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## SUPPORT TO TONGA HORTICULTURE COMPETITIVENESS

July 2023

SDG:



Country:

Tonga

Project Code:

TCP/TON/3701

FAO Contribution:

USD 323 000

Duration:

1 February 2019-31 December 2021

Contact Info:

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### Implementing Partners

Ministry of Agriculture, Food and Forest (MAFF);  
Ministry of Commerce, Consumer, Trade, Innovation and Labour (MCCTIL).

### Beneficiaries

Farmers, especially youth and women; small processors and government institutions involved in agriculture.

### Country Programming Framework (CPF) Outputs

*CPF (2018-22) Output 3:* Food control and business practices identified and promoted to facilitate efficient agri-food value chains which provide safe, nutritious and affordable food.



### BACKGROUND

Tonga, a Polynesian sovereign state, relies heavily on agriculture. Yet, this sector has become vulnerable to economic shocks, climate change and natural disasters. The country's economy is characterized by its small economic base, isolation from global markets and dependence on remittances, which has also been experiencing negative growth due to various factors, including cyclones, political instability and the collapse of major export industries. Tonga heavily relies on imported agricultural products, thus the project was developed to address this agricultural and economic challenge to ultimately boost its export potential by improving agricultural production, enhancing biosecurity and food safety practices of value-added products following the Hazard Analysis and Critical Point (HACCP) standards and strengthening capacities of stakeholders along the agricultural supply chain. The project was designed following extensive consultations and requests from the Government, ensuring that it accurately addressed the identified needs and priorities of Tonga. By aligning with the Government's input, the project aimed to effectively target the specific challenges and requirements related to HACCP, food safety and biosecurity in the country.

### IMPACT

The project provided logistic support and training to farmers, small processors and government staff, equipping them with the knowledge and tools to sustainably revitalize the production of fresh and value-added agricultural products. This has contributed to increasing the food and nutrition security of vulnerable farmers, as well as enhancing the livelihoods of beneficiaries.

The project was developed in full accordance with the Pacific Multi-Country Programming Framework 2018-22, which demonstrates the project's direct contribution to the framework's goals and objectives according to regional and national priorities.

### ACHIEVEMENT OF RESULTS

The project outputs and activities specifically addressed the capacity gap in Tonga concerning HACCP standards, food safety and biosecurity. One of the key accomplishments was the establishment of demonstration plots for on-station trials. Four demonstration plots were developed in Tongatapu, Eua, Ha'apai and Vavau, with Eua and Tongatapu plots already completed and trials underway. The cultivation of crops (such as ginger, turmeric, pele, talo and dragon fruit) in these plots showcased promising potential. Moreover, a consultancy contract was initiated as part of the project's reprogramming to draft a Farm Management Manual (FMM) and conduct a related Gross Margin Analysis, which was deemed crucial for the Ministry of Agriculture, Food and Forest's work. A draft FMM comprising 90 percent of the completed manual was successfully developed and shared with the Government. Furthermore, a national consultant was hired as part of the reprogramming to support an international consultant in conducting a commercial feasibility analysis of the cassava value chain, specifically focusing on the feasibility of establishing a cassava flour mill operation in Tonga. The national consultant assisted in providing available documentation for the international consultant's review. Finally, the project successfully trained and certified five individuals as HACCP auditors through a comprehensive course titled "Food Safety Management Systems Lead Auditor". This certification allows the Government of Tonga, through a government roster, to have certified auditors for conducting HACCP audits when needed, filling a previously existing gap on the island.

## IMPLEMENTATION OF WORK PLAN AND BUDGET

Challenges, such as border closures and disruptions caused by the measles outbreak and the COVID-19 pandemic, hindered several project activities and outputs. Specifically, these challenges hindered the initiation of the on-farm trials and delayed training and input delivery to selected farmers who were intended for experimentation with improved agriculture production practices of potential value chains. Despite the project's procurement of inputs and farmer selection, on farm trials could not commence on time. In Haapai and Vava'u, demonstration plots, trials and related training could not be carried out. Additionally, the project encountered difficulties in operationalizing the original activities due to the same challenges, leading to the decision to reprogramme funds including the drafting of the FMM. Although a semi-completed draft was produced and shared with the Government, it required further data and information from the Government to finalize it, which was not provided by the project's completion. Finally, the undertaking of the feasibility study also suffered from these challenges. Although the national consultant provided documentation for the international consultant's review, the hiring process for the latter could not be completed within the project's timeframe. In light of these challenges, the project was granted a no-cost extension, and project activities (including reprogramming) were implemented according to the original budget.

## FOLLOW-UP FOR GOVERNMENT ATTENTION

Responsibility for maintaining the demonstration plots after the project lies with the Government and the Mainstreaming of Rural Development Innovation Tonga Trust (MORDI). Proper management and coordination are required to ensure their sustainability beyond the project duration.

Regarding the unestablished on-farm trials, it is recommended that the Government continue exploring alternative project funding and support to successfully complete this activity.

Finally, it is advised to continue discussions and efforts to secure support through other project funding for the implementation of both the original activities and reprogrammed ones that were not successfully completed.

## SUSTAINABILITY

### 1. Capacity development

The relevant policies and legal framework play a crucial role in supporting the sustainability of the project outcome. The project intentionally aligned with CPF 2018–22 Output 3, which focuses on identifying and promoting food control and business practices to facilitate efficient agri-food value chains that provide safe, nutritious and affordable food.

### 2. Gender equality

Gender equality was considered throughout the project. The project was originally designed to explicitly target youth and women farmers. In all, activities were in line with the needs of both men and women.

### 3. Environmental sustainability

The project successfully mainstreamed environmental sustainability. Its activities had no negative impacts on the environment.



## DOCUMENTS AND OUTREACH PRODUCTS

- **Khalid, N.** 2021 *Farm Management Manual (DRAFT)*. 92 pp.

## ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Production of fresh and value-added agricultural products revitalized in a sustainable manner	
Outcome	Increased consistent supply of quality fresh and value-added agriculture products to markets	
	Indicator	<ul style="list-style-type: none"> <li>– Trained government officials on production, biosecurity, food technology and food safety.</li> <li>– Number of household farms participating in the improved production training.</li> <li>– Number of farmers trained on improved and good agriculture practices.</li> <li>– Number of farmers trained in agribusiness management and contract farming.</li> <li>– Number of on-farm and off-farm trials conducted.</li> <li>– Capacity of selected agroprocessors built on food safety and HACCP.</li> </ul>
	Baseline	0
	End Target	<ul style="list-style-type: none"> <li>– 50 government officials;</li> <li>– 150 household farms;</li> <li>– 90 farmers;</li> <li>– 100 farmers;</li> <li>– 20 on-farm and off-farm trials; and</li> <li>– 10 agroprocessors.</li> </ul>
	Comments and follow-up action to be taken	<p>Project implementation was severely challenged by border closures and restrictions stemming from the measles outbreak and the COVID-19 pandemic in 2019. Project implementation was planned for international consultants to travel into the country to carry out training and capacity building on production, biosecurity, food technology and food safety. In addition, difficulties in getting materials due to shipping disruptions and border closures further hampered project activities. The challenges posed by COVID-19 restrictions resulted in cost savings that made it impossible to fully deliver and utilize the budget by the end of the project. FAO thus reprogrammed savings under this TCP with additional activities related to the goals of the project.</p> <p>The project provided support to the preparation and development of demonstration plots for Eua and Tongatapu with trials completed in Eua and trials in Tongatapu underway at the time of reporting. The project conducted training of trainers on improved production in the demonstration plots in Eua and Tongatapu. Demo plots, trials and related training could not be carried out in Haapai and Vava'u due to COVID-19-related delays and impacts.</p> <p>Output 2 was reprogrammed to provide support on the FMM and gross margin work upon request from the Government of Tonga. The project drafted the FMM with a related gross margin analysis. The manual could not be finalized during the project timeframe as additional information from the Government was not made available. Nevertheless, the draft was shared with the Government.</p> <p>Output 3 was also reprogrammed to meet Government priorities on carrying out a commercial feasibility analysis of the cassava value chain and the feasibility of setting up a cassava flour mill operation in Tonga. Objectives of the feasibility study were outlined, however, the recruitment of necessary technical support to carry out the work could not be carried out within the project timeline. The work was identified by the Government of Tonga as a priority and discussions are ongoing at the time of reporting to gauge how it can be funded through other sources and funding opportunities.</p> <p>Output 4 also faced similar challenges caused by COVID-19 and related travel restrictions. The project was able to provide support on building the capacity of five individuals in HACCP through a five-day training on "Food Safety Management Systems Lead Auditor". Five individuals passed the training and received their certification. Ongoing discussions will continue with the Government to further support through other projects funding and technical assistance.</p>

<b>Output 1</b>	Improved agriculture production practice of potential value chains for the domestic and niche export markets		
	Indicators	Target	Achieved
	Trained government officials on production, biosecurity, food technology and food safety.	50 government officials.	Partially
<b>Baseline</b>	0		
<b>Comments</b>	Project implementation was severely challenged by border closures and restrictions stemming from the measles outbreak and the COVID-19 pandemic in 2019. Project implementation was planned for international consultants to travel into the country to carry out training and capacity building on production, biosecurity, food technology and food safety. In addition the difficulties in getting materials due to shipping disruptions and border closures further hampered project activities. Ongoing discussions will continue with the Government to provide further support through other projects funding and technical assistance.		
<b>Activity 1.1</b>	Conduct on-station trials		
	Achieved	Partially	
	Comments	This activity was partially achieved through the preparations of demonstration plots for on-station trials. Demo plots were identified and recommended by Government counterparts. A total of four planned demonstration plots were developed for Tongatapu, Eua, Ha'apai and Vavau. At the time of reporting, the demonstration plots for Eua were completed and trials were underway. Similarly, the Tongatapu demonstration plots under the Ministry of Agriculture, Food and Forest and Mainstreaming of Rural Development Innovation Tonga Trust (MORDI) were also prepared and trials were underway. Initial work on the plots for Haapai and Vavau had started and trials were to be initiated at the time of reporting. In both Eua and Tongatapu ginger, turmeric, pele, talo and dragon fruit were grown and were showing signs of high potential. The upkeep of the plots post project will be the responsibility of the government and MORDI for their use and continuation.	
<b>Activity 1.2</b>	Conduct training of trainers on improved production		
	Achieved	Partially	
	Comments	At the time of reporting, field training took place during demonstration plot development and planting for the Tongatapu and Eua stations only. Haapai and Vavau training were yet to be carried out due to the delay in demonstration plot development.	
<b>Activity 1.3</b>	Conduct on-farm trials in Tongatapu, Vava'u and Eua		
	Achieved	Partially	
	Comments	Selection of farmers for the station was carried out and procurement was made. However, the on-farm trials were not initiated due to the many challenges and disruptions faced which inhibited the delivery of the inputs and training on time. The procured materials were eventually delivered to the Government. This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance	
<b>Activity 1.4</b>	Conduct in-field training on improved production practices (reprogrammed to cover FMM and gross margin analysis as per 1.2)		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
<b>Activity 1.5</b>	Conduct training on Good Agriculture Practices (reprogrammed to cover FMM and gross margin analysis as per Activity 1.2)		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	

Output 2	Capacities of processors and exporters in agro-processing/value addition improved		
	Indicators	Target	Achieved
	Number of household farms participating in the improved production training. Number of farmers trained on improved and good agriculture practices.	150 household farms. 90 farmers.	Partially
Baseline	0		
Comments	Project implementation was severely challenged by border closures and restrictions stemming from the measles outbreak and the COVID-19 pandemic in 2019. Most activities did not progress during project duration due to the impacts, restrictions and challenges posed by the COVID-19 pandemic. The output was reprogrammed to provide support to the country's immediate priorities, such as the development of the FMM with a gross margin analysis for crops and livestock. This reprogrammed activity was partially completed with ongoing discussions with the Government to complete the FMM for use.		
Activity 2.1	Prepare training manual (reprogramming)		
	Achieved	Partially	
	Comments	<p>Due to challenges in operationalizing the initial activities under this output, it was agreed with the Government of Tonga to reprogramme funds to cover other priorities for the Government. This activity was reprogrammed under a consultancy contract in which FMM with a related gross margin analysis for the crops and livestock included in the FMM was drafted. The request to reprogramme was made to include the FMM and related gross margin analysis, which was deemed important for the Ministry of Agriculture, Food and Forest's work. At the time of receiving the request, it was noted that the Government required an updated FMM as the current one was drafted 20 years ago and was outdated. Through an international consultancy, a draft farm management manual with a related gross margin analysis was developed. Approximately 90 percent of the manual was completed and shared with Government counterparts for their review and comments. In the document, an economic analysis data tabulation was completed for selected crops, and more information was requested from the Government (data holder) to complete the manual. Information requested included:</p> <ul style="list-style-type: none"> <li>– the cost of planting materials;</li> <li>– the cost of a few crops that were not listed in the quarterly price data by the Ministry; and</li> <li>– more data references and information on livestock production of several livestock types (pigs, chicken, cattle, goats, etc).</li> </ul> <p>Despite repeated follow-ups by the international consultant, national consultant and the Assistant FAO Representative for Tonga, no further data was received from government counterparts. No response or information was received at project completion, hence the draft was not finalized but was shared with the government. Discussion will continue with the Government to look at ways in which data can be sourced so that the manual can be completed for use.</p>	
Activity 2.2	Conduct training of trainers on food processing		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
Activity 2.3	Conduct food processing/value addition trainings		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
Activity 2.4	Conduct market trial		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	

Activity 2.5	Provide in-field trainings on food processing		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
Output 3	Capacities of farmers, processors and exporters on agribusiness management, agro-enterprises development and marketing improved		
	Indicators	Target	Achieved
	Number of farmers trained in agribusiness management and contract farming. Number of on-farm and off-farm trials conducted.	100 farmers. 20 on-farm and off-farm trials.	Partially
Baseline	0		
Comments	Project implementation was severely challenged by border closures and restrictions stemming from the measles outbreak and the COVID-19 pandemic in 2019. Project implementation was planned for international consultants to travel into the country to carry out training and capacity building on agribusiness farming and contract farming. Ongoing discussions will continue with the Government to provide further support through other projects funding and technical assistance.		
Activity 3.1	Conduct training of trainers on SMEs and agribusiness management (reprogrammed to cover Feasibility study)		
	Achieved	Partially	
	Comments	Due to challenges in operationalizing the initial activities under this output, it was agreed with the Government of Tonga to reprogramme funds to focus on other priorities for the Government. This activity was reprogrammed under a consultancy contract with a national consultant to support the work of an international consultant to carry out a commercial feasibility analysis of the cassava value chain and more specifically the feasibility of setting up a cassava flour mill operation in Tonga. The feasibility study would identify gaps and prospects of cassava flour within Tonga to fully develop into a sustainable locally consumed and exportable commodity. Its objective was to provide an evidence-based study on the gaps and potential of cassava and specifically cassava flour as a commercial commodity for both export and local markets. The national consultant provided documentation for the international consultant's review once on board, however, due to time restrictions, the project team was unable to complete the hiring of the international consultant. The work remains a priority for the Government, and discussions were held to explore funding opportunities to finance this work.	
Activity 3.2	Conduct agribusiness management training		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. This activity did not make progress. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
Activity 3.3	Conduct in-field contract farming training		
	Achieved	No	
	Comments	This activity was not carried out due to border closures, restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	

<b>Output 4</b>	Biosecurity/quarantine and food safety practices enhanced		
	Indicators	Target	Achieved
	Capacity of selected agroprocessors built on food safety and HACCP.	10 agroprocessors.	Partially
<b>Baseline</b>	0		
<b>Comments</b>	Project implementation was severely challenged by border closures and restrictions stemming from the measles outbreak and the COVID-19 pandemic in 2019. The initial plan entailed international consultants travelling to the country to carry out training and capacity building on production, biosecurity, food technology and food safety. An online course was however procured with a training company in Australia that resulted in five individuals trained in HACCP auditing and certification. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.		
<b>Activity 4.1</b>	Develop a System approach quality management (SAQM)		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. The project did not make any progress in this activity as it required technical support that was unavailable in the country. An international consultant was planned to cover this work, however, the consultant could not travel to Tonga to carry out the work as planned. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
<b>Activity 4.2</b>	Conduct two national training workshops and develop farm biosecurity manual		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. The project did not make any progress in this activity as it required technical support that was unavailable in the country. An international consultant was planned to cover this work, however, the consultant could not travel to Tonga to carry out the work as planned. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
<b>Activity 4.3</b>	Build capacity on food safety		
	Achieved	No	
	Comments	This activity was severely challenged by border closures and restrictions and shipping disruptions stemming from the measles outbreak and the COVID-19 pandemic in 2019. The project did not make any progress in this activity as it required technical support that was unavailable in the country. An international consultant was planned to cover this work, however, the consultant could not travel to Tonga to carry out the work as planned. Ongoing discussions will continue with the Government to provide further support through other project funding and technical assistance.	
<b>Activity 4.4</b>	Build capacity on HACCP		
	Achieved	Yes	
	Comments	The activity was completed through the training and certification of five ACCP-certified auditors following their completion of a course titled "Food Safety Management Systems Lead Auditor". The certification allows the Tongan Government to have certified individuals to carry out HACCP auditing for the government since there originally was no one on the island to carry out this work. The five individuals were enrolled in a five-day training, from 15 to 19 November, administered by PricewaterhouseCoopers Ltd. All five individuals passed the training course and received their certificates. The individuals are now on the Government roster to carry out HACCP audits when needed.	

**Partnerships and Outreach**

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