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DEVELOP QUALITY MANAGEMENT SYSTEMS AND GOOD AGRICULTURAL PRACTICES (GAP) FOR PRIORITY VALUE CHAINS

October 2024

SDGs:



Country: The Republic of Botswana

Project Code: TCP/BOT/3904

FAO Contribution: USD 128 000

Duration: 1 March 2023–31 August 2024

Contact Info: FAO Representation in Botswana
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Implementing Partner

Ministry of Entrepreneurship (MoE).

Beneficiaries

Farming communities and agricultural extension officers.

Country Programming Framework (CPF) Outputs

CPF Priority 2

Priority value chains in agriculture and natural resources strengthened to be more productive, competitive and sustainable, creating equitable and decent employment.

Indicator

Good agricultural practices for priority value chains (aquaculture; forestry; horticulture; small stock/small ruminants, piggery and apiculture) developed and disseminated to extension services end of 2024.



BACKGROUND

Agriculture is the main sector supporting poor rural households in Botswana. While commercialization of the agricultural sector is a key priority for the Government of Botswana, value chain actors need support to strengthen their capacities, improve the quality and safety of their products and increase diversification through value addition and access to markets.

In this context, the project aimed to assist value chain actors to develop and implement Quality Management Systems (QMS), Good Agricultural Practices (GAP) and Standard Codes of Practice to improve product quality management in agricultural enterprises and to therefore maximize market and production competitiveness of food and agricultural products at local, national and international levels.

The main objective of the project was to help ensure that agricultural commodities meet certain standard requirements, which will ultimately improve and increase their production competitiveness, create decent jobs and employment opportunities and develop the potential for broad-based industrialization. The proposed activities of this project aimed to introduce technical solutions that were new to the beneficiaries and stakeholders including agricultural standards, innovative practices for wastewater use, improved knowledge for market access, and QMS.

IMPACT

The expected impact of the project was to contribute to improving the productivity, efficiency and competitiveness of agriculture by promoting sustainable agriculture and environmentally safe production systems that contribute to food and nutrition security, employment opportunities and industrial development. The project intended to contribute to a significant improvement in agricultural practices, quality assurance and market readiness among beneficiaries. The project's contributions resonated across multiple levels, from national priorities outlined in the CPF to SDGs 2, 6, 12 and 15, underscoring its importance for progress towards sustainable and healthy agricultural production, the reduction of food loss and waste, the creation of a bioeconomy for the promotion of sustainable food and agriculture, and the resulting positive socioeconomic development.

ACHIEVEMENT OF RESULTS

The project design responded to the needs and context at the time of its preparation and its future perspective, while its achievements are the result of the implementation of the activities included in its workplan, with results being achieved under most of the expected outputs. As state above, the project was designed to address the need to support value chain actors in developing and implementing QMS and GAP to ensure that agricultural commodities meet certain standard requirements, with the aim of creating opportunities and potential for broad-based industrialization, leading to more employment opportunities and improved food and nutrition security.

Throughout the project, GAP for horticulture, cereals, pulses and small livestock were developed and shared. The public was consulted for improvement, and the GAP were submitted to the Botswana Bureau of Standards (BOBS) Board for approval in November 2023. As a result, GAP for sheep and goats and for cereals and pulses were finalized in March 2024, following the publication of the standards, and two National Agro Processing (NAPRO) products (pickled vegetables and tomato sauce) were successfully assessed and certified against the applicable standards. A total of 65 farmers were sensitized and 30 extension officers were trained on the developed codes. As part of the process of developing the codes of practice, GAP training on the use of wastewater and sewage for vegetable production was conducted for 50 horticultural farmers in September 2023, specifically targeting those who irrigate with wastewater along the Notwane River.

In addition, training on the Farmer Field School (FFS) methodology and GLOBAL GAP market access was provided to 48 smallholder citrus farmers. Finally, financial support was provided to the 25 executive members of the Botswana Horticulture Council to enable them to find a venue for a workshop to discuss their turnaround strategy and cropping plans.

IMPLEMENTATION OF WORK PLAN AND BUDGET

The project made significant progress towards achieving its expected outcome, which was primarily focused on improving technologies, practices and management systems and contributing to increased productivity, efficiency and competitiveness, while reducing costs and improving food safety and quality. The project was successfully implemented, with key challenges effectively addressed through adaptive management strategies and proactive problem solving. The timely completion of activities and adherence to project objectives reflect the commitment of the team and the positive impact of the project on existing agricultural practices and standards. However, additional funding is required for laboratory improvements and operational QMS training. The project's approach to environmental and social risk management was highly effective, with regular updates, reviews and clear lines of responsibility ensuring that risks were actively managed to minimize environmental impact and proactively address social challenges.

FOLLOW-UP FOR GOVERNMENT ATTENTION

While the project achieved its overall objective, there is still work to be done to fully achieve the expected longer-term impact on improved technologies, practices and management systems to be adopted by farmers and producers in selected value chains; continued collaboration and concerted efforts are essential for the sustainability of the project's achievements. The project laid a solid foundation by supporting NAPRO's processing plant through a comprehensive QMS assessment. The recommendations of the reports encouraged the government to prioritize and fund the automation, expansion and maintenance of the facility in order to sustain the impact of the project in the long term. Other recommended follow-up actions included continued training support from government agencies, ongoing certification processes and established partnerships to ensure continued compliance with GAP and quality standards.

SUSTAINABILITY

1. Capacity development

The project built capacity through training activities, workshops and awareness campaigns on the developed codes of practice, GPAs and QMS, as well as integrated water resource management, all of which are essential to ensuring the sustainable use of resources for agricultural production. The activities targeted a wide range of members of the food value chain, including farmers, extension workers and executive members of the Botswana Horticulture Council. The development of these codes of practice will involve collaborative efforts between government agencies, water resource management authorities and agricultural stakeholders who will ensure the enforcement and maintenance of agricultural standards, ensuring that GAP and QMS remain part of the national agricultural policy.

2. Gender equality

Although gender equality was not specifically targeted under any of the project's interventions, it was taken into account in all activities during its implementation. Thus, efforts were made to ensure equal mobilization of participants and proportional representation of women and men during interventions, training and development activities. As a result, women and men benefited equally from the implementation of GAP, FFS methodologies, market access training and decision-making processes.

3. Environmental sustainability

The project, which had a direct focus on environmental sustainability and ecofriendly codes of practice throughout the food supply chain, respected FAO's environmental and social standards in all its activities and focused its interventions on the awareness raising of stakeholders through training and workshops.



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

The project supported human rights by promoting the participation of men and women without discrimination, respecting human dignity, and providing support to the most affected and vulnerable within the farming community. The project ensured participation and transparency through the comprehensive training of farmers by educating them on GAP and adherence to established standards. It supported FAO’s Right to Food Guidelines by promoting sustainable agricultural practices and contributed to the creation of employment opportunities and improved working conditions by promoting skills development, positively impacting rural youth, women and marginalized groups. .

5. Technological sustainability

The project significantly improved local knowledge and practices by providing targeted training on safe wastewater use, FFS methods, access to the European market and GAP. This multifaceted approach increased local capacity, improved agricultural practices and facilitated market access, thereby strengthening both the practical and regulatory knowledge needed for sustainable and compliant agriculture.

As a result of the training and workshops, project beneficiaries improved their technical expertise and capacity to continue implementing project activities and the developed codes of practice on their own.

6. Economic sustainability

The project contributed significantly to economic sustainability by mobilizing additional financial resources. Following the successful completion of the project, NAPRO secured funding to improve and expand its processing facility. In addition, the products and services developed by the project, including GAP codes and NAPRO certifications, are likely to be affordable given their focus on improving agricultural standards and market access.

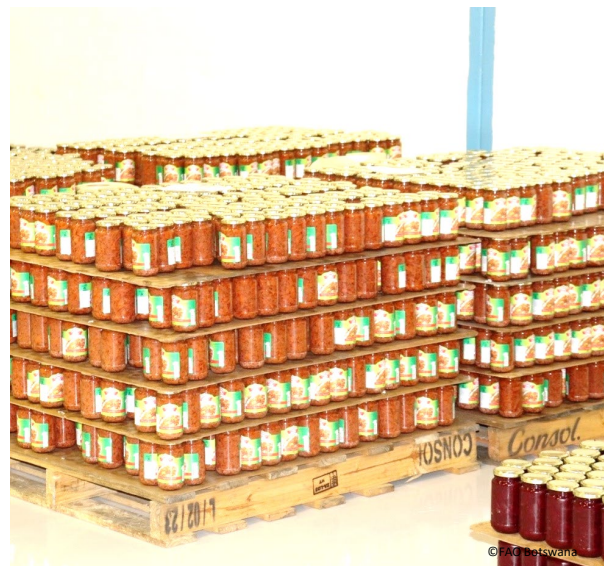


DOCUMENTS AND OUTREACH PRODUCTS

- ❑ **Botswana Bureau of Standards (BOBS).** 2023. *Good Agriculture Practice for Cereals and pulses -Code of Practice.* Gaborone, Botswana.
- ❑ **Botswana Bureau of Standards (BOBS).** 2023. *Good Agriculture Practice for Sheep and Goats -Code of Practice.* Gaborone. Botswana.

Social media publications

- ❑ <https://bit.ly/4dhWMQV>
- ❑ <https://bit.ly/3MQcmIV>
- ❑ <https://bit.ly/4gtVq8l>
- ❑ <https://bit.ly/3MQCcfR>
- ❑ <https://bit.ly/3MR5vyQ>
- ❑ <https://bit.ly/3TAjo8r>
- ❑ <https://bit.ly/3MRlaNC>
- ❑ <https://bit.ly/3ze38TP>
- ❑ <https://bit.ly/3ZuHViP>
- ❑ <https://bit.ly/4dekdea>



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Agriculture to become more productive, efficient and competitive in order to increase its share of employment, sustainable agriculture and ecologically safe production systems that contribute to food and nutrition security.		
Outcome	Improved technologies, practices and management systems adopted by producers in selected value chains to increase productivity, efficiency and competitiveness reduced cost and improved food safety and quality.		
	Indicator	Number of GAP for priority value chain (small stock and cereal and grains) developed.	
	Baseline	One (horticulture).	
	End Target	Three (small stock and cereal and grains).	
Comments and follow-up action to be taken	All three codes of practice are now complete, but follow-up action is required to make farmers aware of the existence of these standards and to ensure compliance.		
Output 1			
Output 1	Code of practice for horticulture, cereal and grains, small stock developed		
	Indicators	Target	Achieved
Baseline	Number of codes of practice developed.	Three	Yes
Comments	<p>The development of good GAP for sheep and goats as well as for cereals and legumes was completed in March 2024, following the publication of the standards. A total of 65 farmers were sensitized on the developed codes of practice and 30 extension officers were trained on the codes. The horticulture code of practice was available before the start of the project.</p> <p>A training session on GAP related to the use of wastewater/sewage water for the production of vegetables was held for 50 horticultural farmers on 20 September 2023, specifically targeting those who irrigate with wastewater along the Notwane River.</p> <p>In addition, FFS methodology and EU Global GAP market access training was provided to 48 smallholder citrus farmers.</p> <p>The 25 executive members of the Botswana Horticulture Council were provided with financial support to enable them to find a venue to hold a workshop to discuss their turnaround strategy and cropping plans.</p>		
Activity 1.1	Proposal stage		
	Achieved	Yes	
Activity 1.2	Comments	A Letter of Agreement (LOA) was signed with the BOBS to develop the code of practice. As a result, all internal processes were completed up to the validation and gazetting phase.	
	Preparatory stage		
Activity 1.3	Achieved	Yes	
	Comments	The technical committee developed the technical content document, taking into account input from a range of experts. Technical committee meetings were held in June and July 2023 for discussion and refinement of the technical content of the proposed standard.	
Activity 1.4	Public comments stage		
	Achieved	Yes	
Activity 1.5	Comments	The Technical Committee sought public input on the developed draft standard for consolidation. Consultative workshops with the public and farmers were held in July and August 2023 in four districts focusing on cereals, pulses and small livestock production. The draft standards were made available for comment to the public from August to October 2023.	
	Approval stage		
Activity 1.6	Achieved	Yes	
	Comments	The Technical Committee submitted the final draft to the BOBS Board for approval. The standards were then submitted to the Standards Council's Technical Advisory Committee (TAC) for review and approval on 30 November 2023.	
Activity 1.6	Publication stage		
	Achieved	Yes	
Activity 1.6	Comments	The Technical Committee sent the final document for publication, printing and distribution. The standard was gazetted in March 2024 and subsequently prepared to be published and printed.	

Activity 1.7	Implementation stage		
	Achieved	Yes	
	Comments	FAO conducted training for extension officers in collaboration with the MoE. A total of 30 extension officers were trained.	
Activity 1.8	Advocacy and promotion		
	Achieved	Yes	
	Comments	This exercise was conducted jointly by the MoA and FAO. Key stakeholder consultations focused on small livestock issues on farms in Palapye and Lubu. Cereal farmers in Pandamatenga and Mosisedi were also consulted. In horticulture, water use and safety training were provided to farmers using wastewater for irrigation. In addition, awareness workshops were conducted for 48 citrus farmers. These workshops focused on FFS and access to the European market and included advocacy and promotion of relevant key issues. Support was provided to 25 executive members of the Botswana Horticulture Council to hold a workshop to discuss a turnaround strategy and crop plans.	
Activity 1.9	Legislation and regulations (legal instruments).		
	Achieved	Partially	
	Comments	At the time of writing, the MoE was developing legal instruments to regulate the GAP programmes. The development of a legal instrument to enforce GAP standards was under consultation with relevant stakeholders.	
Activity 1.10	Establishment of the regulatory body.		
	Achieved	Yes	
	Comments	At the time of writing, the MoE was working to establish a multisectoral supervisory body to oversee the regulatory aspects of GAP. The establishment of the body that will be responsible for this oversight began in July 2024. The first phase included a needs assessment of various entities across the country, which was conducted from 8 July to 12 July 2024.	
Activity 1.11	Conduct pilot projects.		
	Achieved	Yes	
	Comments	The implementation of GAP for the targeted farmers was integrated into the daily routine of the extension officers, who were trained in these practices. Awareness workshops were also held with 65 participants to introduce farmers to the codes of practice developed.	
Output 2	Agro processing quality management system – guidelines (priority areas identified by agroprocessing strategy) developed		
	Indicators	Target	Achieved
	Quality management systems (guidelines) for agro processing developed.	One	Partially
Baseline	0		
Comments	The processing facility of NAPRO underwent a comprehensive QMS assessment and a detailed documentary report was submitted. The recommendations encouraged the government to prioritize and fund the automation, expansion and maintenance of the facility.		
Activity 2.1	Preparatory stage		
	Achieved	Yes	
	Comments	Two NAPRO products – pickled vegetables and tomato sauce – were successfully assessed and certified against the applicable standards and met all the necessary compliance requirements. However, additional funding is required for laboratory improvements and operational QMS training.	
Activity 2.2	Steering committee identification stage		
	Achieved	Yes	
	Comments	BOBS Steering Committee framework was used.	
Activity 2.3	Consultant identification stage		
	Achieved	Yes	
	Comments	BOBS was engaged through the LOA.	
Activity 2.4	Guidelines (tool) development stage		
	Achieved	Yes	
	Comments	The guidelines were developed using BOBS' internal process.	
Activity 2.5	Validation stage		
	Achieved	Yes	
	Comments	The validation stage was conducted by BOBS Technical Committee and approved by BOBS Board.	

Activity 2.6	Publication stage	
	Achieved	Yes
	Comments	The certification was awarded to NAPRO, a facility established under the National Agricultural Research and Development Institute for commercialization and technology transfer across the agricultural value chain.
Activity 2.7	Implementation stage	
	Achieved	Yes
	Comments	The certified products are now on the market and are expected to open doors to new opportunities, including local and international retailers, thereby increasing sales potential.
Activity 2.8	A detailed, actionable quality assurance and control issues in greater detail.	
	Achieved	No
	Comments	It was not completed because the scope of the project changed from the development of the Agro Processing Quality Management System guidelines to the certification of NAPRO products.
Activity 2.9	Legislation and regulations (legal instruments).	
	Achieved	No
	Comments	It was not completed because the scope of the project changed from the development of the Agro Processing Quality Management System guidelines to the certification of NAPRO products.
Activity 2.10	Establishment of the regulatory body	
	Achieved	No
	Comments	It was not completed because the scope of the project changed from the development of the Agro Processing Quality Management System guidelines to the certification of NAPRO products.

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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