



Australia Awards



THE UNIVERSITY OF QUEENSLAND AUSTRALIA

CREATE CHANGE

Australia Awards – Africa

2017 Agribusiness Short Course Award

DEVELOPING GARLIC VALUE CHAINS IN NORTHERN MOZAMBIQUE



PARTICIPANT: AVÊNCIO MATENGA

Agribusiness Advisor for the Swisscontact’s horticulture value chain project in Northern Mozambique called Horti-Sempre.

“ I am an agribusiness and local economic development expert, with over 15 years of working with NGOs and local governments in Northern Mozambique. Prior to that I was a teacher for over 8 years. I have a BSc in Agriculture – Rural Engineering and Diploma in Local Development Management. I have practical experience in agricultural value chain projects and market studies; extension and capacity building for smallholders, and technical support for small- and medium-sized enterprises working across agribusiness value chains. I have started to integrate consumer research as key critical step in value chain studies, and I hope that soon I will become a practitioner and trainer of trainers at local and national level. ”

Diversity of domestic-garlic sold by retailers in Waresta Municipal Market



AUSTRALIA AWARDS – AFRICA AGRIBUSINESS SHORT COURSE

Australia Awards – Africa, delivered under the Australia Aid program managed by the Department of Foreign Affairs and Trade, are prestigious scholarships offered by the Australia Government to individuals who have the greatest potential to drive development in their country and become leaders in their chosen field.

The Agribusiness Short Course Award, designed by UQ International Development (UQID), provides learning experiences to enhance

participants’ ability to engage with and influence challenges regarding sustainable economic development in their home country, profession, workplace and community. Participants develop a Reintegration Action Plan (RAP) which details a unique project outlining an area of change that they will address when returning to their organisation. These projects are devised with the expert knowledge and learnings gained from the course and enable to the Course Leader, UQID and Australia Awards to monitor and provide feedback during various stages of the project.

CONTEXT

In 2013 the Swiss Foundation for Technical Cooperation (Swisscontact) launched a project to increase the income of horticultural smallholders in Northern Mozambique to provide an alternative to traditional but declining cash crops like tobacco and cotton. Matenga explains that, “We were attracted by garlic’s potential because local conditions were suitable for its production; it has a long shelf-life without needing a cool chain, and there is an opportunity for domestic production to substitute for imports from China.”

Typically, local farmers cultivate less than a quarter of a hectare and yields are low due to pests, use of rudimentary agricultural practices and the degeneration of seed varieties used by farmers. “It was clear that since farmers have very limited capacity to invest, any upgrading of the chain would have to deliver better returns to sustain farmers’ ability to pay for improved seeds. This is why we undertook a Value Chain Analysis (VCA).”

This VCA focused on three questions:

1. What attribute of garlic do consumers value, and how much are they willing to pay for them?
2. What activities across the chain contribute to these attributes, and how should they be improved to deliver a product more highly valued by consumers?
3. How can relationships be developed to ensure these coordinated improvements are made, and the benefits shared so they are sustained?

HOW CONSUMER RESEARCH LED TO CRITICAL CONTROL POINTS OF VALUE

“Essentially, we found great potential for expanding the market for domestic garlic, especially considering supermarket consumers were willing to pay significantly more if the product fulfilled their preferred attributes. However, we found that currently domestic garlic is only sold in open markets because it does not reach supermarkets’ standards for clove size, cleanliness, packaging and reliable supply.”

“Accordingly, the critical control point analysis emphasized that domestic chains resolving these problems and so competing against imports would require aligning a number of improvements across the chain. If chain members just acted independently, there was a high risk that value created in one part of the chain would be destroyed in another, and so anticipated results would not be realised.”

The critical control points for garlic that Matenga identified are shown in Table 1.

RECOMMENDATIONS

Interventions to strengthen domestic garlic value chains will include capacity building to all chain members, from input suppliers to wholesalers and retailers. Swissconnect’s project Horti-sempre, in partnership with IIAM, will provide **capacity building to farmers** in growing, harvesting and postharvest practices, such as sorting for size and color. “We will also encourage input suppliers to offer technical advice to farmers about using improved seeds and chemicals and seeds as a way to build stronger relationships with farmers.”

“We also want to establish **gravity irrigation** to add value in terms of yield, size of cloves, freshness and taste. However, gravity irrigation risks water losses and soil degradation, so we will need to ensure the most appropriate equipment is installed, and training given to farmers.”

Garlic can be sold out-of-season for higher prices. However, this requires **storage** to have ventilation or air-conditioning to maintain the temperature and moisture levels to meet requirements for freshness and shelf-life. “Currently, traders have poor handling practices and don’t have good warehouses, so they destroy value. These facilities need upgrading, or farmers’ efforts will be wasted.”

“We also need to conduct a feasibility study into **investment into cold chain facilities**. Practically, these would extend domestic garlic’s shelf-life and freshness. Strategically, they would facilitate stronger relationships between value chain actors, because they would open up more market opportunities so long as the actors worked together to deliver better quality garlic.”

Table 1: Critical Control Points of Value

Product Attribute	Valued Characteristics	Sources of Valued Characteristics	Responsible Chain Members
Taste	<ul style="list-style-type: none"> Strong acidity and spiciness 	<ul style="list-style-type: none"> Seed variety Farming practices Post-harvest practices 	Research institute, input dealers and farmers
Aroma	<ul style="list-style-type: none"> Strong, spiced aroma 	<ul style="list-style-type: none"> Seed variety Farming practices Post-harvest practices 	Research institute, input dealers and farmers
Size of cloves	<ul style="list-style-type: none"> Larger cloves which are easier to peel 	<ul style="list-style-type: none"> Seed variety Farming practices Sorting and grading 	Research institute, input dealers, farmers and traders/wholesalers
Shelf-life	<ul style="list-style-type: none"> Up to a month 	<ul style="list-style-type: none"> Seed variety Harvest Post-harvest practices Storage and conservation 	Research institute, input dealers, farmers, traders, wholesalers and retailers
Availability	<ul style="list-style-type: none"> Year-round 	<ul style="list-style-type: none"> Would require off-season imports, so: <ul style="list-style-type: none"> Procurement Distribution 	Traders, wholesalers and retailers
Appearance	<ul style="list-style-type: none"> Color Sorted into single varieties Cleanliness 	<ul style="list-style-type: none"> Seed variety Farming practices Harvest Post-harvest practices Sorting and grading 	Research institute, input dealers, farmers, traders, wholesalers and retailers
Freshness	<ul style="list-style-type: none"> Not withered, nor too humid, which affects taste 	<ul style="list-style-type: none"> Seed variety Farming practices Harvesting Post-harvest practices 	Research institute, input dealers, farmers, traders, wholesalers and retailers
Convenience	<ul style="list-style-type: none"> Diversity of garlic on sale Different pack sizes 	<ul style="list-style-type: none"> Procurement 	Retailers
Packaging	<ul style="list-style-type: none"> Supermarket shoppers prefer bags smaller than 10kg. 	<ul style="list-style-type: none"> Pack procurement Packing Weighing Labelling 	Package suppliers, traders, wholesalers and retailers

HOW MATENGA BENEFITED FROM THE COURSE

AUSTRALIAN EXPERIENCE

“I learnt about the benefits of strong relationships and communication between Australian value chain actors, for example in facilitating traceability systems. We also saw how farmers are very well connected to processors, and so they have the knowledge and skills to produce what the market wants. This helped me to understand that promoting healthy relationships between actors to satisfy consumers’ demands is the most important foundation in building sustainable value chains in Mozambique, where currently this does not happen.”

GHANAIAN EXPERIENCE

“In Ghana, I was part of a group looking at a pineapple juice value chain. I visited farmers, a processing company and some retailers. Relationships between the processor and farmers were strong, but because input suppliers are not well connected to farmers, we learnt how the processor ended up supplying a significant volume of inputs to farmer.”

IN-COUNTRY PROJECT

“This project contributed directly to my work in Horti-Sempre, and I was really motivated to implement the expertise I had gained during the course. From a practical perspective, I learnt about the different reaction of consumers when approached to be part of the research. In Australia, it was easy to ask people questions, but in Mozambique the attitude is not the same, with many refusing to take part. I think this is partly to do with different levels of education. I certainly learnt about the importance of persistence!”