



Australia Awards



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Australia Awards – Africa

2017 Agribusiness Short Course Award

KENYAN CAGED FISH VALUE CHAIN



PARTICIPANT: ROSEMARY AKINYI WANASUNIA

County Program Coordinator, Agricultural Sector Development Support Program (ASDSP)

Rosemary is a development practitioner with vast experience in coordination of inclusive agricultural value chains to support food security and nutrition goals, improve sector coordination and secure livelihoods through agribusiness enterprises. She has 15 years' experience working with value chain actors across many commodity chains to increase their productivity, enhance their entrepreneurial skills and facilitate market access. In 2015, she launched the Siaya Agrivalue chain incubator (SAVIC) that is currently incubating enterprises along the fish, mango and poultry value chains.

Customers and retailers at fish 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

Fish provide around 55% of Kenyans' protein intake. Currently, aquaculture accounts for 7% of supply and is expanding rapidly. Caged production is practiced in Lake Victoria, where wild fish stocks are dwindling, driving prices up, and hence consumption down, which is jeopardizing public nutrition and threatening the region's food security, especially with the growth in cheaper imports from China.

Rosemary had three objectives for her project. "We needed to improve the market orientation of cage fish value chains by conducting consumer research and so establishing the drivers of value creation. We would also investigate the relationships between chain actors, and their ability to gather, share and utilize information. Finally, this would enable us to make evidence-based recommendations to improve the competitiveness of chain actors by improving value creation and efficiency."

Working with her colleagues Ken Owuor, Stephen Okech and Antony Moses, the team conducted a rapid value chain analysis by interviewing 25 chain actors in Kisumu and Siaya County on the shore of Lake Victoria. The interviews involved ten consumers in a focus group discussion and two through shopper observation; two input suppliers; four producers; three wholesalers; one transporter and four retailers.

HOW CONSUMER RESEARCH LED TO CRITICAL CONTROL POINTS OF VALUE

"Understanding consumer value is the first stage in better orientating value chain activities to market requirements. We did this by conducting consumer research, and then working out what improvements were needed to deliver a product which more closely resembled what consumers wanted. For example, we found that consumers' preferred fish size was 500-800g, but the chain was predominantly supplying 250-450g."

"Having found out what needed to change in the product, we needed to work out how the chain needed to change. We did this by walking the chain and looking for activities which affected each product attribute."

The key product attributes identified in the consumer research and their critical controls points are shown in Table 1.

RECOMMENDATIONS

Rosemary made a range of recommendations for individual members of the chain. Examples of these are set out in Table 2.

HOW ROSEMARY BENEFITED FROM THE COURSE

Australian Experience: "The Australian experience exposed me to not only the theoretical perspective of the new thinking, but more importantly I had an opportunity to interact with Australian value chain actors from a broad range of perspectives. I learnt that continuous innovation that is focused on creating value for the consumer remains the key determinant for success."

Ghanaian Experience: "Ghana provided the initial insights into applying value chain principles within an African context. The group exercise using Rapid Value Chain Analysis as a diagnostic tool in appraising the performance of a fish value chain generated really useful lessons and information."

In-country Project: The final course component involved each participant undertaking a mentored Value Chain Analysis in their own country. "My project provided a platform for shared learning and skill sharpening. In particular, it challenged the assumption that one must have a lot of funding to undertake a meaningful survey. In particular, the information generated on consumer preferences has previously been largely ignored. For instance, none of the value chain actors had ever considered attributes such as sex of fish, size and color as critical value creation factors."

"For my colleagues, the project also created an experiential excitement and an awakening to challenge the current practice. The team has gone on to propose adoption of value chain thinking and principles in soil health projects."

Table 1: Critical Control Points of Value

Product Attribute	Valued Characteristics	Responsible Chain Members
Freshness	Pure red gills, firm skin, fishy scent/odor. Devoid of muddy taste	Whole of chain in speed of delivering fish to market, and chilling and grading
Size	Fleshy appearance (high ratio of flesh to bones)	Quality of fingerlings Affordable quality feed Producer practices, such as feeding regimes; cage management
Health and Hygiene	Handling of fish, water used for cleaning, display of the merchandise and environment	Whole chain, especially transporting and storing fish under chilled conditions
Price	Affordable	Whole chain efficiency
Color	Prefer light color	Genetics Producer practices, especially stocking density
Sex and shape	Consumers preferring the smaller females, who have smaller heads and are considered tastier	Hatchery, through mono-sex egg production Genetics
Forms of processing	Fried, smoked, sun dried and filleted	Retailer, for example wood, rather than charcoal, produces better tasting fish
Nutritional quality	Fatty acids such as omega oils and their association with brain development. Benefits to those with lifestyle diseases such as hypertension	Genetics
Origin	Production system (capture, cage and pond)	Producer production practices

Table 2: Recommendations

Value Chain Actor	Short Term	Medium to Long Term
Input suppliers: feed and fingerlings	Run on-farm demo to pilot feed formulation Align shipment orders with customer demand to minimize wastage through dead stock	Build capacity in higher quality fingerling production (selection, sexing and management) and feed formulations. Strengthen feed company's governance to guarantee quality Expand hatcheries to avoid shortages Establish code of ethics and training to eliminate unethical behavior (such as undersupplying fingerlings) to improve relationships with producers
Producer	Build capacity on stocking, cage management and post-harvest handling	Conduct consumer education about features of cage fish, pond caught, captured and imported fish Strengthen the fish value chain platform to lobby for a fair and competitive business environment Introduce on-farm feed production to reduce costs Encourage collaboration among cage producers for market penetration and branding/ differentiation
Transporter	Engage public vehicle transport association to understand their role in the chain	Adopt cost effective fish handling and storage containers for transportation, such as wax/foam/cooler boxes and ice blocks to improve quality and hygiene, and avoid vehicle corrosion
Wholesaler		Strengthen the existing value chain platforms to improve access to market information Invest in storage and cooling facilities Work with retailer on a pricing strategy
Retailer	Experiment with product differentiation	Strengthen the existing value chain platforms to improve access to market information Invest in storage and cooling facilities Introduce differentiated pricing strategy based on consumer-focused attributes Lobby for investment in market infrastructure such as clean water and sanitation