpetuation of floral buds, leading to improved lifelong production and productivity of the trees. <p>Based on the training, the Manual was extensively revised (with significant contributions from the international expert). In addition, five leaflets were excerpted from the manual, covering Propagation, Nursery Establishment, Field Management, Pollination and Fruit Development, and Harvest. Together with the manual, these resources can be used extensively for training both farmers and new MoAL personnel.</p> <p>At the request of MoAL, the project procured five sets of pole pruners, harnesses and goggles, building in-country capacity to conduct a medium- to large-scale tree pruning exercise and leading to improved productivity of the existing mature trees over time.</p>	
Activity 3.3	Preparation of the requirements of a Systems Approach for exports and pest management measures for soursop		
	Achieved	Yes	
	Comments	<p>Grenada has cornered the United States fresh fruit market mainly because two key pests of soursop (the seed borer <i>Bephratelloides cubensis</i> and the fruit borer <i>Cerconata anonella</i>) are not present in Grenada. The need to maintain pest-free status in order to continue to supply this market was discussed during and after the stakeholder workshop in June 2018. It was agreed that, although the Systems Approach could be useful in the long run, it was more important to conduct regular monitoring and surveillance activities in the immediate future, ensuring that all possible measures were in place to prevent the entry of these two pests of high quarantine importance into the country. A hands-on training session on monitoring and surveillance was proposed and agreed to by the Plant Protection Unit (which was already in the process of beginning a national surveillance programme for other pests). The training, undertaken via a Letter of Agreement with the Caribbean Agricultural Health and Food Safety Agency (CAHFSA), was conducted by the CAHFSA plant health specialist in November 2019. Of the 18 persons trained (8 females and 10 males), one was from the Marketing Board and 17 were MoAL personnel (technical and extension).</p> <p>At the country's request, the project procured five GPS units, each with micro-SD cards (8 GB), to support future surveillance activities.</p>	

Output 4	Increased market supplies of fresh and processed soursop products from small farmers and agro-processors		
	Indicators	Target	Achieved
	Improved post-harvest handling and processing.	Harvest and post-harvest training conducted Processing facilities upgraded. Linkages established between producers and packing houses. Business models developed for sustainable market supplies.	Partially
Baseline	0		
Comments			
Activity 4.1	Determine and introduce improved post-harvest handling and agro-processing technologies		
	Achieved	Partially	
	Comments	The Market Analysis and Trade Study reviewed existing post-harvest handling and identified the training of farmers through a programme of inspection and certification for compliance as a key need. With regard to agro-processing, potential opportunities for improved practices, scaling-up and branding were identified. As indicated at 3.2, harvest and post-harvest training was held as part of the best practices training. The Soursop Production Manual covered some aspects of agro-processing. In addition, the project facilitated linkages between the Bureau of Standards and processors in order to improve the standard and quality of products.	
Activity 4.2	Facilitate upgrading of selected processing facilities		
	Achieved	Yes	
	Comments	The Soursop VCA identified that processing facilities for value-added products were not a critical component for industry development at this stage as the majority of trade is in fresh soursop. However, packing houses that aggregate and ship fresh soursop to export markets play a major role in the functioning of the chain and project activities were reallocated to assist packing houses to gradually raise their standards to international levels. Independently of the project, many large packing houses had begun to improve standards. The project collaborated with the Bureau of Standards to provide assistance to packing houses to develop compliance with the Grenada Fresh Produce Export Act of 1998 for exporting. The Bureau visited several packing houses on various occasions to work with exporters to improve operations in accordance with these standards. It is anticipated that standards in packing houses will gradually improve.	
Activity 4.3	Conduct producer-buyer workshop to strengthen market linkages		
	Achieved	No	
	Comments	The Soursop VCA established that good linkages already exist between local producers and packing houses, the major buyers in the industry. The latter have seen notable consolidation over the past five to ten years, and four or five large packing houses now dominate the market. As a result, competition for fresh produce is fierce, and many packing houses have invested notable resources into building their relationships with producers across the island. For this reason, producer-buyer workshops were not deemed to be a critical activity under this project. Instead, resources were reallocated to production-based activities to support productivity improvements for producers. Nonetheless, the relationship between the large exporters was identified as a critical link in the chain. The current outlook is adversarial and competitive; it was noted that greater collaboration among exporters might provide more leverage to lobby government to improve airport and freight facilities. Preliminary discussions to encourage collaboration were held with individual exporters. However, this was not possible under the project, and will require more time and facilitation if anything is to be achieved.	
Activity 4.4	Develop inclusive business models for contractual agreements for sustainable market supplies		
	Achieved	No	
	Comments	This activity was re-designed in light of the comments above. Agreements between producers and packing houses were already well formed and being closely managed within the chain. Producers indicated their interest in production-level activities as a preferred strategy as increased production may serve to improve their negotiating power with exporters and increase their livelihoods. If the VCCC remains functional, it could serve as an important platform to enable ongoing dialogue between producers and exporters to arrive at more inclusive relationships.	

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