



Australia Awards



Australia Award –Africa
2016 Agribusiness Short Course Award

TOMATO VALUE CHAIN IN THE GREATER ACCRA REGION OF GHANA



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Social Entrepreneur

Nicholas is a social entrepreneur who has great passion for agriculture. He is passionate about the transformation of Africa's agricultural production, processing and marketing using the value chain management approach. He uses his knowledge and skills in agricultural value chain development, and entrepreneurial spirit to inspire and empower smallholder farmers, young people, companies and organizations to initiate and attain growth.



Ungraded tomatoes

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 <http://aciar.gov.au/publication/mn178>.

HIGHLIGHT

Nicholas' project highlights the systemic recommendations which can be made from comprehensively mapping a value chain and examining interdependencies among chain actors, and so identifying the need for upgrading activities across the chain, rather than treating them in isolation. He also proposes a journey of incremental improvements - 'start small; small steps' - to build the chain gradually in line with existing attitudes.

CONTEXT

Tomatoes are the second most consumed vegetable in Ghana. Although the population consumes about 3 million tonnes a year, only 30% are grown domestically. Ghana is also a major importer of tomato paste - over 78,000 tonnes annually.

Tomato farmers are generally smallholders who own or rent up to 1.5 hectares. The most intense areas of tomato cultivation are limited by access to water and rainfall patterns. Nick's project focused on Tuba, a district in the Greater Accra Region which includes irrigation facilities for around 220 hectares. Production is seasonal, with gluts during the rainy season, postharvest losses of at least 20% mostly due to poor seed quality, excessive use of fertilizer and chemicals, poor harvesting practices and poor handling during transport.

APPROACH

Nick started by conducting three consumer focus groups in the capital, Accra, with a total of 24 people drawn from different socio-economic backgrounds. He followed this up with individual consumer interviews and shopper observations. Next he interviewed retailers (4), wholesalers (2) and middlemen at four different markets; conducted two focus groups and additional in-depth interviews with farmers; met four input suppliers (seeds; fertiliser; irrigation and private extension services) and had discussions with three government agencies covering agribusiness, crop science and irrigation.

UNDERSTANDING THE MARKET

Some Ghanaian consumers are becoming sophisticated in their demand for quality products, and are ready to pay a premium for goods that meet their preferences. Nicholas reports that "The focus groups revealed that shoppers' decisions are driven by taste, freshness, texture, colour and traceability. Supermarkets are responding to the needs of their high-end shoppers, who are willing and able to pay for quality and healthiness."

MAPPING THE CHAIN

Producers do not plan production. They cannot afford to take advantage of the irrigation facilities, and so miss out on the more lucrative dry season market. They pack into 10kg and 20kg wooden boxes which result in a lot of waste. They have no sorting, grading or storage facilities. Wholesalers have to grade, repackage and store tomatoes for their clients. They also incur costs of storage and transport, especially during the dry season.

Nick highlights that, "Farmers lack any market information, so they cannot factor in those issues and insights into decisions on what and how to grow."

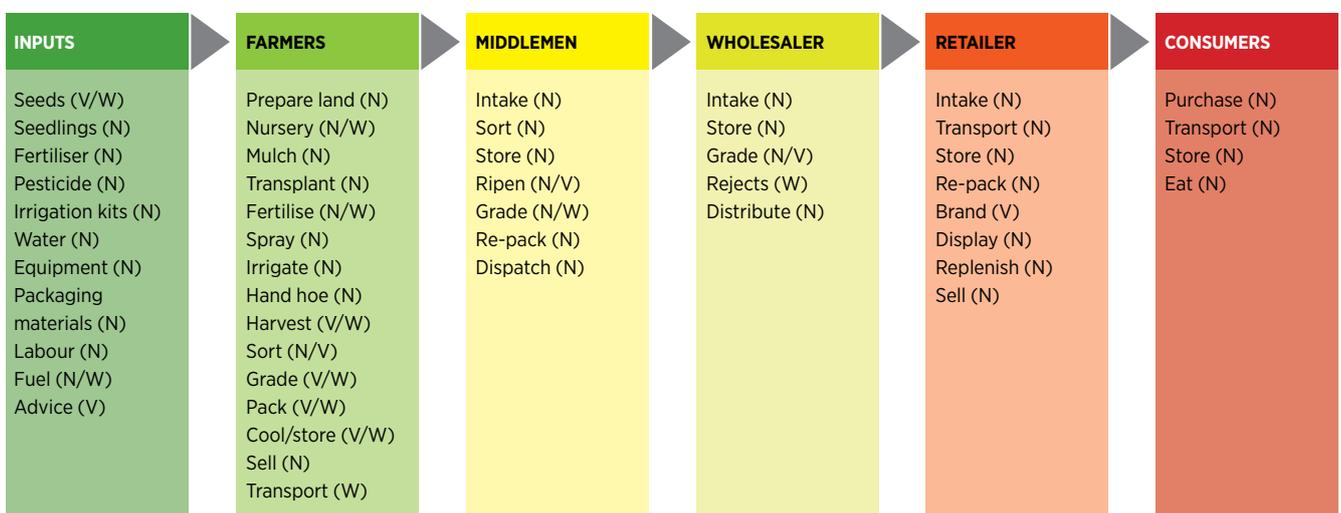
Input suppliers are more focused on large commercial farms, so have only a transactional relationship with smallholders. There is very limited information sharing about the suitability of varieties for particular seasons or production conditions. Hence, given the price of inputs, farmers resort to locally produced and stored seeds.

Middlemen wield most of the power in the chain. They are the direct link between farmers and urban markets. "They constitute a strong cartel of market traders that controls the distribution network of fresh tomatoes to the market, determining the number of crates each farmer can bring to the market on market days as well as dictating the price to farmers. They have strong relationships with wholesalers and retailers, but do not share information with producers to enhance productivity and efficiency with the chain." As a result, market forces do not apply, reducing the incentives for efficiency and effectiveness upstream. And given the distance to market, most farmers rely on middlemen to collect their tomatoes, and "If these traders do not show up, farmers leave them to rot in the field because there is insufficient local demand."

Wholesalers have to re-grade and re-pack produce because farmers and middlemen have failed to do this in line with retailers' specifications. They incur storage and transport costs because the chain is not coordinating production and harvesting in line with market demands. "All these unnecessary costs mean the chain has less money left to offer incentives to encourage beneficial behaviour, so it remains dysfunctional."

In the absence of a high performing chain with whom to build a long term relationships, retailers are largely transactional.

"Overall, there is little market orientation, low levels of investment and lack of organisation amongst farmers or along the chain".



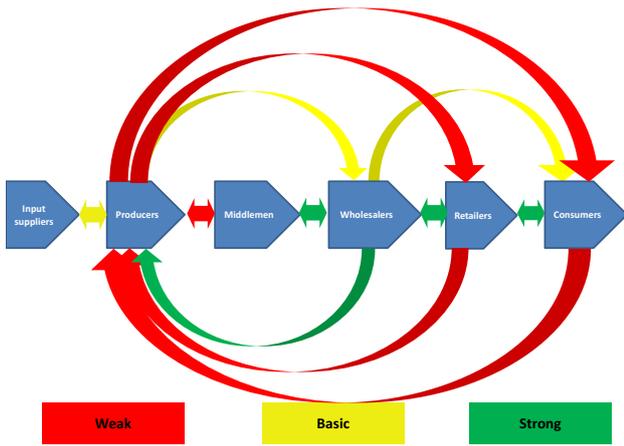
Key

V = activity with scope to create consumer value

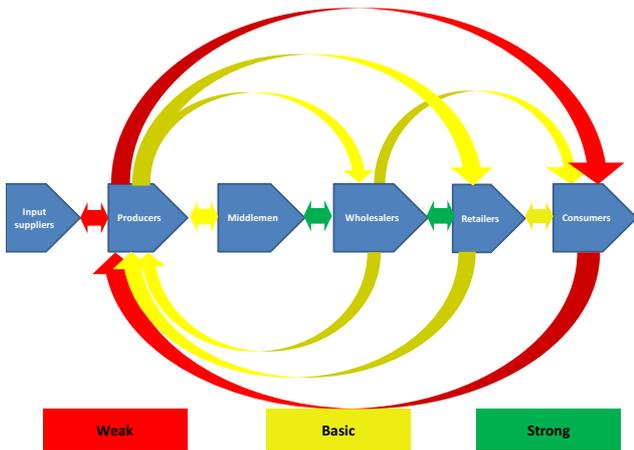
W = activity currently creating waste

N = necessary but non-value creating activity

Map of Information Flow



Map of Relationships



FINDINGS AND RECOMMENDATIONS

Nick explained that, "I categorized my recommendations into short, medium and long term, based on time, difficulty and cost implications in implementing them." His proposals are shown in the matrix. Nick started by delivering training on leadership and teamwork, and on production planning and record keeping. "However, the biggest challenge – and biggest reward - will be achieving enough of the recommendations that the local chain can become preferred suppliers for supermarkets, so the farmers can benefit from those higher value markets."

High ↑ Impact ↓ Low	Research into suitable high yielding seed varieties	Establish a pack mini-sorting center or terminal for post-harvest activities	Pilot production solutions (protected environments, green house)
	Increase trial cultivation of developed varieties	Introduce the use of plastic crates at the farm, including a system for returning them for re-use	Pilot preservation solutions (drying, cold storage, bulk purchasing, mini local processing equipment)
	Training on production planning, record keeping, harvesting and post-harvest solutions	Establish partnership between farmers and tomato traders associations, wholesalers and retailers for sale of produce	Develop quality and food safety certification system to communicate valued attributes to consumers
	Training on leadership and teamwork dynamics	Coordination of marketing activities of produce	Develop and implement M&E system
	Meeting with farmers on cooperation	Coordination of procurement of inputs and equipment	
	Meetings with all relevant actors of the value chain on the benefits of collaboration, and present consumer research findings and implications	Coordination of production activities; monitoring, evaluation and feedback, including from retailers to farmers to improve quality and reliability	
	Low → Difficulty → High		
	Do it now	Do it soon	Do it later

LESSONS

Nick's advice to others is that it needs a collaborative mindset to get all actors on board. "The key role of relationships among actors is very important, and so I found that it was imperative to get a number of actors who are willing to participate and committed to work together. Even then, it involves a lot of time and effort in planning to get the desired results."

He also learnt that it is critical to walk the chain, starting from consumers and then working upstream to input suppliers. "Understanding consumers' different preferences must be the starting point."



Seed shop



Australia Awards

AUSTRALIA AWARDS

The Australia Awards, delivered under the Australian aid program managed by the Department of Foreign Affairs and Trade, are prestigious scholarships offered by the Australian Government to individuals who have the greatest potential to drive development in their country and become leaders in their chosen field. Australia Awards contribute to the achievement of development objectives across a range of sectors and are a feature of nearly all of Australia's bilateral aid programs. The Australian Government works closely with its partners in developing countries to ensure that Australia Awards support the development priorities of each country.

They aim to:

- develop capacity and leadership skills so that individuals can contribute to development in their home country;
- build people-to-people links at the individual, institutional and country levels.

Australia Awards' Short Courses are 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: <http://australiaawards.gov.au>

Australia Awards Scholarships: dfat.gov.au/people-to-people/australia-awards/Pages/australia-awards-scholarships

AUSTRALIA AWARD –AFRICA 2016 AGRIBUSINESS SHORT COURSE AWARD

The Agribusiness Short Course Award, designed by UQ International Development (UQID) specifically for Awardees from 10 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 Awardees 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 – Business Development; Week 8 – Rapid Value Chain Analysis.

Awardees developed a Work Plan on Return (WPR) 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, UQID and Australia Awards to monitor and provide feedback during various stages of the project.