



Australia Awards



THE UNIVERSITY  
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CREATE CHANGE

Australia Awards Short Course

Agribusiness 2018

# Ghanaian Guinea Fowl Value Chain



## Participant

Yakubu Abukari joined the Ministry of Food and Agriculture in 2004. Working in the Upper East Region of Ghana, he became a Regional Livestock and Poultry Development Officer in 2013 at the Regional Department of Agriculture of Upper East Region Coordinating Council. He received an Australia Awards Scholarship to study a Masters of Science in Agricultural Systems at the University of Western Australia, and started work in the Northern Region in 2018 in the same Development Officer role. His passion has become taking a holistic approach to agricultural intervention using a value chain perspective and livestock-crop integration systems for food, income and nutrition securities for smallholder producers, especially young people and women, and those physically challenged and marginalised in the poorest regions of Ghana. He completed the Australia Awards Short Course in Agribusiness in 2018.

**Women of Bognaayili Guinea Fowl Producers and Marketing Cooperative  
Feeding five week old keets in a brooder house in Kumbungu District**



## Value Chain Approach

A value chain approach means taking a whole-of-chain perspective from primary producers and their input suppliers, through every stage until the product reaches the end consumer. It examines the flows of products, money and information, with a focus on how these are influenced by the relationships among chain members. Of particular importance is the need to understand markets and consumers, and the state of collaboration among chain members. A value chain approach highlights how effective partners can align better their skills, resources and behaviour to deliver products and services to different market

segments and to reduce waste, with the resultant financial returns being distributed equitably so as to sustain partnerships within the chain. This improves the competitiveness of each business and helps chain members to recognise their interdependence, and the consequent benefits of solving shared problems.

Detailed advice on adopting a value chain approach is provided in *A Guide to Value Chain Analysis and Development for Overseas Development Assistance Projects*, by Ray Collins, Benjamin Dent and Laurie Bonney, available free at [aciar.gov.au/publication/mn178](http://aciar.gov.au/publication/mn178).

## Context

After completing the Australia Awards Short Course in Agribusiness, Yakubu applied his new knowledge and skills in Value Chain Thinking to Ghanaian guinea fowl. “These are domesticated wild birds with the potential to reduce food, nutrition and income insecurities for young people, women and marginal individuals. The meat has an appetizing taste – due to its genetics and from foraging – and is both lower in fat and higher in protein than chicken.”

While several publications and projects targeted guinea fowl production, Yakubu’s course had highlighted their limitations. “While some studies looked at the whole supply chain, they failed to recognise the importance of understanding relationships between actors in each chain to ensure that recommendations are specific and realistic. Equally, a CTA paper on mapping livestock chains across Central Africa had found how most projects emphasised production rather than demand, or targeted problems in isolation, failing to recognise that a value chain is a system, and so must be looked at as a single unit.”

Yakubu studied guinea fowl value chains in four districts in the Northern Region and one in the Upper East Region. He collected data from 61 consumers and 85 actors across those chains.

## Consumer research

Yakubu included sensory evaluation in his consumer research. This involved 15 consumers recording their reaction to a blind tasting of samples of meat from male and female guinea fowl, and contrasting domestic, free-range birds with imported, intensively reared ones. “This allowed a direct comparison between different meats, with all samples being prepared in similar ways. Participants reported their overall preference, and described their reaction to each sample’s taste, aroma and texture. It revealed a mild preference for female birds, and a strong preference for domestically produced meat.”

These results were supplemented by investigating other attributes through focus groups, intercept interviews at markets and cooked meat stalls. “This enabled me to characterise the product attributes which most influence consumers’ decisions over whether, where and how often to buy, and what price to pay. Then I traced these attributes to the Critical Control Points of Value.” These are the inputs and activities across the entire chain that positively or negatively affect each product attribute. “By explaining these critical control points to chain actors, they know the specific roles each of them needs to play for the chain collectively to create consumer value.” Yakubu’s results are set out in Table 1.

## Whole of Chain Perspectives and Recommendations

“There was no standard grading system of live or processed birds using these valued attributes.” However, when considering how to introduce such a grading system, Yakubu recognized that while some attributes are observable – such as size and appearance – many rely on confidence that the correct production system and feeding regimes have been followed, because they cannot be verified until the meat is eaten. “For those attributes, trust between suppliers and customers is key, because when a product attribute cannot be observed, retailers and their shoppers must trust that everyone upstream has upgraded their activities correctly to meet the premium specification.” This trust will be based on experience, with confidence developing over time. “The resulting loyalty between a supplier and customer is a source of competitive advantage, because it would be risky to switch to different, unknown suppliers who might not abide by the necessary standards, and then consumers would be disappointed and quickly swap to another retailer. This is an example of how opportunistic supply chains benefit from becoming collaborative, stable value chains.”

Indeed, Yakubu found most relationships along the chains were transactional, especially in urban areas, suggesting improvements would need to begin modestly to allow time for greater confidence to develop. “This highlights the importance of analysing relationships as part of a value chain analysis, otherwise resources are wasted in trying to be too ambitious too soon. However, I did find some more cooperative relationships, especially between rural and downstream operators who often had been doing business for more than two years. Offers of credit and ongoing communication about supply and demand indicated firmer foundations for more rapid and significant improvements in those chains.”

There was also a strong relationship between farmers and government field officers. “Activities focused on disseminating technology and building agronomic capacity through demonstrations and farmer field schools. However, the opportunity is to leverage this existing relationship into promoting Value Chain Thinking, and then working with those farmers with the necessary skills and attitudes to link them to middlemen, wholesalers, processors and retailers who are keen to target premium markets, and are willing to share the benefits with the farmers.”

All consumers are sensitive to price, even if they are willing to pay more for higher quality, and so a chain’s efficiency is always important. “I observed widespread, preventable mortality when I walked the chain. This included predation on farms, high keet mortality, theft, overcrowding during transit, and retailers leaving dead birds in cages for several hours, a potential agent for spreading disease or infection. This requires multiple interventions by providing advice to every chain member, and stronger enforcement of regulations.”

Yakubu used his new insights to create a prioritised action plan for all chain members (Table 2).

Table 1: Critical Control Points of Value

Product Attribute	Valued Characteristics	Critical Control Points of Value
<b>Taste</b>	<ul style="list-style-type: none"> <li>Lasting, sweet, natural, and providing a good stock in soup</li> </ul>	<ul style="list-style-type: none"> <li>Production system (free-range foraging)</li> <li>Feeding, including balanced rations and leafy forage</li> <li>Medication</li> <li>Watering</li> </ul>
<b>Fat content</b>	<ul style="list-style-type: none"> <li>Low</li> </ul>	<ul style="list-style-type: none"> <li>Production system (semi intensive)</li> <li>Feeding, including balanced rations and leafy forage</li> <li>Watering</li> </ul>
<b>Aroma</b>	<ul style="list-style-type: none"> <li>Intense, appetizing, non-fishy. Especially appetizer for the sick to encourage them to eat</li> </ul>	<ul style="list-style-type: none"> <li>Feeding, including balanced rations and leafy forage</li> <li>Watering</li> </ul>
<b>Nutritional/health benefits</b>	<ul style="list-style-type: none"> <li>Source of proteins, vitamins and minerals</li> </ul>	<ul style="list-style-type: none"> <li>Production system (semi intensive)</li> <li>Feeding, including balanced rations and leafy forage</li> <li>Watering</li> <li>Pest and disease control</li> <li>Grilling by barbecue operators</li> </ul>
<b>Texture</b>	<ul style="list-style-type: none"> <li>Tender, compact and non-slimy in the mouth, easy to cut but not too soft</li> </ul>	<ul style="list-style-type: none"> <li>Reduce stay on farm: 6-12 months</li> <li>Grilling by barbecue operators</li> </ul>
<b>Price</b>	<ul style="list-style-type: none"> <li>Willing to pay for better quality</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency across the whole chain, including reducing mortality</li> </ul>
<b>Freshness</b>	<ul style="list-style-type: none"> <li>Long shelf life</li> </ul>	<ul style="list-style-type: none"> <li>Speed through the chain and/or freezing</li> <li>Grilling by barbecue operators</li> </ul>
<b>Size/weight</b>	<ul style="list-style-type: none"> <li>Preference varied, but a bird should be heavy for its size</li> </ul>	<ul style="list-style-type: none"> <li>Balanced rations</li> <li>Watering</li> <li>Pest and disease control</li> <li>Sorting and grading</li> </ul>
<b>Appearance</b>	<ul style="list-style-type: none"> <li>Dark colour and no blood stains</li> </ul>	<ul style="list-style-type: none"> <li>Feeding, including balanced rations</li> <li>Slaughtering, evisceration, draining</li> </ul>

Table 2: Recommendations

Value chain actor	Short term	Medium term	Long term
<b>Input and service providers</b>	<ul style="list-style-type: none"> <li>Capacity building: managing keet mortality; improved housing; biosecurity, and feed formulation</li> <li>Environmental and veterinary personnel to start education on meat hygiene and inspection</li> </ul>	<ul style="list-style-type: none"> <li>Research and development into feeding regime and nutrient levels for guinea fowl</li> <li>Negotiate with middlemen and processors to ensure adherence to inspection of birds in holdings and meat after slaughter</li> <li>Field officers to provide introduction to Value Chain Thinking training, and select those farmers with the skills and attitudes to commit to value chain development projects</li> </ul>	<ul style="list-style-type: none"> <li>Input suppliers to conduct demonstrations on input usage for producers</li> <li>Departments of Agriculture to conduct farmer-led demonstrations on best animal husbandry management practice, e.g. brooding, perch stands in coops, nest beds/boxes and balanced rations</li> <li>Departments to facilitate guinea fowl value chains' development</li> </ul>
<b>Producer</b>	<ul style="list-style-type: none"> <li>Improve housing with more space, feeding and water troughs</li> <li>Grow and sell at age 8-18 months</li> <li>Plan breeding and sales</li> </ul>	<ul style="list-style-type: none"> <li>Form a district-level guinea fowl farmers' value chain management and development committee to liaise with customers, input suppliers and service providers; develop business plans; facilitate capacity building; negotiate contracts; assist in establishing standards/specifications; plan and develop production plans; arrange to sell in bulk by collecting from individual members to meet orders and so ensure consistent and reliable supply of high specification birds. Membership must be restricted to those with appropriate skills and attitudes.</li> <li>Segment and specialise production into                             <ul style="list-style-type: none"> <li>layers/eggs</li> <li>growers/meat</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Form a regional-level guinea fowl value chain body to coordinate and champion guinea fowl chain actors in the region and country; scout for support and grants to build members' capacity; lobby policymakers for support and investment in guinea fowl; conduct market research to inform production parameters; conduct needs assessment to inform capacity building; develop standardized product specifications and value-based pricing systems; introduce branding</li> </ul>
<b>1st level aggregator-communities (micro)</b>	<ul style="list-style-type: none"> <li>Reduce overstocking in carriers</li> <li>Use feeding and watering troughs</li> <li>Dispose of dead birds immediately</li> </ul>	<ul style="list-style-type: none"> <li>Improve cages and carrying capacity</li> </ul>	<ul style="list-style-type: none"> <li>Join the guinea fowl value chain body</li> </ul>
<b>2nd level aggregator-Market (meso)</b>	<ul style="list-style-type: none"> <li>Reduce overstocking in carriers</li> <li>Use feeding and watering troughs</li> <li>Dispose of dead birds immediately</li> <li>Routinely clean cage</li> </ul>	<ul style="list-style-type: none"> <li>Improve cages and carrying capacity</li> <li>Provide balanced rations</li> <li>Reduce holding of birds</li> </ul>	<ul style="list-style-type: none"> <li>Arrange and sell to processors after five days in holdings</li> <li>Join the value chain body</li> </ul>
<b>3rd level aggregator (macro)</b>	<ul style="list-style-type: none"> <li>Reduce over-stocking carriers</li> <li>Dispose of dead birds immediately</li> </ul>	<ul style="list-style-type: none"> <li>Enhance cages</li> <li>Improve cage carrying capacity</li> <li>Provide balanced rations</li> <li>Lobby for investment in market infrastructure such as clean water and sanitation</li> </ul>	<ul style="list-style-type: none"> <li>Arrange and sell to processors after five days in holdings</li> <li>Join the value chain body</li> </ul>
<b>Processors</b>	<ul style="list-style-type: none"> <li>Improve withholding pen space</li> </ul>	<ul style="list-style-type: none"> <li>Ensure inspection of birds and meat by state-mandated institutions e.g. environmental and veterinary personnel</li> </ul>	<ul style="list-style-type: none"> <li>Join the value chain body</li> </ul>
<b>Barbecue operator - Kebab</b>	<ul style="list-style-type: none"> <li>Ensure inspection of birds after slaughter by state-mandated institutions, e.g. environmental and veterinary personnel</li> </ul>	<ul style="list-style-type: none"> <li>Differentiate products, for example, spicy, non-spicy and salt-free</li> </ul>	<ul style="list-style-type: none"> <li>Join the value chain body</li> </ul>
<b>Mobile vendors</b>	<ul style="list-style-type: none"> <li>Ensure inspection of birds and meat before and after slaughter by government institutions</li> </ul>	<ul style="list-style-type: none"> <li>Ensure safety of product by covering to prevent exposure to flies which might contaminate product</li> </ul>	<ul style="list-style-type: none"> <li>Join the value chain body</li> </ul>
<b>Fresh and roasted meat</b>	<ul style="list-style-type: none"> <li>Ensure inspection of birds and meat before and after slaughter by government institutions</li> </ul>	<ul style="list-style-type: none"> <li>Conduct media education and branding on consuming Ghanaian and indigenous-grown products</li> </ul>	<ul style="list-style-type: none"> <li>Package product into:                             <ul style="list-style-type: none"> <li>half; mixed; varied cuts (drumsticks, wings, breast)</li> </ul> </li> <li>Join the value chain body</li> </ul>

## How Yakubu benefited from the course

"While I had used the term 'value chain' before, the course provided me with a deeper understanding of consumer-focused Value Chain Thinking and its practical application in agricultural project development and extension service delivery. The practical fieldwork of walking different chains in both Australia and Ghana and the face-to-face interaction with industry players showed that the concepts could be applied regardless of a chain's size or complexity."

"I also received valuable training in leadership, project management, and monitoring and evaluation, which are all increasingly critical to my work, and are now being applied in my daily activities."

Yakubu is now able to contribute to the Ghanaian government's emphasis on market-oriented agriculture. "I have started offering capacity building to staff using the course's Value Chain Thinking principles and tools for understanding consumers' preferences and then creating and delivering them; reducing waste, and building partnerships anchored on money flow and information sharing among chain actors."

Yakubu concluded, "I now sleep, dream and wake-up thinking how value chains' development in the livestock and poultry sector can be used as the panacea for income, food and nutrition insecurity for the poor, youth, women and marginalised in the poorest regions of Ghana."



**Ibrahim Adam: A guinea fowl market chief and wholesaler, aggregates from small-holder producers and middle persons for hotels and processors in the chain**



Yakubu in Napagyili with Alhassan Abdul Majeed, a middle person who adds value and makes extra cash by supplying ready to cook guinea fowl meat for restaurants and 'chop bar' operators when orders are placed

## Australia Awards Short Courses

Australia Awards Short Courses are funded by the Australian Government and help to promote security and prosperity. They enable mid-career professionals and emerging leaders to tap into Australian expertise and gain valuable skills and knowledge. Australia Awards Short Course build enduring links between people and institutions both within Australia and in-country. They provide opportunities for recipients to undertake short-term study, research and professional development in support of key development and foreign affairs priorities.

Australia Awards Short Courses is a tailored program that aims to create skills development through short-term post-graduate training courses of three months or less that are delivered in Australia and/or the country or region specific to the course.

## Australia Awards Short Course – Agribusiness 2018

The Agribusiness Short Course, designed by The University of Queensland's International Development unit specifically for participants from 15 African countries, provided learning experiences related to Agribusiness to enhance participants' ability to engage with and influence challenges regarding sustainable economic development in their home country, profession, workplace and community. Key features included using value chain methodology as the context around which the curriculum is delivered. The program balanced content and experiences to maintain engagement and interest, and enabled participants to access value chains of major Australian agricultural industries from a South-East Queensland training base. Furthermore, the course collaborated with African partners during the course design phase to ensure participants were supported upon their return to Africa.

The course comprised of 8 x 1 week long learning modules:

**Week 1** – The Value Chain in Context; **Week 2** – Value Chain Innovation in Practice; **Week 3** – Smallholders and Small Business; **Week 4** – Public Sector Perspectives; **Week 5** – Analysing and Improving the Value Chain; **Week 6** – Professional Skills for Agribusinesses; **Week 7** – Value Chain Development in African contexts; **Week 8** – Rapid Value Chain Analysis.

Participants developed a Reintegration Action Plan (RAP) which detailed a unique project outlining an area of change that they will be addressing when returning to their organisation. These projects are devised with the expert knowledge and learnings gained from the course and enable the Course Leader, International Development and Australia Awards to monitor and provide feedback during various stages of the project.