



Special Issue



African Agribusiness on the Move

Case Studies on Food and Agribusiness Success in Africa




We dream of a better way to feed Africa

At Alltech we strive to nourish the world while protecting its natural resources. Our scientific curiosity has led us to discover natural, nutritional solutions for animal and human health. Our exciting innovations in algae, crop science, nutrigenomics and farming are enabling our partners worldwide to produce more and healthier food... naturally.

Alltech®
Nourishing the world. Naturally.

Alltech.com

 [AlltechNaturally](https://www.facebook.com/AlltechNaturally)

 [@Alltech](https://twitter.com/Alltech)



International Food and Agribusiness Management Review

African Agribusiness on the Move

Case Studies of Food and Agribusiness Success in Africa

This Special Issue was made possible through the generous support of





International Food and Agribusiness Management Review

Editorial Staff

Executive Editor

Peter Goldsmith, University of Illinois, USA

Regional Managing Editors

Asia, Australia, and New Zealand

Murray McGregor, University of South Australia, Australia

Nicola M. Shadbolt, Massey University, New Zealand

Europe

Jacques Trienekens, Wageningen University, The Netherlands

Vera Bitsch, Technical University of Munich, Germany

Alessio Cavicchi, University of Macerata, Italy

Diogo Souza Monteiro, University of Kent, United Kingdom

Yuliya Bolotova, Clemson University, USA (E. Europe)

North America

Ram Acharya, New Mexico State University, USA

Corinne Alexander, Purdue University, USA.

Vincent R. Amanor-Boadu, Kansas State University, USA

Mark Hansen, Brigham Young University, USA

David Van Fleet, Arizona State University, USA

David Sparling, The University of Western Ontario, Canada

R. Brent Ross, Michigan State University, USA

Cheryl Wachenheim, North Dakota State University, USA

South America

Joao Martines-Filho, Universidade de São Paulo, Brazil

Africa

Ajuruchukwu Obi, University of Fort Hare, South Africa

Editorial Board

Filippo Arfini, *Universita' di Parma, Italy*

Stefano Boccaletti, *Universita' Cattolica, Italy*

Michael Boehlje, *Purdue University, USA*

Fabio Chaddad, *University of Missouri, USA*

Dennis Conley, *University of Nebraska - Lincoln, USA*

Francis Declerck, *ESSEC Business School, France*

Hamish Gow, *Massey University, New Zealand*

Jukka Kola, *University of Helsinki, Finland*

Jay Lillywhite, *New Mexico State University, USA*

Woody Maijers, *INHOLLAND University, The Netherlands*

Marcos Fava Neves, *FEA / USP / PENSA, Brazil*

Onno Omta, *Wageningen University, The Netherlands*

Hernán Palau, *Buenos Aires University, Argentina*

Christopher Peterson, *Michigan State University, USA*

Thomas Reardon, *Michigan State University, USA*

Mary Shelman, *Harvard Business School, USA*

Johan van Rooyen, *University of Stellenbosch, South Africa*

Table of Contents

Introduction: Africa Land of Bright Promise

African Agribusiness on the Move	5
Editors' Introduction <i>Mandla Nkomo, Mary Shelman, and Aidan J. Connolly</i>	
A GLIMPSE into the Future: A Lens through Which to Consider 'Africa's Rising' <i>Aidan J. Connolly</i>	9
Towards 2050: Trends and Scenarios for African Agribusiness <i>C.J. Van Rooyen</i>	19

Chapter 1. International Specialty Markets

Rooibos Ltd.: Turning Indigenous Products into Business Opportunities <i>Nick Vink, Martin Bergh, and Barbara M. Novak</i>	43
Harnessing the Power of Africa's Sun to Produce Healthy Products for International Markets: The Case of Fruits of the Nile (FON), Uganda <i>Fred Yamoah, Adam Brett, and Ian Morris</i>	49
Bee Natural Uganda: Unlocking the Potential of Smallholder Farmers in the West Nile <i>Margaret Lynch, Edward Mabaya, Elena Bussiere, and Matthew Willigerd</i>	57
Ele Agbe in Search for a New Light in Ghana's Shea Sector <i>Rita Abban, S.W.F. Omta, John B.K. Aheto, and Victor Scholten</i>	63
Wild Fruits of Africa: Commercializing Natural Products to Improve Rural Livelihoods in Southern Africa <i>Edward Mabaya, Jose Jackson-Malete, Gretchen Ruethling, Casandra Marie Carter, and Jack Castle</i>	69
Conflict Resistant Agribusiness in Democratic Republic of Congo <i>Shahriar Kibriya, Vincente Partida, Joseph King, and Edwin Price</i>	75

Chapter 2. Cooperatives Creating Opportunity

Inclusiveness of the Small-Holder Farmer Key Success Factors for Ethiopian Agribusiness Development <i>Marc Steen and Woody Maijers</i>	83
Building a Better Livestock Market in Benin and a Safer, More Reliable Food Supply <i>Eric A. Newman and Mark D. Newman</i>	89
From Economic Vulnerability to Sustainable Livelihoods: The Case of the Oromia Coffee Farmers Cooperatives Union (OCFCU) in Ethiopia <i>Tadess Meskela and Yalem Teshome</i>	103

Chapter 3. Innovation in Practice

Agribusiness Model in Africa: A Case Study of Zambeef Products PLC	111
<i>Lal K. Almas and Oladipo Obembe</i>	
Building Professional Capacity in the Livestock Industry Through ITC in East Africa	117
<i>Tricia Beal, Francesco Braga, and Bayella Thiam</i>	
Dala Foods Nigeria Limited: Effective Product Development and Management in Nigeria	125
<i>Musa K.K. Gambo and Ali Madugu Safiyau</i>	
Adding Value to Aquaculture Products: Kati Farms (Uganda) Ltd.	131
<i>Jean-Joseph Cadilhon and Lovin Kobusingye</i>	

Chapter 4. Human Capital Development

The Journey from Subsistence to Commercial Viability: The Case of Meru Herbs, Kenya	139
<i>Fred Yamoah, Conall O’Caoimh, Christina Donnelly, and Sally Kimotho Sawaya</i>	
Practicing Ergonomic Balance in Order to Avoid the Inevitable Addiction to Cheap Labor: The Case of Greenway Farms	145
<i>Vito Rugani and Peter Goldsmith</i>	
Agribusiness as the Anchor: The Role of KijaniAgro	153
<i>Michael L. Cook, Rebecca Savoie, and Ronen Almog</i>	

Chapter 5. Adding Value Locally

Woolworths Farming for the Future	161
<i>Lucy King and Suzan Thobela</i>	
Inclusive Agribusiness Models for Africa: The Case of an Innovative Initiative by TechnoServe in Zimbabwe	167
<i>Maxwell Mutema and Pamela Chiromo</i>	
Commercial Agricultural Production in Tanzania: Mountainside Farms Limited	175
<i>John Y. Simpson and Qing Yang Cheong</i>	
Irvine’s: Developing Business and Communities in Zimbabwe	181
<i>Patrick Murphy and Sarah Gentry Aubry</i>	

Chapter 6. Achieving Scale through Exports

The Export Trading Group: Unlocking Africa’s Agricultural Potential	187
<i>Disha Maheshkumar Petal</i>	
Tru-Cape Fruit Marketing, South Africa: Managing the Export Market Diversification Challenge	193
<i>Wilma Viviers, Marié-Luce Kühn, Ermie Steenkamp, and Brian Berkman</i>	
Growth in a Globalized Industry: The Case of Hillside Green Growers & Exporters Ltd.	199
<i>Edward Mabaya and Laura Cramer</i>	
HomeVeg Tanzania: Managing a New Strategy Amidst GLIMPSE Challenges	205
<i>Theresa Dominic, Ludwig Theuvsen, Mussa Mvungi and Ray Ufunguo</i>	



International Food and Agribusiness Management Review
Volume 17 Special Issue B

African Agribusiness on the Move

EDITORS' INTRODUCTION

Mandla Nkomo[Ⓐ], Mary Shelman^ᵇ, and Aidan J. Connolly^ᶜ

[Ⓐ]Operations Director, TechnoServe (South Africa), 13th Floor, Metal Box Building, 25 Owl Street, Auckland Park, 2092, South Africa

^ᵇDirector, Agribusiness Program, Harvard Business School, Boston, Massachusetts, 02163, USA

^ᶜVice President Corporate Accounts, Alltech, Sarney, Summerhill Rd., Dunboyne, Co Meath, Ireland and Adjunct Associate Professor of Marketing, UCD Michael Smurfit Business School, Dublin, Ireland

It is said that Africa only experiences two seasons, wet and dry! The wet season is anticipated with both hope and anxiety. If the rains do not come, it can spell a very long and difficult dry season. When the rains do come, vegetation, birds, flying ants, and of course, the bullfrogs celebrate. The greeting among Sotho communities in Southern Africa reflects this. “Pula! Nala! Let it rain! Let there be bounty!” Nothing beats the smell of coming rain, of wet soil responding to raindrops. It reflects hope.

Like the rainy season, this decade is a similar time for Agribusiness in Africa. Hope is in the air and we anticipate the start of a coming new season of bounty. African Agribusinesses are on the move! Pula! Nala! Agribusiness succeeds when there is strong and growing demand. Eighteen months ago, the Economist coined the phrase “Africa Rising: The Hopeful Continent” to reflect a decade that will see personal incomes rise by over 30%. The agri sector has struggled to meet the growing demand of an affluent consumer class and Africa needs a vibrant agribusiness industry, well oriented to produce efficiently and effectively.

[Ⓐ]Corresponding author: Tel: +27114826005.4.1

Email: M. Nkomo: mnkomo@tns.org

M. Shelman: mshelman@hbs.edu

A. J. Connolly: aconnolly@Alltech.com

The World Bank and the United Nations are among those who have pointed out that the agricultural sector can have the biggest impact on reducing rural poverty; therefore it's a developmental imperative that growth occur in this sector. The World Bank's report "Growing Africa: Unlocking the Potential of Agribusiness" (March 2013) suggests that by 2030 the food market on the continent will be \$1 trillion. This will be driven by the anticipated rapid urbanization of the continent, as for the first time more than 50% of Africans will be living in cities. McKinsey's "Lions on the Move" (June 2010) also suggests that there will be over 128 million African families with discretionary income by then. The impact of this will be a change in how food is consumed on the continent, the form in which it needs to be available, and the places it will be sold.

The entire agricultural system will need to adapt and respond to these fundamental changes. Markets for inputs such as seeds, fertilizers, and agrochemicals will be needed to meet increased demand as producers adopt modern farming approaches and respond to the need for more food to be produced per hectare. Research into new varieties and production practices can ensure that African staples such as maize, sorghum, cassava, plantains, sweet potato and yams can be produced at optimal levels. Producers will also need to respond to the mechanization challenge. How do we take sophisticated technologies and adapt them to the African context?

Food processing will move from the home to organized factories and modern warehousing facilities as a response to urbanization. Are companies stepping up to this challenge and changing the game? The need for better processing facilities has no better demonstration than the quantity of post-harvest losses in Africa. The "last mile" of distribution for food and food products will also experience a radical change, with supermarkets or more formal trading facilities taking over from wet markets and traditional distribution networks.

Is the agribusiness sector geared up to respond to this opportunity? Do we have the requisite strategic thinkers, business leaders, entrepreneurs, skilled personnel and implementers on the continent or those willing to invest in Africa? Can African and outside investors in Agribusiness overcome the GLIMPSE factors that have made African business success so difficult in the past? This Special Issue of the IFAMR offers examples and case studies showing that progress is being made in the right direction.

Retailers like Woolworths are expanding their offerings while focusing on building sustainable supply chains. At the same time, primary producers like Rugani carrots are redefining how fresh produce is grown and delivered to highly urbanized markets. African Agribusiness is on the move and continues to be responsive to the changes and the growing opportunity in the food sector.

Exporters of commodities like the Oromia coffee cooperative (Ethiopia) and HomeVeg (Tanzania) are proving the point that even export-orientated value chains still have a significant role to play in supplying global markets that continue to experience growth in the demand for responsibly produced and unique products.

Global companies are also taking the lead in adopting their business models to respond to uniquely African market conditions, with much success. Others like Irvine's (Zimbabwe) and Zambeef (Zambia) provide interesting templates of how African companies may build a solid business in the midst of complex market conditions by being responsive to local consumer demands and leveraging global expertise. This example is also similar to the experience of the Ugandan fish processing business Kati Farms which has responded to a need by producers for a differentiated outlet for their fish production.

There is a lot to learn and a lot to share in this unfolding story of African Agribusiness on the Move. To paraphrase the United Nations, “scaling-up agribusiness in 2014 will be Africa’s next growth frontier,” increasing incomes, increasing productivity and reducing waste. Businesses freed from restraints defined by GLIMPSE factors can be a force for positive change, making it possible for Africa to produce food efficiently and cheaply and therefore feed itself and perhaps feed the rest of the world as well.

This Special Issue provides plenty of evidence of that progress. We have compiled cases from across the continent, experiences from West and East Africa, insights from the South and Central Africa, written by entrepreneurs, academics and development practitioners. These cases are real companies overcoming real challenges, successfully. These stories deserve to be told but also they provide a road map for others waiting for the rains to arrive. Pula! Nala!



International Food and Agribusiness Management Review
Volume 17 Special Issue B

A GLIMPSE™ into the Future: A Lens through Which to Consider ‘Africa’s Rising’

Aidan J. Connolly

Vice President Corporate Accounts, Alltech, Morrison St. NW, Washington, DC, USA
Adjunct Associate Professor of Marketing, UCD Michael Smurfit Graduate Business School, Dublin, Ireland

Abstract

By 2050, there will be two billion more people living on the African continent. GLIMPSE™, an acronym that was introduced in this journal in 2012, identified the seven biggest obstacles to providing enough food to feeding the nine billion people who will be living on earth in 2050. Here, we review the GLIMPSE™ challenges specifically in an African context, examining how they apply and in what ways agribusiness can contribute to meeting these challenges. The paper places agribusiness alongside governments, non-governmental organizations and charities as important players in addressing the ‘wicked’ problem of feeding the growing population, and identifies specific areas where agribusiness can make a difference.

Keywords: African agribusiness; food supply; science, innovation, economy

Corresponding author: Tel: + 1.859.494.3978

Email: A. J. Connolly: aconnolly@alltech.com

Just over 18 months ago, an article in this journal (Connolly & Phillips Connolly 2012) used a modified Delphi approach (involving survey, interviews with a panel of two dozen agribusiness experts and independent research) to identify seven key barriers that impede the ability of agribusiness to meet the food needs of the rapidly growing number of people on earth. Collected under the acronym GLIMPSE™, these seven factors help frame the obstacles and identify the opportunities of trying to feed 9 billion people:



Since then, the interest in the potential of African agribusiness has led to the Economist magazine coining the phrase ‘Africa rising’, referring to Africa’s economic growth in general, the role of agribusiness in particular, and the importance of the increasingly urban population. The World Economic Forum also recognizes the importance of agriculture, noting that the ten countries which have invested 9-10% or more of their budgets in agriculture are on track to reduce extreme poverty by 50% by 2015 (Suzman 2014).

As the majority of the population growth is expected to be in sub-Saharan Africa, it is useful to get a GLIMPSE™ of the region.

Introduction

GLIMPSE™ was driven by the recognition that the population of the world is due to increase by 50% in the next 30 years, from 6 billion to 9 billion people. Sub-Saharan Africa alone will account for 1/3 of that growth, as the population more than doubles from over billion in 2013 to at least 1.9 billion in 2050 (World Population Review 2014).

The region also has a very young population, with nearly half the population under the age of 25 in some states—a young population that will soon make up the world’s largest work force. (World Population Data Sheet 2013). In 2013, six of the top 10 fastest-growing economies in the world were in Africa, including the No.1 and No. 2, South Sudan and Libya, with GDPs of more than 30% and 20%, respectively (International Monetary Fund 2014).

Overall, the continent has averaged GDP growth of 5% annually throughout the past decade, and that pace is expected to continue, with GDP projected to triple by 2030, and achieve a sevenfold increase by 2050 (International Monetary Fund 2014).

Moreover, Africa has ample land: along with South America, it is the continent with the most potential for the development of new agricultural land and (outside the Sahara Desert) much of the continent has ample water resources. Thus, it has the potential to produce not just enough food to meet the needs of its own population, but to help meet the demands of the global population.

The United Nations' Economic Commission on Africa says that 'scaling up agribusiness should be Africa's next growth frontier' (Lopes 2014). The question is, can Africa achieve its own version of the Brazilian "miracle of the cerrados"? And if so, what steps are needed?

Despite The Economist's optimistic headline 'Africa Rising: The Hopeful Continent' the obstacles identified under the GLIMPSE™ model account for much of the failure of food production and farm prices to keep up with the overall growth rate in the continent's economies. The continent needs not just growth but transformation: much of the economic growth has come from extractive industries, rather than building a business environment that adds value. As a result, growth has failed to produce jobs and in turn a strong middle class has been slow to develop. Agribusiness can help effect that transformation.

It will take change on the part of virtually every constituent in the food chain—governments, nongovernmental organizations (NGOs), farmers, agribusiness and consumers—to successfully solve this wicked problem. It will also take cooperation, among these constituent groups, but it can be done.

Agriculture in Africa

Nearly three-quarters of the population of Africa rely on agriculture for their livelihoods (UNdata.org), and agribusiness and agro-industries account for more than 30% of national incomes, as well as the bulk of export revenues. Yet, "agribusiness" is often seen as being part of the problem, pursuing short-term gains at the expense of human development and the environment. NGOs in particular often see the interests of agribusiness as being in direct conflict with the interests of the population. For example, Greenpeace has argued that sustainable agriculture can deliver food for 9 billion people- if governments will listen to people, not agribusinesses (Oram 2012). We take a different perspective: that market-driven, private-sector solutions can not only complement the efforts of governments and NGOs, but also play an essential role in meeting the challenge.

Some of the GLIMPSE™ factors are equally intractable for governments, NGOs / charities and agribusiness, such as volatile weather (including climate change) and changing eating habits. Others, such as political or economic instability, require government action. Some challenges pose issues for which agribusiness can play a limited, but important role (such as regulations, resources, and infrastructure). However, there are some challenges for which agribusiness is actually the best hope for progress, most notably in supply chain management, markets and innovation.

The original GLIMPSE™ paper looked at these factors through a global lens. Here, we review the factors that are particularly relevant to Africa, with an emphasis on the role of agribusiness. Examples of some of these elements that are already in play are also noted.

Government

Africa, both within and between the various countries, faces substantial problems with government bureaucracy and regulations. In particular, in many countries, the cost of establishing and operating a business and transporting goods across borders is a serious barrier to growth. Some complexity is inevitable, given that there are more 50 countries included as part of the African continent, whose peoples speak more than 1,000 languages.

The World Bank estimates that African farmers could grow enough food to feed the continent—and generate an estimated \$20 billion in earnings for their countries—if policy makers can agree to lift cross-border restrictions, simplify the rules and fees involved in food trade, and permit uncultivated land to be put into use.

Progress is being made, and in many countries, red tape is being reduced (Global Post 2012). Rwanda, South Africa, and Botswana are now rated as in or near the top 50 (of 189) easiest countries in which to do business (International Finance Corporation 2014). However, there is considerable scope for improvement: virtually all of the bottom 20 countries are in sub-Saharan Africa. To do something as simple as finding out the types of documents that are required to ship a container abroad, or what the fees are, requires a meeting with an official in most African countries (Ship Overseas 2014).

A number of regional initiatives among the countries of Africa, such as the African Union (which aims to transform the African Economic Community, a federated commonwealth, into a state under established international conventions), have sought to address such challenges. The AU's goals include an African Renaissance and an end to hunger on the continent by 2025. Within those goals, progress is being sought to promote peace and reduce red tape (African Union 2014).

In addition to laws, government corruption (whether informal payments that 'expedite' government paper work or larger payoffs for contracts), or simply being told with whom one can do business raises the cost of doing business.

Finally, property rights in most African countries are informal- it has been estimated that less than 10% of the continent's land is formally owned (The Economist 2004). This can make it difficult for investors to be confident that their investment is safe and legal, and leaves considerable scope for local leaders to make land deals at the expense of the local citizens. One example of a government working to alleviate these issues is Ghana, which is trying to create a land bank for investors (Reuters 2014).

However, there is also scope for agribusiness firms to work with both governments and citizens to establish efficient operations. EmVest, a diversified agricultural investment company operating in Sub-Saharan Africa, says that these challenges represent opportunities. EmVest grows an array of grains, vegetables and nuts on about 25,000 acres at 10 sites. From onions to melons and sugarcane, their "turf to table" operation – growing food for Africans and exporting some produce – is all about increasing food production while building relationships with governments and strengthening communities, according to their executive chair, Susan Payne (Susan Payne 2013). EmVest's business model includes employing farm managers and local farm workers, but also includes ensuring access to fresh water, electricity, job training, medical services and other benefits for the African communities in which it operates.

Another challenge for governments is keeping up with changing technology. Whether it is approval of a new type of crop protection chemical or regulation of the ownership of data collected in a field, agriculture requires dealing with complex scientific and legal matters.

This is a challenge that agribusinesses are in a good position to help address: not only do companies have a direct interest in having their innovations accepted, but scientists in the agribusiness community are well-positioned to help reduce the scientific gap among industry, academia and government.

Losses

The UN's Food and Agriculture Organization estimates that one-third of all food produced globally is lost or wasted. Food waste in South Africa alone is estimated at 10.2 million tons a year (Babalola 2013). Post-harvest grain losses due to poor storage, transportation cause more than 15% of grain production to be lost (Aphlis 2014). A report from FAO/World Bank estimates that recovery of postharvest grain losses could meet the minimum annual food requirements of at least 48 million additional people (World Bank 2011). In a world with a rapidly growing need for food, reducing such losses at each stage of production, processing and distribution is obviously the first priority.

Losses in African countries can be largely attributed to on-farm issues (especially harvesting techniques); storage (in particular mold, insect and animal infestation) during post-harvest storage; transport (length of time from the farm to processing centers); and packaging and marketing. These are all areas in which agribusiness can be particularly helpful, as the large firms have substantial expertise in getting food safely and efficiently from farm to processors to consumers (ADM Institute for the Prevention of Postharvest Losses 2012).

Infrastructure

Infrastructure such as railways, highways, bridges, and ports are a core function of central government, due to the high costs, the need for standardization and sometimes cross-border issues. Given the perishable nature of produce, logistics is critical for agriculture, yet most of the continent lacks roads, railways, and navigable waterways. The example of Brazil, where large grain companies and farms built roads and ports, demonstrates that in the absence of government action, agribusiness can make the difference. Companies that supply smaller infrastructure needs, such as grain storage units or refrigerated trucks are even better positioned to provide solutions to postharvest–pre-consumer losses.

The Infrastructure Consortium for Africa (ICA) promotes increased investment in water, energy, transport and communications. Launched at the G8 Gleneagles Summit in 2005, ICA members include the G8 countries, the World Bank Group, the African Development Bank Group, the European Commission, the European Investment Bank and the Development Bank of Southern Africa. ICA is not a financing agency, but acts as a platform to catalyst donor and private sector financing of infrastructure projects (icafrica.org).

There are other infrastructural issues as well. For most regions, both the supply and quality of electricity and water are so variable that they act as fundamental barriers to growth. Similarly, poor banking and supermarket systems hinder the development of agribusiness in all its forms, including the food and beverage industries (Amadou 2014).

Markets

Markets present some of the biggest challenges to the food system. The issues are complex, and can involve a number of the GLIMPSE™ factors. Governments and their policies can raise barriers to trade, and poor infrastructure limits access to markets and customers. Price volatility may raise barriers to entry and makes longer term planning more difficult. Many markets are fragmented and lack transparency, leading to inefficient pricing, while some require middlemen, making markets less efficient. Small holders typically have difficulty accessing markets for cheap farm inputs (fertilizer, seeds, feedstuffs) and competitive markets for their food (Hoevel 2013).

In an effort to address the impediments at the government and policy levels, the African Union (AU) aims to harmonize conditions and promote trade within the African continent, along the same lines as the European Union. There currently are eight regional economic communities recognized by the AU, as well as at least a dozen other partnerships. Many countries are involved in multiple economic and trade partnerships.

Globally active agribusiness firms have experience in structuring a range of business, including partnering with local companies and in some cases, buying smaller, local companies to boost market efficiencies. These can be as simple as multi-year production contracts, or as complex as investment at several points in a supply chain. In some cases, it means overcoming behavioral constraints in markets, whether from old antagonisms, poor communication or simply the resistance to change along the food chain, from producer to consumer (Sanghvi 2011).

Policies

Most importantly, governments should pursue policies that support the private sector and the development of businesses by local entrepreneurs.

One of the areas most responsible for distortions in agricultural production and marketing is policy and regulation. Government policies frequently can help or hinder the development of productive and competitive agribusiness sector, and in many cases, governments have supported the wasteful use of resources or subsidize environmentally destructive practices. Governments can support the private sector and the development of businesses by local entrepreneurs by supporting and encouraging the use of modern hybrids of seeds or animals, ensuring the availability of fertilizer, supporting biofuels where appropriate, and encouraging the movement of goods, including imports and exports (All Africa 2014).

Whether blue (water) or green it is important for government policies to be specific and targeted. Too many initiatives can be counter-productive, as Liberia found when it created 21 separate initiatives across multiple sub-sectors (Sanghvi 2011). More targeted initiatives, involving key players in the private sector can be more effective. For example, Cote d'Ivoire and Ghana cut export taxes on processed goods, increasing the proportion of cocoa processed in-country from less than 10 percent in 2000 to nearly 50% today (Ibid).

Policies regarding the recognition of patents and the ability to protect intellectual property also have an effect on agricultural production in many regions. Best-yielding seeds may not be available in a country where there is no guarantee that a company's investment in developing them will be protected.

Finally, health and education policies are an important part of developing the human capital needed for realizing the potential of the agricultural sector. Extending more schooling to more children creates a workforce that is prepared for more complex agricultural processes. At least seven countries have increased the level of schooling by 5 years or more over the last 30 years- and Burundi has moved from an average of less than 2 years of schooling to 11 years (Altman 2012).

Science and Innovation

The benefits of the scientific breakthroughs of the "green revolution" of the 1960's and 70's (notably fertilizers, chemicals that reduced losses to weeds, insects and disease, and plant breeding) have plateaued. In the meantime, distrust and antagonism has grown between society and scientists. This has been fed by scandals such as BSE and Angel Dust in Europe; by growing global concerns about hormones in animals and antibiotics in

animal feed; by fears of corporate rapacity; and by uncertainty about gene technology. In particular, genetically modified organisms (GMOs) have become a proxy for being pro-environment and anti-corporate greed. More than half of the countries of Africa have ratified the Cartagena Protocol on Biosafety, an international agreement that “seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology” (Bch.cbd.int/protocol).

Two countries (Kenya and South Africa), require labeling of many GM foods based on undefined amounts or a cutoff of greater than 1%, while another five have mandatory labeling of some food. At least seven countries have rejected food aid if it includes GMO grain (Center for Food Safety 2013).

However, although much of the focus has been on GMOs, science has a lot more to offer to the countries of Africa, including microirrigation, precision farming (using GPS and Big Data) and the use of drones and sensors to precisely detect yield, fertility and moisture of soils. The development stages of agriculture in other regions can sometimes be shortcut by embracing the latest technologies.

Environment

Resource issues and their implications for the environment are only going to escalate as the pressure to feed 3 billion more people increases. Sound science is needed to produce earth-friendly methods of crop and animal cultivation and protection.

Both land use and water use increasingly pit cities against agriculture. Greater productivity is one answer. Another is making better use of marginal land, such as is occurring in Brazil. As noted in the introduction, these approaches are particularly relevant for the countries of Africa, which have vast, under utilized land resources. The African continent has the same population as India with 10 times the land mass; it has as much land as the United States, China, India and Western Europe, with 1/3 the population. It is estimated that 60% of the world’s uncultivated arable land is on the African continent (Briney 2014).

Obviously, there are also challenges. Africa is the hottest continent, and the only one to stretch from northern temperate zones to southern temperate zones, with climate ranging from tropical to subarctic (mountains). With terrain ranging from the Saharan Desert to rainforest, the availability of water is very uneven. Twenty-seven percent of its land is desert and 40% is dry land (Water Industry News 2014). Africa is losing forest at a pace of more than 4 million hectares a year, twice the global deforestation rate, raising fears of loss of diversity. The most promising new agricultural land is in the central and southern half of the continent, where water is more available and the plains are suitable for cultivation.

In many countries, water scarcity is widespread and represents a real threat. The UN Development Program projects that by 2025, almost half of Africans will be living in areas of water scarcity or water stress (defined as less than 1,000 cu. m./person/year), including Kenya, Morocco, Rwanda, Somalia and South Africa (UN Development Programme 2012).

On the other hand, some countries have readily available water. In Nigeria, 79% percent of the precipitation is “green water” that does not return to groundwater and rivers but will eventually evaporate or transpire through plants; 21% is “blue water” that has potential for societal use and environmental water flow (which is needed to sustain ecosystem services). There is substantial potential to increase withdrawal for irrigation and food

production: currently only 0.35% of water is used for irrigation and of that, nearly half represents return flow (UN Development Programme 2012).

Moreover, African interest in global climate change is strong. The potential to use solar power, implement hydroelectric power stations, and biofuels are all ventures with significant potential that are being undertaken throughout the continent (CGIAR 2014). The IFPRI has issued three reports on their estimates of the effect of climate change on farming in Africa (IFPRI 2013).

The challenge of creating more food from more difficult environments is one in which innovation, creativity and the desire to succeed that are characteristic of the private sector can be used to advantage, in Africa as elsewhere. Already, companies are at work, developing irrigation systems, building infrastructure and working with local farmers to improve yields, handling, storage and transportation.

Conclusion

Although “Africa” is sometimes referred to as a single unit, in fact it is arguably the most diverse of all the continents. The GLIMPSE™ framework, developed to help break down a ‘wicked’ problem (how to feed 9 billion people), is a useful way to look at both the general and the particular circumstances of the region.

Governments and government failure are typically seen as the root of the struggle for many African nations to produce enough food to feed their citizens, despite adequate natural resources. Not coincidentally, they also have been a decisive factor in the willingness to embrace investments by other countries. But there are success stories as well (World Bank 2014): policy reform in Ghana has led to strong growth in the cocoa sector, with more of the price reaching producers; in Rwanda reforms have transformed the coffee sector and boosted impacts and so on (ASFG 2014). The food and beverage industry on the continent is on course to top \$1 trillion USD (up from 300 billion) by 2030 (World Bank 2013). The expertise and resources of agribusiness firms, brought to bear on the GLIMPSE™ factors identified here can be an important part of the transformation of agriculture across the continent. Working with the best asset any country can have- its human capital, i.e. the people- creates stronger economies that are resilient through resource and commodity booms and busts.

References

- ADM Institute for the Prevention of Postharvest Losses. University of Illinois. 2012. <http://postharvestinstitute.illinois.edu/projects.html>.
- African Union. 2014. Introduction. <http://www.au.int/en/about/nutshell>. February.
- All Africa. 2014. Africa: Melding Science and Tradition to Tackle Climate Change. <http://allafrica.com/stories/201405231623.html>. May.
- Altman, Daniel. 2012. Africa's Human Capital. http://www.foreignpolicy.com/articles/2012/11/26/africa_s_human_capital. November.
- Aphlis. Estimated Postharvest Losses (%) 2003-13. March 2014. http://www.aphlis.net/index.php?form=losses_estimates.
- ASFG. Success Stories. 2014. <http://www.asfg.org.uk/success-stories/success-stories>
- Babalola, Elizabeth. 2013. Valuing South Africa's Food Waste. <http://environment.yale.edu/yer/article/valuing-south-africas-food-waste>.

- Briney, Amanda. 2014. Geography of the Countries of Africa. <http://geography.about.com/od/africamaps/a/countriesofafrica.htm>.
- Center for Food Safety. 2013. April. <http://centerforfoodsafety.org/report>.
- CGIAR. 2014. Climate-proofing major development efforts in East and Southern Africa. May. <http://ccafs.cgiar.org/blog/climate-proofing-major-development-efforts-east-and-southern-africa>.
- Connolly, Aidan and Kate P. Connolly. 2012. Can Agribusiness Feed 3 Billion New People...and Save the Planet? A GLIMPSE into the Future *International Food and Agribusiness Management Review* 15(B):139-152.
- Convention on Biological Diversity. 2014. The Cartagena Protocol on Biosafety. <http://bch.cbd.int/protocol>.
- Global Post. 2012. Best and Worst Countries to do Business in Africa. <http://www.globalpost.com/dispatch/news/regions/africa/120523/best-and-worst-countries-do-business-africa-interactive>.
- Hoevel, Michael. 2013. Global Food Security. "Linking African smallholder farmers to markets. <http://www.foodsecurity.ac.uk/blog/index.php/2013/06/linking-african-smallholder-farmers-to-markets/>.
- IFPRI. East African agriculture and climate change. 2013. <http://www.ifpri.org/publication/east-african-agriculture-and-climate-change>.
- International Finance Corporation. Economy Rankings. 2014. <http://www.doingbusiness.org/rankings>. May.
- International Monetary Fund. Regional Economic Outlook. 2014. April. <http://www.imf.org/external/pubs/ft/reo/2014/afr/eng/sreo0414.pdf>
- Lopes, Carlos. 2014. Scaling up agribusiness should be Africa's next growth frontier. <http://www.iol.co.za/business/news/scaling-up-agribusiness-should-be-africa-s-next-growth-frontier-1.1677361#.U49TsfbD-M8>.
- Oram, Julian. 2012. A New Direction for Agriculture. Greenpeace. <http://www.greenpeace.org/international/Global/international/publications/RioPlus20/New-Direction-for-Agriculture.pdf>.
- Payne, Susan. 2013. EmVest CEO Susan Payne Makes Case for Africa Farmland. Presented at Land Investment Expo, 2013. <http://peoplescompany.com/blog/2013/emvest-ceo-susan-payne-makes-case-for-africa-farmland>.
- Reuters. 2014. African states seek new farmland deals without problems of past. <http://www.reuters.com/article/2014/02/06/gulf-africa-food-idUSL5N0LA0HO20140206>. February.
- Ship Overseas. 2014. Container Shipping to Africa from USA. <http://www.shipoverseas.com/us/ship-container/africa.html>. May.
- Sanghvi, Sunil, Rupert Simons, and Roberto Uchoa. 2011. Four lessons for transforming African Agriculture. April. http://www.mckinsey.com/insights/public_sector/four_lessons_for_transforming_african_agriculture.
- Suzman, Mark. 2014. Africa: Four Overlooked Factors Behind Africa's Economic Success, World Economic Forum. Africa. May.

- Sy, Amadou. 2014. Five Questions Answered on Africa's Rising Economic Growth. <http://www.brookings.edu/blogs/africa-in-focus/posts/2014/02/03-africa-rising-economic-growth-sy>. February.
- The Economist. 2004. Breathing Life into Dead Capital. <http://www.economist.com/node/2328596>. January
- The World Bank. 2014. African Successes. <http://blogs.worldbank.org/africacan/african-successes-listing-the-success-stories>. March.
- The World Bank. 2013. Growing Africa: Unlocking the Potential of Agribusiness. <http://siteresources.worldbank.org/INTAFRICA/Resources/africa-agribusiness-report-2013.pdf>. January.
- The World Bank. 2011. Stemming post-harvest waste crucial to African food security. <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:22928991~menuPK:2246551~pagePK:2865106~piPK:2865128~theSitePK:258644,00.html>. May.
- World Population Data Sheet 2013. <http://www.prb.org/Publications/Datasheets/2013/2013-world-population-data-sheet/data-sheet.aspx>.
- UN data. <http://data.un.org/>. 2014. February
- United Nations Development Programme. 2014. <http://undp.org>
- UN Environment Programme, GRID-Arendal centre. 2012. http://www.grida.no/graphicslib/detail/nigeria-and-the-freshwater-challenge_a764.
- Water Industry News. 2014. waterindustry.org
- World Population Review. 2014. Africa Population 2014. March <http://worldpopulationreview.com/continents/africa-population/>.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Towards 2050: Trends and Scenarios for African Agribusiness

C.J. Van Rooyen

*Director, Standard Bank Center for Agribusiness Development and Leadership, Stellenbosch University,
Stellenbosch, West Cape, South Africa*

Abstract

Agriculture, including agribusiness, is projected to be a \$1 trillion USD industry in sub-Saharan Africa by 2030 (World Bank 2013). It is therefore understandable that agricultural development in Africa is back on the global development and investment agenda. In September 2009, the G20 recognized agricultural development as a central activity for African development, echoing the calls of the World Development Report (World Bank 2007) the “Our Common Interest” Report (Commission for Africa 2005) and most recently the African Heads of State at World Economic Forum in Cape Town called for increased agricultural investment (NEPAD 2013). All emphasized the notion that agriculture is a key driver of economic development and growth, poverty alleviation and food security on the African continent.

Keywords: agricultural development drivers; new agribusiness systems; governance and systems innovation; scenarios for growth with equity

Corresponding author: Tel: +27 (0) 21 808 4758
Email: C. Van Rooyen: cjvr@sun.ac.za



Introduction

Agribusiness, is projected to be a \$1 trillion USD industry in sub-Saharan Africa by 2030 (World Bank 2013). It is therefore understandable that agricultural development in Africa is back on the global development and investment agenda. With investments from sources around the globe, agribusiness started booming in the 2000s. In addition, soaring grain prices and global food inflation spurred investor interest in African farming. Africa has the land availability and space for farm production to grow significantly, which counts in its favor. Many farming projects, linked to the value chain through agri-food processing, food retail establishments and service networks, increasingly do business on the continent, due in part to growing private sector interest. African agriculture attracted more than \$100 million in private equity investment in the first half of 2012, compared with \$50 million for the whole of 2011. Standard Chartered invested \$74 million early in 2013 to gain a stake in the grain and fertilizer trade in sub-Saharan Africa, and another \$20 million in Zimbabwe's horticulture sector.

This trend is also recognized and welcomed in the world of government and economic politics. In September 2009, the G20 recognized agricultural development as a central activity for African development, echoing the calls of the World Development Report (World Bank 2007, the "Our Common Interest" Report (Commission for Africa 2005) and most recently the African Heads of State at World Economic Forum in Cape Town called for increased agricultural investment (NEPAD 2013). All emphasized the notion that agriculture is a key driver of economic development and growth, poverty alleviation and food security on the African continent.

The strategic and societal importance of African agricultural performance is also clearly illustrated by its direct and indirect relationship to and impacts on all eight United Nations Millennium Development Goals (MDGs) (United Nations 2009). At the 2013 World Economic Forum in Cape Town, South Africa, the African Union chairperson confirmed this view and stated "Africa is on the road of prosperity. African agriculture is the true driver of economic growth; but we need the private sector to kick-start this process" (NEPAD 2013). This importance was also confirmed by the World Bank (2013) report, "*Growing Africa – Unlocking the potential of Agribusiness*", which recognized that agribusiness, in particular, is positioned as a vital sector to overcome constraints and to encourage strategic "good practice" investments in African agriculture.

Looking toward the future development of African agriculture, a few questions need to be considered: what functions and actions should be prioritized for agriculture and who should drive or initiate them; what good practice models and good governance protocols will be required to strategically direct development paths towards sustainable and equitable growth; what will be needed to enable African agriculture to contribute its full potential over the next decades without again turning into an exploitative scramble for Africa (Pakenham 1992); how should initiatives be structured, directed and implemented; and what scenarios could emerge for African agriculture depending on the future directions taken?

Keeping these issues and questions in mind, this paper sets out to:

- Identify drivers and trends that will shape agriculture's roles in Africa. These include: meeting the growing demand for food at global, regional, city and household levels, activating Africa's immense untapped agricultural production potential and possible production and price scenarios, directing the evolving agri-food business systems and investments in African agriculture, strengthening economic management and good governance practices, and creating human capital development;

- Consider a strategic framework – comprising of functions, thrusts and actions; and to
- Apply this framework in context of different scenarios for African agricultural development and growth.

Drivers of Development and Change in African Agriculture

African agriculture has a unique set of circumstances and features that differentiate it from other regions. For example, the Asian Green Revolution in the 1960s and 1970s had an immediate and highly positive impact in terms of economic development and growth, economic structure, governance, human capital development and the political development paths followed. Yet, any effort to repeat these results in Africa must recognize differences between the two regions and but also factor in lessons learned, because the Green Revolution also had negative consequences. The negative aspects were mostly related to imbalances between output prices, low yields and high input costs – in other words, what is known as the price-cost squeeze. Due to global trade mechanisms, the visibility of social impacts, including social media, and the internal dynamics on the continent, Africa faces a future expected to be significantly different from its past.

What are the expected occurrences that will drive opportunity and challenges in African agriculture over the next decades?

The emerging consensus among development institutions and agencies and strategic investors, referred to in the introductory paragraphs, must be appreciated as a primary set of forces driving the restructuring of agricultural development in Africa. The universally accepted Millennium Declaration, which emphasizes agriculture's prominent role in all eight of the MDGs, together with the declarations by African leaders on the future role of agriculture, clearly situate African agriculture's roles and contributions within the broader economic-political context of both global and local realities impacting on Africa. However, this still falls short of wide-scale implementation and continues to show underinvestment and mis-investment by many governments and international donors (De Janvry 2009).

Recent statements and financial commitments by influential groups are encouraging. Among those expressing support of African agriculture are the World Bank and the 2008 World Development Report, the Food and Agriculture Organization of the United Nations (FAO), and several high profile international donor foundations – notably the Bill & Melinda Gates Foundation, Rockefeller Foundation, Ford Foundation and Kellogg Foundation. The launch of programs such as the Comprehensive African Agriculture Development Programme (CAADP) of New Partnerships for Africa's Development (NEPAD), and the Alliance for a Green Revolution in Africa (AGRA) must also be noted. These have paved the way for new funding and investment instruments in African agriculture, globally. There also have been commitments by, inter alia, local African business entities, such as the Sanlam/Kellogg AgriVie Fund, the FutureGrowth Fund from Old Mutual, funding from Standard Bank to support AGRA, and investments by Standard Charters and Zeder—to mention just a few cases, to invest in new agricultural related ventures in many African countries.

Driver 1: Global Market Growth for Food and Fiber

By 2050, the major growth in demand for food and products is expected to come from the markets of North America, Western Europe and China, and these trends will drive commercial food business systems (Swinnen 2007; McCoullough et al. 2008; ABSA 2009). Demand will be influenced by population growth, per capita income trends, lifestyle aspirations and related consumer preferences. Consumer demand in these regions has

become and will continue to be more exacting, fragmented and geared to convenience, food safety and quality. While these consumers will also seek attributes of fun, surprise and taste sensations in their food experiences they will also be sensitive to environmental, ethical and social considerations (Hughes 2007; Vermeulen et al. 2008). These trends are expected to have profound effects on the sourcing of food products, and will link farm production, processing, wholesaling and retailing. This means the agri-food value chain will increasingly be subjected to consumer preferences, considerations and values originating in these markets, and the related food safety, environmental and ethical valuations, certifications requirements, traceability and monitoring systems. Civil society and activist groups, and social media can be expected to monitor such developments.

In addition, exploding urbanization in Africa, combined with its expected increases in per capita food consumption (FAO 2009; Vink 2010), will directly expand local demand and provide opportunities for localized (short) value chains, directly linking farming areas to growing urban concentrates on the continent.

The evolving trade pattern confirms these trends. Both exports and imports are increasing, with imports particularly focused on high value food products. African agriculture is increasingly linked to global food trade patterns and will continue to be integrated in this world of contracts, value chain specifications and business opportunities.

Household food security in urban and rural environments. Food security is defined in terms of food supply, access, distribution and nutrition (DBSA 2009). This means that having a positive food self-sufficiency index (SSI) – the ability to produce sufficient food for the nation or region – does not necessarily lead to food security at the household level. Many African countries with positive SSIs still deal with serious hunger, food vulnerability and malnutrition (Global Food Security Index, Economic Intelligence Unit 2012). South Africa is a case in point (Vink and van Rooyen 2009; De Kock et al. 2013).

Food supply can generally be secured through a combination of trade and local farm-level food production. It should not be approached from only a national agricultural production perspective. A broader, holistic view is needed—one that focuses on farm production at national and household levels, on trade and distribution, and on aspects of food safety, household-level access, vulnerability and nutrition education (DBSA 2009; De Kock et al. 2013).

Food security at household level is generally attained through income security or the ability to purchase food stuffs as required. However, in poor environments, food security is vulnerable and highly sensitive to household income levels and food price fluctuations. Thus, food security in poor societies should focus on strategies to enhance household income generation and on creating resilient food production capacities in both rural and urban environments through, for example, the support of food gardens. In the quest to eliminate food vulnerability, there must be support for the view of the International Assessment of Agricultural Science and Technology for Development (IAASTD) which states that “achieving food security and sustainable livelihoods for people in chronic poverty depends on ensuring access to and control of resources by small-scale farmers” (IAASTD 2008). In line with the IAASTD, and with international development institutions such as the Bill & Melinda Gates Foundation, the Kellogg Foundation, Oxfam and FAO, emphasis must thus be placed on support to assist existing smallholder farming.

Driver 2: Africa's Untapped Agricultural Potential

Global food production may need to increase by 70 percent (above 2005 to 2007 levels) by 2050, in order to feed the world's growing population. Cereal production will have to expand by 43 percent and meat production by 74 percent. While Africa and South America have an abundance of untapped agricultural resources to deal with this challenge, other continents will find it increasingly complicated to expand their use of agricultural production resources (see Table 1).

Table 1. Utilization of Arable Land Resources (1980-2050). (% of available potential)

Region	1980-2004 (percentage)	To 2050 (percentage)
World	21	15
South America	16	40
Asia	46	12
Central & North America	-2	2
Europe	114	-2
Africa	18	60

Source. FAO and Standard Bank

Table 2 illustrates the current status of global land potential for food grain production. This clearly shows that Africa, the region with the most abundant land resources, provides by far the greatest scope to supply food and fibre through land-expanding activities to meet the growing global demand.

Table 2. Food grain production growth potential: Actual 1980-2004 and projected 2005-2050.

	1980-2004 (percentage change)	2050 (percentage change)
South America	80	60
Asia	64	47
Central & North America	40	21
Europe	80	44
Africa	75	150

Source. FAO 2009; ABSA/Barclays Bank 2009; author's own calculations 2009.

Sources of agricultural production growth. While agricultural production in Africa is often viewed as stagnant, the production increase recorded by African agriculture since 1984 tells another, very encouraging, story. Per capita production increased from below 200 kg in 1984 to almost 600 kg in 2006 and from 300 million tons in total in 1984 to almost 750 million tons in 2006. These increases were largely achieved through a combination of factors illustrated in Table 3, including expanding arable land, increased yields and higher cropping intensity. The scope to expand agricultural production through these three main sources of growth means that exceptional opportunities exist for African agriculture.

Table 3. Sources of growth (percentage) in African agriculture: Recorded for 1961–1999 and projected for 2000–2030.

	Arable land expansion		Increasing yields through technology and production management		Cropping intensity increases through multiple cropping, etc.	
	1961-1999	2000-2030	1961-1999	2000-2030	1961-1999	2000-2030
Developing countries	23	21	71	67	6	12
Sub-Saharan Africa	35	27	34	61	31	12
Near East and North Africa	14	13	72	68	14	19
East Asia	26	5	79	81	-5	14
South Asia	6	6	80	81	14	13
Latin America	46	33	55	46	-1	21

Source. FAO 2009; ABSA/Barclays Bank 2009; and author own calculations 2009.

Climate change, variation and instability, such as variable rainfall during peak production periods, constrains farm production and must be addressed through research and development (R&D) and insurance support schemes to sustain food security and reduce food vulnerability in the region.

Climate change is expected to cause shifts in production space and locations over time. However, no major changes in the potential for food grain production are projected for the sub-Saharan region over the next 20 years (BFAP 2009). The potential impact of climate change requires careful assessment, especially its spatial effects on populations and smallholder households.

Driver 3: Transformation in the Agri-food Business System and the Emergence of Value Chain Networks

The driving forces of income growth, demographic shifts, globalization and technical change have led to a reorganization of the agri-food system since the 1990s, with supply chains and support networks becoming dominant features linking farm to plate. The agri-food industry has fundamentally restructured to meet the ever expanding global demand for food and, keep up with changing consumer preferences and technological innovation, and also to comply with the worldwide deregulation of agricultural business and trade (Zuurbier 1999; Vorley et al. 2007; Hughes 2007; Swinnen 2007; McCoullough et al. 2008; Reardon et al. 2009; Webber and Labaste 2009; Swinnen 2010). These changes have introduced shifts from:

- Spot-market-based transactions, which are largely opportunistic in nature, towards value chain management and coordination, which are largely governed by trust, long-term contracts and relationship management,
- Local sourcing of farm products towards global sourcing in wider regional and international markets,
- Public- or government-based standardization and certification processes (food and quality assurance, fair labor practice, etc.) towards private sector-driven norms and standards in food safety and ethically and environmentally based consideration (supermarket initiated certifications and audits).

Interest in agriculture is now clearly stretching beyond farm land and focusing on all aspects of the value chain. As a result, sourcing of produce from farmers is increasingly directed through contracts or long-term arrangements, and subjected to certification and monitoring procedures to conform to standards required by

markets. Farm producers have effectively become members of corporate food business networks, operating in an integrated and coordinated manner with input suppliers, service providers, funding agencies, processors, retailers and supermarkets – agri-food value chain networks (Jaffee 1993, 1995; Reardon, Timmer and Berdegue 2004). Trust and relationship management within a particular agri-food chain network have become important drivers of sustainable agribusiness. The World Bank (2013) pointed to the importance of promoting initiatives that include small, medium and large companies in the value chains, creating new opportunities and jointly diagnosing and relieving bottle necks and constraints. The aforementioned all promote a range of commercially directed farming models and governance systems, directed to enhance the business performance of a particular value chain network vis-à-vis other competitive agri-food chain networks.

The location of future production sites. Because of the vast potential of their unused natural resources and land availability, Africa and to a lesser extent Latin America, will become important future locations for farm production and sourcing of raw materials to satisfy the rapidly growing demand for food and .

With a so-called green revolution, Africa could increase the value of its agricultural output from \$280 billion a year in 2011 to more than \$500 billion by 2020 and \$880 billion by 2030. Growth of this magnitude would increase demand for a whole range of upstream products and services such as fertilizers, seed, pesticides, machinery, market advice and food safety services, and downstream activities such as grain storage and refining, food processing and biofuels. This demand for upstream and downstream activities is projected to reach \$275 billion a year by 2030 (McKinsey 2011).

Meeting this growth in demand will require the emergence of global agri-food chains and networks that can source raw materials from African producers. In this case, cost effectiveness, innovation, traceability, food safety and quality checks will drive the different processes in the chain. Localized agri-food chains that link farm production to rapidly growing urban areas in Africa will also feature in the food business system of the future. The evolving agri-food business system and agri-food value chains will impact directly and dramatically on African agricultural and farming prospects and typologies (Shepherd 2008; Webber and Labaste 2009; Reardon et al. 2009; Poulton and Lyne 2009).

Changing investment patterns. The restructuring of the agri-food business system is also expected to change the nature of agribusiness investments. For example, in order to consolidate value chain actions and allow for scale economics, investments will need to focus on wholesale market infrastructure. The singular purpose of providing farm producers with access to the next level in the value chain will thus shift the emphasis to the development of infrastructure and support systems to facilitate the functioning of all levels of operation in the total agri-value chain. The new drivers of business opportunities in the food system will be investments that focus on agribusiness mentoring, coaching and extension for producers participating in the value chain, and on processing, retail functions, and their mechanisms for support and food safety (Swinnen 2010; Reardon et al. 2009; McKinsey 2011; World Bank 2013).

A 2010 Organization for Economic Cooperation and Development (OECD) report on “Private financial sector investment in farmland and agricultural infrastructure” highlights the expectation that investment in agriculture worldwide will grow, “double, even triple in the medium to long-term” (the estimated investment by the private sector in 2013 amounts to US\$10–25 billion). The geographic focus of such investment activity is shifting noticeably toward South America (led by Brazil) and Africa – both areas with land resource abundance.

One major advantage for Africa is the lower land acquisition cost for large-scale farming operations in southern and central Africa, boosting scale economies advantages. In Brazil, land costs range from \$1500 to 3000 per hectare, compared with \$300 to 500 per hectare in Africa. There are also transportation cost advantages on the east coast of Africa relative to the Western Hemisphere as far as exports to India and the rest of Asia are concerned (OECD 2010). This will see the emergence of global agri-food chains and networks that will source raw materials from African producers, with cost effectiveness and innovation, traceability, food safety and quality checks, all driving the different processes in the chain. Localized agri-food chains that link farm production to rapidly growing urban areas in Africa will also feature in the food business system. The evolving agri-food business system and agri-food value chains will impact directly and dramatically on African farming prospects and typologies (Shepherd 2008; Webber and Labaste 2009; Reardon et al. 2009; Poulton and Lyne 2009).

The emerging investment patterns in Africa are complex. Local capital markets are still in the early stages of development, and land tenure regulations that govern land titles and concessions are evolving. Investment schemes typically constitute a tiered corporate holding structure with subsidiaries overseeing farm production processes, often across different countries. These large-scale farmland developments do offer benefits, such as sustained and higher wage earning opportunities, better and more stable working conditions and employment benefits, local capacity and skills development, improved agronomic and business practices for neighboring farmers, as well as increased farm productivity and access to markets. Where outright ownership of land is not possible, long-term concessions are generally negotiated with governments, which often include commitments by investors to provide support for social projects such as schooling, health, and feeding and skills development. These operations also are often the biggest and most compliant tax contributors, expanding the tax base for local communities. Governments have thus been generally favorably disposed to such private capital development, transforming of farmland and investing in agricultural and related rural infrastructure (OECD 2010).

The 20 percent plus investment paradigm constitutes an increasingly attractive option for African agriculture, governments and local entities. However, the social sustainability of such production systems is an important political and financial concern and will be discussed in the sections to follow.

As to the environmental sustainability of such farmland development, the 2010 OECD report indicates that many investors in large scale agriculture cultivate close working relationships with multilateral organizations such as the World Bank, the International Finance Corporation (IFC) and the FAO, to ensure sustainable farming practices.

Another feature of the changing investment pattern in African agriculture focuses on the improvement of logistic infrastructure. The World Bank 2012 Logistics Performance Index (LPI) rates most African countries low, putting eight of the ten lowest LPI countries in the world in Africa. In many respects, the key to unlocking Africa's agricultural potential will be driven by investment in logistical infrastructure.

Smallholder agriculture and agri-food business transformation. Farm producers who are directly linked to agri-food value chains are generally better off due to price and quality considerations, and because they have assured markets and can aspire to long-term prospects to share in value-adding opportunities and more secure financial support services (Zuurbier 1999; Vorley et al. 2007; Swinnen 2007; Shepherd 2008; Webber and Labaste 2009).

Food companies and supermarkets generally prefer to source from large-scale farm operations, rather than from large numbers of smallholders, in order to avoid high transaction costs and problems with consistent volumes, quality and delivery. Larger farms are also better equipped to benefit from this emerging value chain-driven food business system (Kirsten et al. 2009).

Does a commercial value chain-dominated agri-food system work against smallholder agriculture or can smallholders access such business systems? The underlying hypothesis to this question is that the transforming agri-food business system will effectively exclude smallholder agriculture from future business opportunities. In general, it must be noted that various studies on the position of smallholder agriculture in agri-food value chain-driven business systems do not necessarily support this view (Swinnen 2007; Shepherd 2008; Webber and Labaste 2009; Kirsten et al. 2009; Reardon et al. 2009). Various cases can be quoted where raw products are sourced from smallholders – not as an act of charity or corporate social responsibility, but because their inclusion was found to be profitable, even when large producers operated in the same sector. Sugar, vegetables, milk, fruit and meat are examples of produce sourced in this way (Nestle 2009; Shoprite/Checkers 2009, Fresh Mark 2013, to name a few).

These studies also found that where smallholders dominate the agrarian structure, as in many African regions, food companies tend to source from those smallholders operating in localities where certain elements are in place and functioning effectively. These include production infrastructure and assets, such as irrigation systems, farm equipment and farm equity, collective action organizations such as farmers' associations and producer cooperatives, as well as access to transport and communication systems. Partnerships with government agencies are also sought to enable such situations. Supporting government policies and systems are generally found to enhance the successful inclusion of smallholders in the value chain. Resource and input supply contracts between smallholders and operators serving a particular agri-value chain are important in dealing with constraints faced by smallholders, such as the lack of credit, production inputs, technology transfer and extension.

Value chains depend on sound partnership arrangements. Partnership business models such as outgrower schemes, contract farming, cooperatives or business trusts, and coaching and extension schemes, accommodate the aforementioned features, and will enable smallholders to participate in future business prospects and to move on a development trajectory towards higher levels of commercial farming (Karaan 2009; Van Rooyen 2009, Mabaya, et al. 2011).

Linking smallholders (and other small- and medium-scale businesses) to commercial business systems, should thus be considered a continued major future focus in situations dominated by the presence of, or with imperatives to develop, smallholder agriculture. Policy directives, government support to business-focused strategies, program interventions and projects, strategic financial support instruments, public-private sector partnerships and appropriate governance systems (including long-term transactions and contracts), should be designed and introduced to support African smallholder participation in the evolving agri-food system.

Driver 4: Scale Factors in Farm Production

Most African agricultural production is still done by smallholders, however, production within this system is largely stagnant and its commercialization – linking farm producers to commercial markets is generally complex and difficult (Agra 2009; Kirsten et al. 2009).

Larger scale farming in countries such as South Africa, Zimbabwe, Zambia, and Tanzania has proven to be successful. So have recent large or mega scale corporate farm development initiatives that range from 30,000 ha to 1 million ha in the grain, livestock, sugar and fruit industries in sub-Saharan Africa (Standard Bank 2009; AgriVie 2009; Byerlee 2010; Emergent Asset Management, Citadel Capital and Dominion Farms, cases quoted by the OECD 2010; Ducastel 2010; Connolly et al. 2012). In particular, these large-scale ventures have provided the required investment returns, as well as technical innovation, yield-increasing practices, market responses, and social community support. These business-driven systems have contributed significantly to the production increases noted in African agriculture (see previous sections). They produce large volumes cost effectively for growing markets and consistently provide food grains, vegetables and fruit for local consumption and for export.

What is underlying this trend towards large-scale farming in Africa? Apart from a range of scale economic advantages in the farm production process – mechanization, labor management, and so forth – large scale farming generally lowers the transaction costs of delivering to agri-food value chains, while also providing consistency in production volumes and quality. Therefore, input-provisions and food-processing companies generally prefer to source from large-scale farmers over smallholder. Large-scale farming also competes more effectively with non-agricultural business activities for investment, financial reward and remuneration for its managers and workers (Reardon et al. 2009; Kirsten et al. 2009).

Land Transfers and the Notion of “a Land Rush” in Africa

From the above discussion it is clear that Africa has again become subject to outside interest in its natural resources; this time especially land and water. Dramatic changes are occurring throughout Africa including South Sudan, Ethiopia, Madagascar, Tanzania, Congo, Kenya, Liberia, Senegal, Zambia and Mozambique, to name some with leading investors from Asia, particular China, India and Korea and also from South Africa, the Netherlands, France, Canada, Italy, UK, Sweden and also international funds (FAO 2009; The Land Matrix 2013). Recent research by Anseeuw and Ducastel (2011) identified deals made for 948 projects encompassing 161.6 million hectares in Africa, compared with 240 projects encompassing 17.6 million hectares in Latin America. Main investors in the African deals originated from China (77 deals), Saudi Arabia (65 deals), UK (60 deals), India (60 deals), South Africa (41 deals), USA (38 deals) and the Netherlands (26 deals). Table 4 presents examples of recent land related farm developments in Africa.

Africa's abundance of high potential lands and water (see endnote 2) allows the production of valuable agri-food commodities. This, combined with eager local African governments, has seen the number of land deals soar and an unparalleled transfer of land ownership. While some sceptics have viewed this as a form of land grab or new colonialism, others emphasize that this has potential to increase food security, employment and income generation. While agreeing that these cash-for-cropland deals might improve growth prospects and food security for all participants, many NGOs, such as Oxfam and World Watch, have raised concerns regarding the real intentions behind such deals and the potential impact of removing indigenous people from their lands, with no alternative jobs or resources provided. Some also question the shift in focus towards large-scale agribusiness and value chain-led investments (FAO 2009; Oakland Institute 2011). The World Bank counters that supporting governments in regularizing land tenure systems provides a much improved base to encourage investments which will support those whose rights have not been formalized. Smallholders need not be excluded in such developments, inter alia, through good practice investments and protocols (World Bank 2013).

In their study on such so-called land grabs in Africa, Connolly et al. (2012) concluded: “[e]ither way, when large scale farming operations first come to a region, social disruption is inevitable, or outcomes are difficult to predict. Availability and pricing of both labor and resultant agricultural products are certain to change. Opportunities for entrepreneurs, either as part of a supply chain, or in ancillary goods and services are also likely. The response of the community may also come into play, whether through cooperation or resistance.” From this, it can be concluded that any new paradigm and strategic framework will have to focus in particular on sustainability, as defined from various social and livelihood perspectives. A clear view on the future position of smallholder farming will therefore also be relevant.

The future of smallholder farming. Do these economic advantages and business preferences for large-scale farming and the related land transfers effectively leave African smallholder farming out in the cold, so to speak?

First, there is growing evidence that smallholder systems can increase farm production through yield-increasing technologies and improved access to agricultural support services – if the technologies and services are supplied to smallholders and if they are linked in to agri-value chains (Future Agricultures 2011; World Bank 2013).

Second, the “poor but efficient” hypothesis (Schultz 1984) also provides evidence that although smallholder farmers could operate at higher economic efficiency levels than large-scale agriculture, they generally remain poor because of the low income-producing potential of small scale. Technological innovation may enable smallholders to increase their income levels, although this generally also requires increased capital investment, risk insurance and management applications, and technical know-how. In other words, it requires operating with a higher production function. However, as these are scarce factors in smallholder agriculture, its application is constrained, and the “poor but efficient” hypothesis is generally confirmed.

Third, in addition to the large-scale and smallholder farming typologies, a mixed-mode farming typology is emerging in African agriculture. In this mode, large-scale and smallholder agriculture co-exist through coordinated, synergistic and collaborative activities, based on commercialization and economies of scale. This typology is increasingly observed in labor-intensive farm production activities such as i) vegetables, fruit, sugar and dairy, which link to value-adding processing and trade, ii) grain production with scale economic advantages in off-farm storage and processing activities, and iii) livestock farming which provides animal products to large abattoirs and value-adding meat processing. This mixed-mode farm typology also supports opportunities for smallholders to depart from low-income smallholder agriculture and gain access to the higher income earning opportunities of agri-food value chains and distribution networks.

Table 4. Examples of recent African farm land developments: country, investors, and crops*

Angola	140,000 ha mixed crops, AgriSA, South Africa; 25,000 ha rice, Lonrho, UK
Benin	350,000 ha crops and 300,000 ha oil palm, South Africa
Ethiopia	815 foreign-financed agricultural projects approved between 2007 and 2010; a 150,000 ha livestock farm; 300,000 ha farm land to an Indian company, Karuturi; 50,000 ha crops by a number of South African companies, including Richmond, New Dawn, Dinaledi, Batau
Congo	68,000 ha eucalyptus, Mag Industries, Canada; 200,000 ha mixed farming, AgriSA, South Africa
Cameroon	55,000 ha mixed crops, Gp Bollere, France
Ghana	13,000 ha under crops by Kimminic, Canada
Gabon	Olam (Singapore) acquired 300,000 ha to produce palm oil
Kenya	160,000 ha biofuels by Bedford, Canada
Liberia	A Malaysian conglomerate signed a 63-year lease for 230 000 ha to grow palm oil and rubber; an Indonesian producer signed an agreement to develop 220 000 ha to produce palm oil
Madagascar	Daewoo (Korea) attempted to lease 1.3 million ha for farm production; a 450,000 ha biofuel project; mixed crops on 100,000 ha by Osho of South Africa; 30,000 ha under Jathropha by Neo, France
Mozambique	35,000 ha teak and 140 000 ha pine, Gsff, Sweden; 15,500 ha Jatropha, Avia Spa, Italy; 20 000 ha livestock, Agriterro
Mali	540 000 ha farm project; 50,000 ha rice project by Saudi Arabia; 40,000 ha crops, Seed Rock, Canada
North Sudan	South Korea companies bought 700,000 ha for wheat farming
South Sudan	800,000 ha land lease near Darfur; United Arab Emirates acquired 750,000 ha farm lands; Saudi Arabia leased 376,000 ha to grow wheat and rice
Sierra Leone	45,000 ha mixed crops, Sierra Gold, Canada
Tanzania	45,000 ha sorghum, Cams Group, UK; 100,000 ha trees, Norway; 100,000 ha Jatropha, Diligent Energy, Netherlands; 100 000 ha crops, KRC, Rep of Korea
Zambia	200,000 ha crops, United Arab Emirates; 15,000 ha sugar, Agzam, South Africa; 27,000 ha crops, DWS Galof, Germany
Ethiopia, Kenya, Madagascar, Senegal, and Mozambique	80 Indian companies invested around US\$2.4 billion in buying and leasing plantations

Sources. Connolly et al. 2012; The Land Matrix 2013.

Note. Some of these “deals” only records intentions to invest and others are projects in implementation. It however shows the degree of intent and interest in to African agricultural investment.

The expanding mixed-mode farming scenario in African agriculture will provide a sound base to introduce institutional innovations and to activate scale economic advantages in production, logistical and financial support systems, and risk mitigation. Agribusiness systems will institute the required collective actions and support systems directed at ensuring production output consistency, quality maintenance and food safety among suppliers, including smallholders. However, this will require the mobilization of community participation

for the implementation of viable project interventions in common resource situations, in other words, where community owned resources such as arable land, grazing and water are involved. This also will require establishing or supporting institutions such as cooperatives, farmer organizations, leadership and mentorship development programs, as well as skills and capacity building and effective and fair contracting and governance systems (Vorley et al. 2007; Reardon et al. 2009; Masuku 2009; Karaan 2009; Agricultural Futures 2010).

Smallholder farming will remain an important feature of Africa's agriculture, helping secure many millions of livelihoods, albeit mostly meagre ones. Socially this typology will also remain important, because it provides a fall back to many that lose their employment in the non-farming environment. Uma Lele (1984) referred to this as a residual function of smallholder agriculture that provides at least a degree of household food security to members and a refuge for the elderly and children.

Support to smallholder farming will require particular support mechanisms—public sector support and, where possible, the integration of such farming systems into supply chain-driven agri-food systems. In addition, any agricultural development framework with a focus on smallholders would have to recognize the need to empower African women and youth in particular, as these are the people mostly served by smallholder production.

Lessons from other regions (Connolly 2012) exposed to commercial farming forces, should also be analyzed. Two cases come to mind, namely the so-called miracle of the Brazilian cerrados, where poor soil was improved enabling highly productive farms, and India's support to millions of small-scale farmers which offered biotechnology tools, small packets of technology including seeds, fertilizer, herbicides, pesticides and mechanization for farmers with less than 1 ha of land, along with training and extension. The China situation, for example, the mobilization of smallholder production through the provision of modern inputs and farming innovation also provides some lessons and direction, but the notion of central planning must be considered. The African situation will require a unique set of solutions to fit the many diverse local situations.

Driver 5: Towards a Bio-based Green Economy

The idea of a bio-based green economy encapsulates a vision of a future no longer wholly dependent on fossil fuels for energy or on industrial raw materials (CGIAR 2009). "The bio-based economy could be to the 21st century what the fossil-based economy was to the 20th century" (Hardy 2002). Agriculture will be central to the bio-based economy, providing source materials for agricultural processes – liquids, fuels, chemicals and production inputs. At the same time, agriculture will continue to provide food and animal feed that is more environmentally sustainable, healthy and safe.

A bio-based economy will require agriculture to expand well beyond its current core function of food production. Positioning agriculture as a supplier of energy could be controversial, because some view this as a threat to food supply and food security, as it could potentially lead to increased food prices. However, this scenario also offers exciting opportunities. Biomass production can provide the energy needed in production processes, plus it is a renewable resource. Thus, African agriculture should explore the future possibilities of biomass with an emphasis on the next generation of biofuels, and the production of bio products (CGIAR 2009).

Pressures, preferences and trends. Consumers, private agencies in food retail and trade, and civil society organizations will continue to pressure the agri-food sector to focus on environmental integrity and sustainable production. Environmental regulation and certification, biotechnology and bio-based items – such as liquid

fuels, agrichemicals and animal feed will all be important features in the evolving commercial agribusiness environment. The establishment of environmentally sustainable and energy-saving crop and livestock systems will thus be a priority for African agri-food R&D systems. Livestock systems, which constitute the largest land-use activity on earth with their high energy to food ratios, will be particularly challenged in this context (Swanepoel et al. 2009).

Research links, networks and protocols. The Consultative Group on International Agricultural Research (CGIAR) has initiatives to establish and link global research networks. These are encouraging and must be supported in the strategic framework for African agriculture (CGIAR 2009). These enterprises promote an agricultural system striving to establish a bio-based economy that reduces water, land, nutrient and chemical use, in order to achieve the envisaged doubling of food production by 2050. Linking research networks could provide incentives to encourage and direct the new trend of commercial African agriculture to move towards greener practices. Implementing these greener practices will require establishing new science policies, good governance practices, and interdisciplinary collaboration among interested groups such as governments, scientists, civil society organizations, consumer groups, food producing businesses, farm agencies and farmers.

Systems Innovation for Economic Management and Governance

The above drivers of change in African agriculture will impact Africa's complex social, political, economic and natural environment, which is dealing with complementarities, trade-offs, redefined roles, changing institutions and long-term commitments (Timmer 2010). To achieve faster agriculture-based growth rates and equitable participation processes, favorable macro-economic and trade policies must be in place along with good governance practices, good infrastructure and access to credit, land, knowledge and markets. These will establish an enabling environment that will incentivize both small and large-scale farmers to adopt new and sustainable technologies and diversify production into higher value crop systems that can support agribusiness systems and value chains. As expected, agro industrialization in the African environment, has generally been regarded as a period of individual and collective stress, discontinuous change and economic disorder (Cook and Chaddad 2002). However, the positive, negative and neutral implications of such often maligned processes of social and economic change (Stiglitz 1988; Barry 1995) must also be noted.

For the aforementioned enabling environment to be established, sound economic management systems will be required. The following introduces the type of systems innovation needed.

Africa-Directed Trade Development

The reduction of trade barriers, especially for higher value-added products, would encourage agribusiness-driven value chains to explore lucrative opportunities in the regional and global environments. Supporting African agricultural trade will require a range of actions, including the reduction of domestic price support programs and border protection by OECD countries; development of African production and regulatory capacity to meet the exacting standards of importing global markets; reduction of inter-Africa trade barriers and red tape, which suppress the competition required for African industry to gain sustainable advantages in evolving and lucrative global markets; improved transportation systems and the addressing of impediments to efficient African rural-urban market linkages for food and fiber. It also calls for simplification of overly complex inter-African trade agreements.

Improved Public-Private Partnerships-PPPs

Collaboration between government and the private sector is also an important strategy to increasing financial, technical, human and social capacity. PPP's need to be directed to a range of activities including training, extension and skills development for farming and agribusiness activities; human capacity development through internships, mentorships and skills transfers; development of agricultural research and technology transfers; the development of information and communication systems; expansion of rural infrastructure; the establishment of agro-industrial clusters and production schemes; technical support for land reform and transfer schemes; the identification and resolution of value chain constraints and opening of opportunities as business system tipping points (Mayers and van Rooyen 2011). The provision of access to financial resources and risk mitigation instruments geared to selected agricultural development activity also needs to be structured.

Good Governance Practices and Investment Protocols

Two key components of a new paradigm and strategic framework to direct agricultural development and ensure that economic and business management processes are implemented in an accountable, transparent and responsible manner will be found in governance and investment practices. This will require institutional innovation to deal with the complexities confronting the African agricultural environment, and with matters related to competition and value distribution along value chains (IFPRI 2006, Swinnen 2007; Webber and Labaste 2009; Poultney and Lyne 2009; Gabre-Madhin 2009; World Bank 2013). Good practice investments that agitate against corruption and exploitative deals are also called for. Rural environments in particular will require new and strong institutions and governance structures to, for example, enable farmers and agribusiness groups to negotiate fair deals in agri-food value chains that are dominated by supermarkets or branded manufacturers. New governance structures will also be required to provide a fair voice to civil society and particularly women and youth in agriculture. These institutions and structures must direct the sustainable use and exploitation of natural resources, and attempt to resolve conflicts such as private versus public, individual versus community and business versus social interests.

The World Bank (2013) views the implementation of economic management and good governance as “daunting challenges for governments with weak capacity and little experience in engaging the private sector.” Good governance in African agriculture can be built through the development of social capital and collective action, where participation in such networks increases the availability of information, helps to enforce property rights regimes and reduces opportunistic behavior concerning the use of common resources such as land, water, information (Ostrom 2009). International donor agencies and private business should collaborate with public sector institutions in processes aimed at establishing and maintaining the required good governance practices.

The notion of setting good practice investment protocols to direct development patterns towards sustainable growth paths must be given priority. The engagement of private investors and agri-food corporates chasing the 20 percent plus baseline will be of vital importance. South Africa's Broad Based Black Economic Empowerment (BBBEE) codes and scorecards can be viewed as a potential model in this context. BBBEEs allocate points for transformational protocols, such as preferential procurement from historically disadvantaged groups and individuals, human capital development, equity opportunities and ownership, and corporate social investments. These South African protocols are currently in operation and provide for a range of business development models such as out-grower and equity share schemes, contracting opportunities and social services (Mabaya et al. 2011).

Reforming the legal systems to, *inter alia*, regularize land tenure systems, will support good governance and help those whose rights have not being formalized, in particular women and smallholders.

Mobilizing Civil Society, Women and Youth in African Agriculture

According to the African Women in Agricultural Research and Development (AWARD) program, women are currently the backbone of African agriculture (CGIAR 2009). According to CGIAR, women produce, process, and market most of the food that Africa depends on. Yet, women farmers receive only 5 percent of agricultural extension training and less than 10 percent of rural credit. CGIAR also documents that women represent less than a quarter of the agricultural researchers, and fewer than one in seven of the leadership. This reality needs to be addressed as a priority if smallholder farm production is to be increased and commercialized. The CGIAR view that “we cannot defeat hunger and poverty in Africa unless women have a strong voice” is echoed by most prominent institutions in their efforts to support the renewal of African agriculture.

It is also observed that young people often want to escape from the rural farming life. This is not surprising, as smallholder farming offers few financial incentives to remain working in the family business. The concept of a thriving and ever modernizing farming system, linked to technical innovation, value chains, markets and business deals, requires intellectual capacity and skills that are generally not available to the aging rural population and to farm producers. Finding a way to mobilize the youth to take up farming as a scientific and business-driven career remains a big challenge.

Support programs and funding schemes giving preference to the young and female farmers must receive priority in development strategies.

Towards a Framework Matrix for African Agribusiness Development

Core Functions and Strategic Thrusts

Future growth in African agriculture is expected to be achieved largely through increasing farm-level production mechanisms by means of: supporting land expansion, technological innovation and increased yield effects; commercializing agriculture at smallholder and large-scale farming levels; building linkages to agri-food chains that will activate intensification and value-adding opportunities for African agriculture; and applying good governance practice through institutions that direct the design and management of complex and globalizing agri-food business systems. A framework matrix can be created through the interaction of a set of core functions and development thrusts.

Core functions. An integrated development strategy needs to be designed to activate four core functions:

- Income generation, including foreign exchange, through the provision of food and fiber at primary production and value-adding levels to supply growing and differentiating global markets;
- Employment creation in the full agri-value chain and in the wider economic environment,
- Household level food security through local supply and production;
- Provision of environmentally sustainable products and services including bio-based energy and fuels.

Cross-cutting strategic development thrusts. Focusing these core actions will require five strategic thrusts for agricultural development in the sub-Saharan African environment, each cross-cutting to the four core actions:

- Stimulate market-pull opportunities: support the exploitation of prospects and opportunities opening up to African agriculture – both large and small scale in order to gain access to the growing agri-food business system and to ensure their commercially sustained inclusion (empowerment of women farmers and support to young farmers will be important in achieving this);
- Improve household level livelihoods and food security: promote the support of food security and deal with food vulnerability that is a concern of many African households in rural and urban environments;
- Promote environmental stability: design environmentally sustainable agricultural practices to support, inter alia, innovation towards the bio-based economy, and development of appropriate systems as incentives for farming communities and agribusinesses to introduce and maintain such practices in their production systems;
- Improve economic management and governance: instil leadership qualities, support good governance practices and codes—accountability, transparency, predictability, and participation, and enable agribusiness, farm producers and women-based groups to have voices in public affairs and in the designing and implementation of development plans. Develop human capacity: emphasize and support human capital development through an interactive and responsive agricultural educational and training (AET) system, providing the human capacities, skills and agents required to drive African agricultural development.

A Scenario Matrix for African Agricultural Development

The nature of the interaction between the four core activities and five cross-cutting development thrusts creates three possible scenarios (see Table 5).

Hit and Run Development (H&R). Agricultural development is driven by short-run market linkages and exploitative social and environmental practices, while governance will be driven by short run considerations, accompanied by corrupt deals to gain rapid access to natural resource potential. Development investment is segmented and only focused on the short-term prospects. Civil unrest and activist actions increasingly jeopardize a sustainable development future. Human capital development is mostly only focused on the development of short-term skills or on expatriate management and subject matter or professional expertise.

Equitable and Sustained Growth (E&SG). This scenario is the opposite of H&R. It establishes the environment and building blocks to empower African society to participate fully in the governance and management of agricultural development and to benefit from its participation in the creation of its own future. The E&SG scenario is driven by market linkages, good governance and economic management, social and environmental directed codes and protocols, and sustained and integrated human capital development at all levels – school, higher education and life-long education and training systems that identify and build needed skills.

Stop and Go (S&G). This falls between the H&R and E&SG development paths, with sporadic, opportunistic, uneven and inconsistent investments, business practices and systems. Good governance and human capital development is of a lower intensity and priority. Short-term vibrant growth and initiatives may be experienced, but there is a failure to achieve a sustained and equitable growth path for the agricultural sector, which is required in order to benefit African society at large.

Table 5. Development scenarios for African agriculture

Thrusts	Strategic Development Scenarios		
	Hit & Run Development (H&R)	Stop & Go (S&G)	Equitable & Sustained Growth (E&SG)
1. Equitable Market linkages	segmented	opportunistic	interactive
2. Social/livelihood	exploitative	uneven	equitable
3. Environmental practice	exploitative	opportunistic	sustainable
4. Governance systems	opportunistic	inconsistent	accountable
5. Human capital use	exploitative	inconsistent	empowering

Note 1. Historically, investment opportunities with returns of around 6–10 percent above inflation were viewed to be sufficient for the agriculture sector.

Note 2. “With land comes the right to withdraw the water linked to it, in most countries essentially a freebie that increasingly could be the most valuable part of the deal” (P. Brabeck-Lemanthe, Chair of Nestle, <http://dawn.com/2011/07/25/foreigners-grab-water-resources-in-africa/>)

References

- Adesina, A. 2009. *Institutional Changes in African Agriculture*. Panel discussion, IAAE Conference. Beijing, China.
- Anseeuw, W. and A. Ducastel. 2012. *New Agricultural Investment Models and Agrarian Change in South Africa*. Agricultural Economic Association of South Africa Conference. Bloemfontein, South Africa.
- Badiane, O. 2009. *Promoting the Competitiveness of African Agriculture*. The 47th AEASA Conference. Durban, South Africa.
- Binswanger, H. 2006. *Empowering Rural People for Their Own Development*. Elmhirst Lecture, IAAE Conference. Gold Coast, Australia.
- Byerlee, D., A. de Janvry and E. Sadoulet 2009. *Agriculture for Development: Toward a New Paradigm*. Annual Review of Resource Economics 1(1): 1-20.
- Byerlee, D. 2010. *Globalisation and the Rise of Corporate Farms in Land-Abundant Developing Countries*. Paper presented at the 54th Annual Conference of the Australian Agricultural and Resource Economics Society. Adelaide, Australia.
- Cheru, F. 2002. *African Renaissance: Roadmaps to the Challenge of Globalisation*. New Africa Books, Palgrave, St Martin's Press: New York.
- Cheru, F. and C. Bradford. 2005. *The Millennium Development Goals: Raising the Resources to Tackle World Poverty*. Zed Books: New York.
- CIGIAR. 2009. *Agriculture Beyond Food: Science for a Bio based Economy*. Science Forum, 2009.
- CIGIAR, 2009. *African Women in Agricultural Research and Development*. CGIAR Gender and Diversity Programme. Nairobi, Kenya.

- Connolly, A., K. Connolly and M. Lyons. 2012. *A Seismic Change: Land Control in Africa*. *International Food and Agribusiness Management Review* 15(2):171-177.
- Delgado, C. 1998. *Agricultural Growth Linkages in sub-Saharan Agriculture*. IFPRI, Washington D.C.
- Delgado, C. 2009. *Global Food Crisis: From Urgent Short-term Responses to Viable Longer-Term Solutions*. Agriculture and Rural Development, World Bank, Washington D.C.
- Development Bank of Southern Africa (DBSA). 2009. *Food Security Project Report*. Midrand, South Africa.
- FAO. 2009. *1.02 billion People Hungry: One Sixth of Humanity Undernourished – More than ever before*. <http://www.fao.org/news/story/en/item/20568/icode/>
- FAO. 2009. *Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa*. FAO, Rome.
- Future Agricultures 2011. *Small farm commercialisation in Africa: Reviewing the issues*. Research Paper 023/ www.future-agricultures.org.
- Gabre-Madhin, E. 2009. Exchange, Contracts, and Enforcement. In J. Kirsten, A. Dorward, C. Poulton and N. Vink, Eds. *Institutional Economic Perspectives on African Agricultural Development*. IFPRI, Washington D.C.
- Haggblade, S., P. Hazell and J. Brown. 1988. *Farm-nonfarm Linkages in Rural sub-Saharan Africa*. World Bank, Washington D.C.
- Hardy, R. 2002. *The Bio-Based Economy*. In J. Janick and A. Whipkey, Eds. *Trends in New Crop and New Crop Uses*. ASHS Press: Alexandria, VA.
- Hughes, D. 2008. *Super Markets in the Global Food Business Systems*. Keynote Session, IAMA 18th Annual Forum and Symposium, Monterey, California, USA. June.
- IAASTD. 2008. *International Assessment of Agricultural Science and Technology for Development. Synthesis Report of the IAASTD*. Johannesburg, South Africa.
- International Food Policy Research Institute (IFPRI). 2006. *Agriculture and Achieving the Millennium Development Goals*. Series nu.32729-GLB. Washington D.C.
- Joehr, Hans. 2009. Personal Interview conducted by Johan Van Rooyen. *Nestle: International Agriculture on Linking Smallholders in to their Food Supply Chains*. Montreux, Switzerland.
- Karaan, A. 2009. *A Transaction Cost Approach to Enterprise Modelling and Coordination between Small Growers and a Large Firm*. In J. Kirsten, A. Dorward, and C. Poulton
- Kirsten, J., A. Dorward, C. Poulton and N. Vink. 2009. *Institutional Economic Perspectives on African Agricultural Development*. IFPRI, Washington, D.C.
- Mabaya, E., K. Tihanyi, A.S. Karaan and C.J. Van Rooyen. 2011. *Case studies of emerging farmers and agribusiness in South Africa*. Sun Press, Stellenbosch.

- Masuku, M. 2009. *The Role of Trust in Contract Enforcement: Analyses of Smallholder Farmers and Sugar Millers in Swaziland*. In *Institutional Economic Perspectives on African Agricultural Development*. J. Kirsten, A. Dorward, C. Poulton and N. Vink, Eds. IFPRI, Washington D.C.
- Mayers, W., and C.J. Van Rooyen. 2011. *Creating “tipping points” in the Ethiopian agribusiness environment*. Report to the Government of the Netherlands.
- McCoullough, E., P. Pingali and K. Stamoulis. 2008. *The Transformation of AgriFood Systems: Globalisation, Supply Chains and Smallholder Farmers*. FAO, Rome.
- McKinsey 2011. *Four Lessons for Transforming African Agriculture*. McKinsey & Company.
- NEPAD 2013. *Report on the World Economic Forum*. Cape Town. May 2013. www.nepad.org.
- Oakland Institute. 2011. Understanding Land Investment Deals in Africa.
http://www.oaklandinstitute.org/files/OI_Mali_Land_Investment_report.pdf-agricultural-development
- OECD. 2010. Private Financial Sector Investment in Farmland and Agricultural Infrastructure. OECD Food, Agriculture and Fisheries Working Papers No.33. OECD Publishing.
- Ostrom, E. 2009. *Managing Common Resources*. Plenary address. International Association of Agricultural Economists Conference. Beijing, China.
- Poulton, C and M. Lyne. 2009. *Coordination for Market Development*. In J. Kirsten, A. Dorward, C. Poulton and N. Vink, Eds. *Institutional Economics Perspectives on African Agricultural Development*. IFPRI, Washington D.C.
- Ravallion, M., S. Chen and P. Sangraula. 2007. *New Evidence on the Urbanization of Global Poverty*. World Bank Policy Research Working Paper No. 4199. World Bank, Washington D.C.
- Reardon, T., C. Barrett, J. Berdegue and J. Swinnen. 2009. *AgriFood Industry Transformation and Small Farmers in Developing Countries*. *World Development*; 37 (11): 1717-1727.
- Rukuni, M. and Eicher, C. 1994. *Zimbabwe's agricultural revolution*. University of Zimbabwe Publications Office. Shepherd, A. 2008. *Approaches to Link Producers to Markets*. FAO, Rome.
- Shoprite/Checkers. 2009. Personal Interview with Mr. E. Nel, Director on the Linking of Smallholders in to their Food Supply Chain in African Countries. Stellenbosch, South Africa.
- Singini, R. and C.J. Van Rooyen. 1995 *Serving small-scale farmers*. Development Bank of Southern Africa, Midrand, South Africa.
- Rukuni, M. and Eicher, C. 1994. *Zimbabwe's agricultural revolution*. University of Zimbabwe Publications Office. Shepherd, A. 2008. *Approaches to Link Producers to Markets*. FAO, Rome.
- Swanepoel, F, A. Stroebel and S. Moyo. 2009. *The Role of Livestock in Developing Communities: Enhancing Multifunctionality*. WCAP Satellite Symposium. Cape Town, South Africa.

- Swinnen, J. 2007. *Global Supply Chains, Standards and the Poor*. CABI: Massachusetts.
- Swinnen, J. 2010. *Value Chains in Senegal*. Keynote Paper Presented at the Joint AAAE & AEASA. Conference. Cape Town, South Africa.
- Timmer, P. 2010. *Lessons from Food Crises Past*. Center for Global Development, Washington D.C.
- United Nations. 2009. *The Millennium Development Goals Report 2009*. UN, New York.
- Van Rooyen, C. 2009. *The Future of Agribusiness in Africa*. Keynote Session of the IAMA 19th Annual World Forum and Symposium. Budapest, Hungary. June.
- Vermeulen, S., J. Woodhill, F. Proctor and R. Delnoye. 2008. *Chain – Wide Learning for Inclusive AgriFood Market Development*. International Institute for Environment and Development, London, UK.
- Vink, N. and C. Van Rooyen. 2009. *Agriculture and Food Security in South Africa*. Paper Prepared for the DBSA Food Security Report. Midrand, South Africa.
- Vink, N. 2010. *Agribusiness Policy and Strategy in the Future*. 2010 Conference of the Agricultural Business Chamber (ABC), Lord Charles Hotel. Somerset West, South Africa.
- Vorley, W., A. Fearne and D. Ray. 2007. *Regoverning Markets: A Place for Small-Scale Producers in Modern AgriFood Chains*. Gower Publishing: Aldershot, UK.
- Webber, M. and P. Labaste. 2009. *Building Competitiveness in Africa's Agriculture: A Guide to Value Chain Concepts and Applications*. World Bank, Washington D.C.
- World Bank. 2005. *World Development Report 2006: Equity and Development*. World Bank: Washington D.C.
- World Bank. 2007. *World Development Report 2008: Agriculture for Development*. World Bank: Washington D.C.
- World Bank. 2009. *World Bank Commodity Markets Review*. DECPG, World Bank: Washington D.C.
- World Bank. 2013. *Growing Africa: Unlocking the Potential of Agribusiness*. AFTFP/AFTAI. World Bank: Washington D.C.
- Zuurbier, P. 1999. *Supply Chain Management*. Wageningen University, The Netherlands.

Chapter 1

International Specialty Markets

C H A P T E R 1

CHAPTER 1

Chapter 1

International Specialty Markets





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Rooibos Ltd: Turning Indigenous Products into Business Opportunities

Nick Vink^a, Martin Bergh^{®b}, and Barbara M. Novak^c

*^aProfessor, Department of Agricultural Economics, Stellenbosch University
Private Bag X1, Matieland, 7602 South Africa*

^bCEO, Rooibos, Ltd., PO Box 64, Clanwilliam, 8135 South Africa

*^cResearch Fellow, Department of Agricultural Sciences, University of Bologna
Viale Fanin, 50, 40127 Bologna, Italy*

Abstract

Rooibos Ltd is the largest processor of Rooibos tea, and currently has a turnover of more than R250 million per year, experiencing strong turnover and export growth over the past few years. The production of the tea is a cyclical process, which creates unique challenges to the company. Key success factors include strong upstream and downstream contractual relationships, ethical stewardship of the product, employees and the environment, and technological leadership. Because production is cyclical, success requires a long term vision, while finances need to be managed within the constraints of this long term cycle. Key lessons are to protect your intellectual property; decide whether you have the potential to be a large business or to remain a medium sized business; understand your industry and your strengths and weaknesses; and strive to be the best supplier of product and the best service provider.

Keywords: Indigenous products, Rooibos tea, cyclical production, intellectual property

①Corresponding author: Tel: + 27 (0) 21 808 4899

Email: N. Vink: nv@sun.ac.za

M. Bergh: martin@rooibosltd.co.za

B. M. Novak: barbara.mila.novak@gmail.com



Introduction

The Rooibos plant (Anglicized pronunciation ROY-bos) is found only in the Cederberg Mountains, in an area 250 km north of Cape Town centered on the town of Clanwilliam, and only in higher altitudes. Rooibos Ltd is the largest processor of the herbal tea made from the plant, and was established in 1993. The company currently has a turnover in excess of R250 million per year, and has seen strong turnover and export growth over the past few years. Industry exports were in the vicinity of 7 000 tons in 2013, while domestic sales were 7500 tons. The CEO is Martin Bergh who is a Stellenbosch University trained horticulturalist and a producer of rooibos in his own right.

In 1904 Benjamin Ginsberg, a Russian immigrant from a family of tea merchants in Europe, started to market the tea. By 1930 the local medical doctor, Dr P le Fras Nortier, showed how to germinate the seeds, while together with Olof Bergh, a local commercial farmer, new cultivation methods were developed, setting the stage for the commercial development of the industry. These technical breakthroughs were followed by institutional change: in 1948 producers formed the Clanwilliam Tea Cooperative and in 1954 the Rooibos Tea Control Board was established under the Marketing Act, 1937. This allowed the majority of producers to implement a compulsory single-channel pool Scheme whereby the entire harvest was handled by the Board, and the proceeds from domestic and export sales distributed back to the farmers. In 1993, however, the Board was converted to the fully privatized Rooibos Ltd (an unlisted public company) as part of the broader process of deregulation of agricultural marketing in South Africa. While still the largest supplier of rooibos tea to the trade, the company now has to be competitive in order to survive.

The rooibos plant is a legume of the genus *Aspalathus*, which is indigenous to South Africa, and has over 200 species, of which only Rooibos (*Aspalathus linearis*) is economically exploited. Rooibos has many uses: it is a health-enhancing tea; a flavourant for other drinks (concentrates, blends, and alcoholic drinks); a food supplement that adds nutritional, health, color and flavor attributes to foods and beverages; and a key ingredient in skin care products, among others.

The Rooibos industry has twice been rocked by attempts over the past decade to register the name Rooibos and its derivatives for exclusive use, first in the USA and then in France. Fortunately, the industry body, the South African Rooibos Council, has succeeded in averting these challenges, and is in the process of getting the product registered as a Geographic Indicator.



Company Background

The main business of Rooibos Ltd is to purchase raw tea from the producers and to process the tea. Some processed tea is also bought from producers. Once the tea has been processed, it is then either placed in storage (in order to manage the flow of product to the market); sold as processed tea to tea packers who will brand the product and sell it into the domestic or overseas market; or the essence is extracted and sold into the flavourant or food supplement market; or the tea is packaged and sold into the retail market under its own name. The last two of these represent only a small portion of the turnover of the company, which is mainly a processor of the raw tea.

The current success of the company in the domestic market rests on three pillars. First, when producer prices were low because of surplus production, the consumer price of Rooibos brands in the domestic market was below that of premium branded teas. Second, the industry enjoys a favorable press which emphasizes the health benefits of the product and celebrates successes in export markets. Third, sales of Rooibos in the rest of Africa are also reflected as domestic sales, as the product is bought in South Africa by South African supermarket groups for sale in their non-South African outlets. The rapid expansion of these supermarkets across the continent therefore adds to the demand for the product.

However, the higher producer prices currently being experienced foreshadow lower growth in domestic sales, while export volumes and returns are largely dependent on exchange rate movements, especially in the traditional markets in Europe. This regular cycle of peaks and troughs in the price of the product is a key feature of the industry, as will be seen below.

Rooibos Limited is the global market leader in this unique product, and has been the preferred supplier to the industry since 1954, with a global market share in the supply of Rooibos tea and extracts and derivatives of about 70%.

Current Management Structure

The company is focused on two things: expanding domestic and export markets, and bringing technological innovation to the production and processing of the product. The vision of the company is to establish Rooibos as a global winner. In this regard, the mission is the goal-directed enhancement of the production, processing and international marketing of unique Rooibos products and services for the benefit of all supportive stakeholders, with special reference to:

- Satisfying consumers' expectations
- Facilitating realistic returns on shareholders' investment
- Honoring commitments made to producers, suppliers and buyers
- Creating a pleasant working environment for the motivation of dedicated employees
- Contributing to the development of South Africa's economy and its people

To put this into operation, Rooibos Ltd operates a lean organization, with a small but high-powered Board and a lean management structure. The Board consists of 10 members, three of whom are Executive Directors, four are producers who deliver to the company and three (including the Chair) are not attached to the company in any manner. The seven division heads all report to the Managing Director, as do three staff functions. This

flat structure is seen as ideal for a medium-sized enterprise and is maintained with a hands-on and open door management style. Line managers have maximum freedom to execute policy, with minimal interference, but they have the responsibility to ask when support is needed, while the CEO engages with managers as necessary, rather than waiting until the end of the month.

The Company employs just over 250 people: 35 serving in management or professional positions, all on permanent appointment, while 114 people are employed on contract, mostly on a seasonal part time basis.

Key Success Factors

There are three things that the Company believes it needs to do right if it is to maintain its competitive edge.

First, the business model is strongly based on contractual relationships with the more than 200 suppliers (farmers) and with clients (buyers). As a result, a lot of time and effort goes into maintaining and building these relationships. So for example the Company has dedicated and professional staff who are available to provide technical and other advice farmers. Furthermore, the company focused strongly on providing extra services to its clients, including bulk packaging, blending, flavoring, extraction, contract packaging under private label, management of inventory to ensure continuous supply, on time delivery and customized product development.



Second, this strong belief in partnering with suppliers and clients is reflected in the Company's emphasis on food safety, fair employment practices and environmental stewardship. For example, the entire factory is HACCP certified and working towards ISO 22000 and Food Safety Systems Certification (FSSC), and certifications have been obtained for organic production and processing (from the EU, the USA, Japan and Korea), and also for Kosher, Halaal, Fairtrade, Rainforest, UTZ and Heart Mark. Furthermore, while the company is committed to observing environmental laws and regulations, it is also committed to going further, as it has shown with the recent installation of a 500 kW system of solar energy at the processing plant that provides 40% of the Company's energy needs, allowing it to provide its suppliers with a product that has a smaller carbon footprint.

Third, Rooibos Ltd focuses strongly on technology development and transfer throughout the industry value chain. Examples include the launching of green or unfermented Rooibos in 2003, the inclusion of Honeybush tea in the product line-up and the production of extracts with a wide range of applications that commenced in 2011. This focus on product development is seen as a necessary service to most of the Company's clients, who are essentially brand marketers who don't always know enough about the technical properties of the product to enable them to develop new products. In this way the Company can also build its reputation as a provider of solutions to its clients.

Strategic Issues

The Rooibos plant grows best in a semi-desert environment, which makes production cyclical and extensive: because the producer farms on an extensive basis and relies on the harsh environment, production is cyclical. This has some benefits, as diseases are easier to control, per unit production costs at the farm level are lower, and, if stored properly, the product is not perishable. However, it has one major disadvantage, as the processor needs the wherewithal to be able to buy stock in years of surplus production and to carry the costs of storage for the lean years so that supply to the market is maintained. As a result, the vision of a successful operator in this market needs to be long term, and the financial management of the enterprise needs to be managed within the constraints of this long term cycle. On the sales side, the enterprise must always be in a position to supply, as there is no more severe penalty for a brand than to run out of supply; hence the successful processor must be a solution provider to the brand owner, e.g. by providing new products, new specifications, new packaging, etc.

Looking Ahead

The vision of Rooibos Ltd is to ensure that Rooibos tea is sold in all corners of the world, in order to increase both the volume and the value per kg of the product. The biggest concern of the management of the Company in fulfilling this vision is to keep the balance in managing the cycle of availability of the product as described earlier. The Company is not a brand manager but a processor that does not compete with those who do manage brands. The concern is, therefore, with staying ahead of the pack as far as the products and the concomitant services delivered by the Company are concerned. This is particularly important because the technology exists for any newcomer to enter the market, and technical and financial entry barriers are not very high. Competitiveness and the ability to keep new entrants at bay are therefore dependent on the customized service offered, the industry know-how and intelligence embedded in these services and the intellectual property and human capacities that the Company controls.

Conclusion

There are a number of lessons for African agribusinesses from the experience of Rooibos:

1. Protect your intellectual property at all costs, especially indigenous products. These are becoming more and more valuable over time as more and more people earn enough to start enjoying unique experiences.
2. Decide whether you have the potential to be a large business, or whether you will remain in the ranks of medium sized businesses, and tailor your management structures and style accordingly.
3. Understand your industry and your strengths and weaknesses, and decide on the optimal business model to follow. This may change over time, so that flexibility is required, but a clear understanding of the optimal model is vital to success. In the case of Rooibos Ltd. this means in the first instance being a product and service provider, and not a brand manager.
4. Strive to be the best supplier of product and the best service provider. For Rooibos Ltd this means having the patience and the financial means to manage the cycles of production inherent to the industry, and investing in human capital and industry know-how



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Harnessing the Power of Africa's Sun to Produce Healthy Products for International Markets: The Case of Fruits of the Nile (FON), Uganda

Fred Yamoah[Ⓐ], Adam Brett^ᵇ, and Ian Morris^ᶜ

^ᵃ *Research Associate, University of Kent, Kent Business School, University of Kent, Medway Campus, Chatham Maritime, Kent, ME4 4AG, United Kingdom*

^ᵇ *Director, Tropical Wholefoods – Full Mill Ltd. Unit 5d Southwick Ind Est, Sunderland, SR5 3T, United Kingdom*

^ᶜ *Overseas Project Manager, Tropical Wholefoods – Full Mill Ltd., Unit 5d Southwick Ind Est, Sunderland, SR5 3T, United Kingdom*

Abstract

FON is a Ugandan company which trains farmers to cultivate Fair trade and grow organic fresh fruits. They developed a simple low-tech solar drying technology and sell dried fruits internationally, and in doing so have improved skills and incomes along the supply chain. Annual exports amount to 100 tones bought from 120 primary producer groups, grown by about 700 farmers. Producer groups are given hygiene, drying and business training, and farmers are given cultivation training. The company's current challenge is to improve production quality in the context of ever rising competition and requirements from European buyers.

Keywords: solar technology, producer cooperatives, healthy dried fruits, strategic partnerships, international markets

[Ⓐ]Corresponding author: Tel: + 44.0.1634888844

Email: F. A. Yamoah: F.A.Yamoah@kent.ac.uk

A. Brett: adam@fullwellmill.co.uk

I. Morris: ian@fullwellmill.co.uk



Introduction

By adopting solar drying as a key element of its competitive strategy FON has been able to penetrate the international market with dried fruits. Current annual exports amount to 100 tonnes bought from 120 primary producer groups, grown by about 700 farmers. The company's success is attributed to strong customer focus, external support, adopting relevant quality standards and the strategic partnership with Fullwell Mill (FM). This comes across in how FON trains farmers to cultivate Fair trade and organic fresh fruits using a simple low-tech solar drying technology and then sells the dried fruits internationally. In doing so, the company has helped improve skills and incomes along the supply chain. The company's current challenge is to improve production quality in the context of ever rising competition and requirements from European buyers.

Company Background

In 1991 FON began production and export of a wholly innovative non-traditional export from Uganda: naturally dried fruits, and using a decentralized production model. Small farmers were encouraged and trained to process and dry the products, and a central buying point was created in Kampala to manage quality control, sorting, packing and export. FON believed that solar drying was an affordable way for farmers to preserve their fruits and add value to them. In addition, solar drying had minimal environmental impact using renewable energy, retained waste at the point where fruit was grown, and minimized transport costs by transporting fruit only when it had been dried - and in bulk. The fruits were 100% natural dried fruits, produced without any added preservatives or added sugars. FON took the role of a training organization and buyer/exporter, and was a wholly privately funded business with initial capital of £25,000.

Beyond the initial seed capital invested by two of its current owners Adam Brett and Kate Sebag, FON has employed a combination of limited profits and grant funds to expand the business. Presently, FON buys Fair trade and organic sun dried pineapple and banana from five farmers groups in Southern and Central Uganda which together forms the Fruits of the Nile Growers Association (FONA). FONA has about 700 members, about a third of whom are pineapple farmers and two -thirds of whom are banana farmers. About 120 of these farmers also run small businesses solar drying their fresh fruits, as well as those of other farmers in FONA. Producer groups are given hygiene, drying and business training, and farmers are given cultivation training. FONA sells its solar dried fruits to FON who grades and packs all fruit ready for export at a factory built for this purpose in Njeru, near Jinja in Uganda.

Most of the driers are simple, timber-framed cabinets, covered in standard UV-stabilized agricultural polythene. The cabinet is raised off the ground using wooden legs, which rest on stones for stability and to reduce insect attack. Inside the drier is a rack to support the plastic mesh trays on which the fruit is laid out. Fresh fruit is collected from the



producer's own land or bought from approved local farmers. When it has reached the appropriate ripeness, it is sliced by hand, and laid out on the plastic mesh trays and dried. The dried fruit is packed and sent to the FON factory where it is sorted, bagged and labelled, and then packed into boxes for export.

To ensure quality, each drier is built on site by a FON carpenter. Driers last for about five years if well maintained, although the polythene sheet has to be replaced every three to five seasons depending on how carefully it is looked after. FON has also constructed a number of larger driers, built on the ground with a concrete slab base to store heat. These increase the air flow by solar powered fans to force convection. These driers are more efficient and have been adopted by a number of larger producers, but they cost about six times as much as a cabinet drier and as a result are too expensive for producers when they are starting out.

A drier costs about \$500,000 USD. They are paid for in a number of ways: outright by producers if they have the capital; paid in part or even full by NGOs; or partially financed by FON itself. In this latter case, producers will normally contribute about two-thirds of the cost by buying the timber, nails and some other materials locally. FON supplies the UV protected polythene sheet, plastic mesh and the labor to construct the driers. This contribution is made available to the producer as an interest-free loan. Individual producers and producer groups own an average of five driers each.

Current Management Structure

FON is a private limited, Ugandan company. It is co-owned by Angello Ndyaguma, Adam Brett, Kate Sebag, and a 20% share-holding is held in a trust which is used to distribute dividends across FON's employees. Practical day-to-day management of the business is carried out by Angello Ndyaguma, with some steering and advisory input from Adam Brett and Kate Sebag. Adam Brett is Co-owner of FON and a director of Fullwell Mill. He has a lot of experience in of health food retailing chain. Adam has worked in the development of fair trade food businesses as an entrepreneur in Uganda, Burkina Faso, Pakistan, Zanzibar and Zambia, Guyana, Pakistan, India since 1990. All businesses he is associated with stress ethical and Fair trade focus in food or branded commodity sectors. Adam has experience in business planning, modelling and execution, financial requirements, budgeting and strategic development for SMEs.

Kate Sebag, is also a Co-owner of FON and marketing director of Fullwell Mill. She has worked in the development of Fair trade food businesses in Uganda and Burkina Faso, and extensively in the development of the Tropical Wholefoods mainstream food marketing effort since 1991. Her skills and experiences center on sales and marketing, development education, office management and product research and development, specializing in ethnic, ethical and organic products sourced from the Third World. The five farmer organizations under FON also take part in decision making.

Key Success Factors

The salient success factors of success for FON include the provision of ensuring a guaranteed buyer for all FON's products through the strategic partnership with FM, pursuing a customer focused strategy, obtaining and maintain high quality standards and accessing external support where feasible.

Strategic Partnership/Interdependence

FON has always sold all of its products to FM. FM is a UK based fair-trade company of good standing, also co-founded and directed by Adam Brett and Kate Sebag, which has made a long-term commitment to buy from

FON. FM is wholly dependent on FON for supply of its dried pineapple and bananas, and the two companies see this relationship as a positive dependency, as through Fairtrade it enables a very close relationship between them coupled with extensive communication of information on market and production. The fact that both companies view their dependency on each other as a positive thing may seem paradoxical when viewed from the outside by conventional business analysts, but in the context of Fairtrade it is perfectly rational. By relying on FM to market its products FON is able to reduce its sales, marketing and advertising budgets to zero, thus saving huge amounts of money when compared to its non-Fairtrade competitors. It is also able to plan for future production on the basis of clear production targets from FM, which greatly reduces the complexity of its stock, inventory and production systems. Additionally FM provides FON with detailed information and IT systems to help it to manage its own business effectively. These include: 1) Information about changes in the UK market, quality requirements etc, to enable the FON product to serve the changing market demand, and 2) Information Technology systems to manage FON's traceability, auditing and financial systems.

FM and FON have a natural history and a strong relationship, which naturally helps with communication. FM and FON have complementary database systems, which has been specifically designed for processing businesses across Africa, Asia and beyond. This allows for relatively seamless information sharing, with commonly agreed KPIs and other data being able to be exported from FON's database and shared with FM as and when required. A good portion of products and ingredients used by FM more widely come from FON, and so there is a regular dialogue between FON and FM on a range of issues including quantity, quality and shipment of product. FM tends to visit FON at least once a year also.

Retail prices of FON products vary based on which business retails them, that is, they are not all sold on a retail basis by FM. Retail prices also depend on what the end products are: for example, dried fruit, snack bars, etc., and size of packets. For instance, FM's own brand, Tropical Wholefoods (TW) retails dried banana and pineapple at £1.20-1.30 for 100-150g bags. Farmer pricing is discussed, negotiated and agreed between FON, FON and FM on an annual/as required basis. FM always considers FON's operating costs as well as fair prices for farmers in these negotiations, rather than imposing a top-down price based on its own interests, as is more conventional. Since all products are sold on Fairtrade terms, minimum prices cannot fall below a certain level, and a premium is paid for farmers to use as their organizations decide for developing their livelihoods and communities. Producers are paid 3,500 USH/kg for dried banana and 6,500 USH/kg for dried pineapple. Each time a producer delivers dried fruit to the factory, payment is made for the weight of accepted fruit which has been delivered, less a deduction for any fruit from the previous delivery which was subsequently rejected during sorting. A small repayment for any outstanding loan is also deducted.

Quality and Standards

FON has penetrated the highest levels of the UK food market, selling to major supermarkets and high-value premium food stores. However, these markets are very demanding, and the profits that can be made in this trade are less than many people might imagine. Indeed, FON competes with competitors across the world to produce dried bananas and pineapples to the highest standards, whose costs of production and transportation can be far lower than in Uganda.

Uganda is not the cheapest source of agricultural product but FON's processing and transportation strategies makes it a sustainable business. FON's business model has focused more on product quality, product differentiation, and tapping niche markets for organic and Fair trade products. This has allowed it to absorb the relatively high costs of production in Uganda, whilst still operating and growing the business.

Also, once a market is gained, it is not a given that it will always be there; rather it must be continuously renewed by improving and upgrading the quality of a business's products. For FON this has also meant achieving internationally recognized standards of HACCP, Fairtrade and organic, which have all been challenging and required significant investments.

Marketing Efforts

As part of the benefits that FON derives from the interdependent relationship with FM, the former relies on FM to carry-out marketing activities to boost sales. Had it not been for the marketing efforts of FM, then not only would sales of dried pineapple and banana products never have taken off the ground in the first place, but they would also not have grown over the years as they have. Some of the marketing communication activities carried out to support FON's products include promotions on social media, using online shopping outlets (including www.tropicalwholefoods.com, and brand wholly owned by FM), and entering retailing relationships with Oxfam and Health Food outlets such as Holland & Barrett.

FM manufactures snack bars both for its tropical wholefood range and for a range of other businesses. For its own range the country of origin is identified as it a critical part of 'the story', which is highly important at the dark green end of ethical business. For many of FM's contract customers, however, the country of origin is rarely a factor, whereas the Fairtrade mark is essential.

External Supports

While FON did not rely on external support to establish itself or grow in the early years, it has benefited fairly significantly from a number of external supports in the form of financial and technical assistance. On the technical side, a team of excellent scientists from the Natural Resources Institute in the UK helped FON to make further key developments to its solar drying technology, as well as to underlying processes at farmer level. On the financial side, grant funding and access to debt financing was provided by the Shell Foundation,



which enabled factory development, equipment purchase and some certification. Further grant funding was provided by Comic Relief to complete certification work, and subsidy funding has been provided by the UK's Department for International Development's (DFID) and Food Retail Industry Challenge (FRICH) Fund to pilot the introduction of cultivation and drying of berry fruits in FON's supply chain.

A combination of the above mentioned factors have contributed substantially to the success of FON, and it is important to acknowledge that part of the success story may have resulted from good luck. In fact, at the time FON was established, the dried fruit products that it produced did not have an identified market in the UK, and so a market had to be created. The fact that sales of dried pineapple and banana products took off, confirming that product selection had been successful, was at least as much luck as good judgment.

Strategic Issues

Opportunities and plans for the future lie in the areas of diversification and carrying out extra processing, such as the development of a simple, semi-automated snack-bar bakery business, modelled on FM's factory in Sunderland, UK, to produce snack-bar products appropriate for local and regional markets. To some extent this has started with a project supported by FRICH to introduce the cultivation and drying of a range of berry products into FON's supply chain. Whilst this has not been on the whole successful as yet at least, it has resulted in some regular sales of dried berries to FM, which were introduced into a number of snack bars that it manufactures. Additionally, and interestingly, the project has led to an unexpected local market for fresh berries in Uganda, which some farmers serving are benefiting from on a small scale. The business model employed by FON has huge social and environmental impacts and fits perfectly well into the ethos of sustainable consumption and development.

FON strongly encourages its farmers to support their children's education, and provides them with the security of price and demand that allows them to do this. All or at least most children of all of FON's 700 farmers are in school, and a number have now gone on to university. Whilst Fair Trade plays a part in such social outcomes, it is at least as much to do with the broader, underlying nature of the relationship along the supply-chain, between buyers and sellers, all the way up to FM.

The FON model provides environmental benefits that come from drying, on farm and using the sun's natural heat – drying reduces weight and volume of product requiring transportation, and since this is done on the farm these benefits are immediate following harvesting (i.e. occurring between farmers and FON); and drying using the sun's natural energy of course uses no non-renewable resources. The reduced transportation costs that come with dried product continue on to FM and beyond, and shipping dried fruits by sea to FM minimizes environmental impact of exporting overseas.

Looking Ahead

There is every hope that once demonstrated on a smaller-scale to be successful the FON model can be replicated on a larger scale. However, it is very clear that the role of FM has been critical to the success of this model. This points to the fact that North-South collaborations can still work but this will require a lot of trust and commitment to create shared value for all. As inferred above, the market for dried fruit is not as large and well-developed as many of the major commodities. This does not make it insignificant or unimportant, however, though it does mean that it has its limits. FON has been able to enjoy a fairly healthy growth curve during at least a significant portion of its existence, and there is scope for expansion into other international and the local premium markets. The caution here is that any attempt at scaling up in the international market should remain cognizant of FM's capacity and what the market is able and willing to absorb to avoid losses to stakeholders, not least the small farmers at the base of the supply chain.

The strategic outlook for FON reflects international market expansion driven by expanded production and increased sales and marketing investment. Meanwhile, dried fruit is not a product like coffee for which there is a well-developed international market. To expand sales outlays implies expansion of production, which ought to be linked to marketing and sales expenditure. Furthermore, existing sales must be maintained, which is not a given, and proving very challenging when dealing with increasingly stringent buyers such as supermarkets, and in increasingly demanding regulatory environments such as Europe. The goalposts set by such customers and trade regulations are constantly changing in an ever more demanding direction. In some cases, given the

small-scale, manual and natural nature of production processes and the end product, customer expectations around issues such as color, consistency and texture can even be unrealistic.

Despite grappling with all these critical issues, management plans on maintaining FON's international market position and expanding, since the story so far confirms that harnessing the power of Africa's sun to produce healthy products for international markets, remains a viable enterprise. However, management appreciates the current challenge for further improving the quality of production because of the ever rising levels of competition and requirements from European buyers.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Bee Natural Uganda: Unlocking the Potential of Smallholder Farmers in the West Nile

Margaret Lynch^a, Edward Mabaya^b, Elena Bussiere^c, and Matthew Williger^d

^a*Program Coordinator, Cornell International Institute for Food, Agriculture and Development,
B75 Mann Library, Cornell University, Ithaca, New York, 14853, USA*

^b*Research Associate, Charles Dyson School of Applied Economics and Management,
Cornell University, Ithaca, New York, 14853, USA*

^{c,d}*M.P.A. Candidate, Cornell Institute for Public Affairs, 294 Caldwell Hall,
Cornell University, Ithaca, New York, 14853, USA*

Abstract

Bee Natural Uganda, Ltd. (BNU) is the largest producer of quality honey and honey products in Uganda, selling 61 tonnes of honey in 2012 with an average growth in sales of 20% per year. BNU's unique business model follows their honey from the hives of smallholder farmers trained by BNU to a state of the art processing facility in Arua, West Nile, Uganda. The company attributes its success to this model, which allows employees to continue checking the quality of their product at every step leading to the sale of BNU's products. In a highly competitive honey market, this consistency in quality has set BNU high above their competition. As Bee Natural Uganda looks to the future, management must develop a strategy to overcome the challenges associated with continued growth and unmet demand in Uganda and the East Africa region.

Keywords: woman-owned business, Uganda, apiculture, honey, SME

[®]Corresponding author: Tel:+ 1. 607.255.0831

Email: M. Lynch: mkl74@cornell.edu

E. Mabaya: em37@cornell.edu

E. Bussiere: etb63@cornell.edu

M. Williger: mlw287@cornell.edu



Company Background

Based in Kampala Uganda, Bee Natural Uganda, Ltd. was formed in 2007 by Maria Odido. Maria is a dynamic, driven entrepreneur whose previous ventures included exporting pineapples, sesame seeds and other food products from Uganda. BNU was founded following the bankruptcy of its predecessor Bee Natural Products in 2006. Bee Natural Products had the same goals as Bee Natural Uganda, but had a higher demand for the products than it could supply. Customers were unhappy with the inconsistent supply of honey and stopped buying from Bee Natural Products. When Bee Natural Uganda was formed management decided to grow at a much slower pace to avoid this problem. In 2013, Bee Natural Uganda employed 12 full time employees between the headquarters in Kampala and the honey processing plant in Arua. Additionally, BNU hires 10 mostly female seasonal workers annually, to assist in the processing of honey during the peak production months of February – May.

The idea for a honey business was conceived in 1997 when Maria learned that China, one of the world's largest exporters of honey, had been barred from the European market. Maria, who knew of the high quality honey produced traditionally in the northwest region of West Nile in Uganda, thought that Ugandan honey could help fill the gap left by China in the global honey market. When Maria first visited the city of Arua and the West Nile region in 2007 she was struck by the extreme poverty that she witnessed. The Lord's Resistance Army (rebel activity), was still sporadic in the region, but Maria was steadfast in her resolve to base the heart of her honey production enterprise in the West Nile. Maria saw a unique opportunity to enhance the economic status of a severely depressed region by unlocking the West Nile's potential to produce quality honey.

To make her plan a reality, Maria used her personal funds to finance the endeavor. She travelled to Denmark to purchase state of the art honey-processing equipment, and began construction of the processing plant in Arua. The plant became operational as part of Bee Natural Products in 2002. At the same time the company began to visit smallholder farmers in the West Nile region to interest them in learning more about apiculture. Through partnerships with SNV Netherlands Development Organization, the Government of Uganda, Kilimo Trust and Centenary Bank, Bee Natural Uganda was able to set up a program to train smallholder farmers in modern apiculture techniques. The program also provided financing and access to markets. The financing allows farmers to purchase modern beehives and the connection to a market gives them a legitimate location to sell their honey.

Since 2002, the number of farmers who were registered via MoU with Bee Natural Uganda has increased to 720 smallholder farmers. BNU purchased honey through agents who sought out other farmers who produced honey in addition to their other crops. Three agents, who were trained by BNU, provided the majority of this additional honey to BNU.



Bee Natural Uganda produces high-grade honey in a variety of containers and sizes that are distributed to mid-to high-end supermarkets, as well as small glass containers that are available at high-end hotels. Beeswax is sold for industrial use as well as bee baiting for new beehives.

Current Management Structure

The Kampala office of Bee Natural Uganda is the headquarters for the senior management of the company. Maria, the CEO, oversees decisions for both the Kampala and Arua offices and manages relationships with partner organizations. The Business Manager, who has been with the company since its inception, manages the day-to-day work in the Kampala office and partners with the Operations Manager at the Arua office. The Kampala office also houses BNU's sales and marketing staff. Quarterly meetings of the Bee Natural Uganda board of directors are held in Kampala.

The Arua office and processing plant is managed by the Operations Manager, a recent college graduate intent on transforming the efficiency of the processing plant. He works closely with the Field Manager who manages the relationships with the local smallholder farmers and agents. Additionally, he manages the upkeep of the processing plant and the proper storage of finished honey products.

The Business Manager and Operations Manager coordinate the supply of honey processing in the West Nile and delivery to Kampala for distribution to retailers. Regular and consistent communication between the Kampala and Arua offices is critical to maintaining the smooth transition between the amount of product requested by retailers—from the processing plant in Arua to the distribution center in Kampala.

Key Success Factors

Bee Natural Uganda is the only honey producer in Uganda to carry the seal of the Uganda Bureau of Standards. This allows BNU to be the sole honey producer in Uganda that can legally export honey products. BNU's focus on consistent and high-quality standards is essential to achieving this recognition. Of the honey brought to the BNU processing plant by BNU-trained farmers, 10% of the raw honey is rejected. The honey brought by agents from non-BNU trained farmers is rejected at an even higher rate—as much as 45%. Once the honey is processed, only the honey that meets the highest grade is sold under the Bee Natural Uganda label. Due to the growing demand for honey in Uganda, BNU was only a domestic producer in 2013. BNU expects to fully meet the domestic market demand in the next five years. BNU can also use its export privilege to begin supplying to other countries in East Africa. A long-term goal is to export to the African continent in general, and the rest of the world.

Through BNU's ongoing partnerships, which provide training and financial assistance to its farmers, BNU ensures that the farmers are trained in high quality honey production practices. BNU's guarantee to purchase honey with cash, on site, has given BNU an advantage over other purchasers who often do not pay at the time of pick-up and offer lower prices. BNU set their purchasing price at fair market value, about 4,000 UGX/KG for raw honey in 2013. As the benefits of working with BNU became well known, more farmers joined their network. Moreover, those farmers already involved continued purchasing high quality modern hives to increase their productivity.

The processing plant in Arua has the capacity to adjust to increases in honey availability, with its top production capacity at 600 tones of honey per year, the largest capacity of any honey processor in East Africa.

Bee Natural Uganda's consistent quality helps influence its strong brand recognition. BNU's products are found in most major retailers in Kampala, and throughout Uganda, and Bee Natural Uganda is commonly the recommended and requested brand at all outlets. Through strong brand recognition, Bee Natural Uganda is able to successfully introduce specialty honey products such as cream honey in addition to their standard honey. BNU does not formally advertise their products. Until they are able to meet the growing demand for honey, they plan to rely on word of mouth and customer satisfaction to drive sales of BNU's products.

Strategic Issues for Bee Natural Uganda, Ltd.

In order to produce a sufficient supply of honey for export to East Africa and globally while meeting Uganda's domestic demand, Bee Natural Uganda needs to produce at least 250 tonnes of honey annually. The largest amount of honey produced by BNU was in 2011, and they were only able to produce 78.5 tonnes. Although BNU has already met the Uganda Bureau of Standards needed to export their honey globally, BNU still faces competition in the domestic market from Ugandan, East African and global honey producers.

To increase honey production, Bee Natural Uganda faces a number of obstacles from farmers, competition and the environment. The primary goal of BNU is to increase the amount of honey purchased from BNU-trained farmers, since trained farmers produce higher quality honey with lower BNU rejected percentages than untrained farmers. In 2012, only 20% of all honey purchased was from BNU-trained farmers. The majority of the honey came to the BNU processing plant via agents who brought low quality honey from local farmers in Uganda. Often, they brought even lesser quality honey from across the border in South Sudan and Democratic Republic of Congo.



Many farmers who were approached about purchasing beehives for their farms declined because of the slow initial rate of return from honey production. Farmers are accustomed to purchasing seeds that yield profitable produce within one season. Beehives on the other hand take up to two years to become colonized by honeybees. This means that the first harvest of honey usually occurs in the third year after purchase of the hive. Paying off debt from the purchase of the hive may take a number of years depending on the model of beehive purchased. This leaves farmers in debt much longer than they would be from their other agricultural endeavors.

The inconsistent rainfall experienced in the region due to climate change also affects the amount of honey that can be produced annually, making farmers increasingly cautious about investing in beehives. Despite the larger return from honey production over a longer period of time, many farmers do not want to take the risk.

BNU's inability to pick up all of the honey produced by farmers also decreases the amount of honey that is purchased by the company. Poor infrastructure in the region makes many roads nearly impassable and most farmers are rarely visited. The Arua Operations Manager is considering purchasing a four-wheel drive vehicle to more easily reach farmers. If farmers store honey and BNU is not able to pick it up within a reasonable

amount of time, the farmers will often sell their honey to other buyers. When side-selling occurs, BNU feels the farmers are being disloyal to the investment the company has made in the farmers' training. As a result, relations with these farmers become strained in future transactions.

Looking Ahead

Bee Natural Uganda is faced with the decision of either focusing on exporting their honey or continuing to grow within their domestic market. If BNU is able to expand their honey production to meet the 250 tonne export minimum, the company could begin to export to the East African community within a few years. Alternatively, BNU is weighing the company's options to continue increasing honey production for the domestic market, while also utilizing their brand recognition to introduce new products such as candies, jams, and beeswax-based cosmetics.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Ele Agbe in Search of a New Light in Ghana's Shea Sector

Rita Abban[Ⓐ], S.W.F. Omta^ᵇ, John B.K. Aheto^ᶜ, and Victor Scholten^ᵈ

*^ᵃPhD Researcher, Management Studies, Wageningen University, de Leeuwenborch,
Building 201, Bode 77, Hollandseweg, Wageningen, The Netherlands*

*^ᵇChaired Professor Management Studies, Wageningen University, de Leeuwenborch,
Building 201, Bode 77, Hollandseweg, Wageningen, The Netherlands*

^ᶜVice President, Kings University College, P.O. Box LG 593, Legon-Accra, Ghana

*^ᵈAssistant Professor, Department of Technology, Strategy and Entrepreneurship,
Delft University of Technology, Stevin 1, 2628 CN Delft, Netherlands*

Abstract

Ele Agbe is a Ghanaian phrase meaning “God is alive.” Founded as a small and medium enterprise (SME), in Ghana in 1996, Ele Agbe Company is currently a dynamic business operating in the downstream shea export sector. Demand for shea is increasing for skin and hair products on the foreign market. Ele Agbe’s artisans use traditional Ghanaian tools and methods, and the highest quality materials available, including unique scents. The protected knowledge build up of unique scents in its shea product mix has given Ele Agbe its trade secret. At Ele Agbe, artisans pass on their skills to younger generations, conducting workshops for school groups and accepting apprentices from throughout Ghana. The business is confronted with challenges partly as a result of non-existent working policy for shea and breaks or gaps in the shea supply chain preventing it from achieving full potential. The company needs to consider how to improve on its’ firm and business networks given its internal and external environment in order to expand.

Keywords: Ele Agbe, SME, networks, shea supply chain, exports

[Ⓐ]Corresponding author: Tel: +233. 244. 96. 8415

Email: R. Abban: rabban22@gmail.com

S.W.F. Omta: onno.omta@wur.nl

J.B.K. Aheto: koblaheto1231@yahoo.com

V. Scholten: v.e.scholten@tudelft.nl



Company Background

Ele Agbe is one of the leading names in Ghana's shea processing sector. Fourteen years ago, when they began exporting, they had six full time workers and 150 casual workers (wood carvers). Today, the company has 10 full time workers and about 300 casual workers. They have remained sustainable through strong marketing, innovation and diversifying products based on consumer needs and expectations in both domestic and international markets. In the past five years, 20 new product lines have been introduced by the company to include shea varieties of soap, lotion bars and lip balm. Other shea products include: body oil, hair pomade and cream for babies. New product lines are driven by market testing and by the young staff who come up with ideas they find interesting and which peers perceive as the trend. All these inform product development. Ele Agbe's success may be attributable to its networks and initiatives management. For example, the company has received several international recognitions.

Comfort Adjahoe-Jennings is the founder and CEO of Ele Agbe Company Ltd. She is a social entrepreneur, engaged in reaching out to the rural women in particular, and creating opportunities for them to make a living. Comfort is also president of the Africa Women's Entrepreneurship Program (AWEP) in Ghana. With an optimistic view¹ of its potential, Ele Agbe remains undaunted by the seeming lack of a regulated shea sector and breaks in the shea supply chain. The company now needs to consider which of its firm and business networks it can leverage to achieve its potential given both its internal and external environment.

Ele Agbe, an SME², established in 1996, began full operations in 1998 focusing mainly on producing ornamental beads, original jewelry designs and handmade home decor which they started exporting in 1999. Shea butter products were introduced to its export product line sometime in 2004. The expansion was made possible through the use of retained earnings (equity) in the amount of \$400 in order to launch a range of shea butter products. One of the purposes of this expansion was to provide a higher market profile for the products of rural women to afford them a more sustainable livelihood. The vision of Ele Agbe is to satisfy a demand in local value-added products and create jobs for rural and urban women; and youth which can help them earn a living by targeting domestic and international markets. Comfort's leadership and vision are fueled by 18 years of export and work experience gained in another company, self-learning and feedback from buyers. Other contributing factors are her high involvement in export trade and frequent travels abroad.



Today, the company targets the domestic market, sub-regional markets through trade fairs, exhibits and international markets, primarily in the USA, Japan and occasional orders to the UK. The quality of products is very high and is assured through work relations requiring maintenance of Fair trade practices and standards.

Current Management Structure

The company has one top level CEO, Comfort Adjahoe-Jennings, four mid-level, and five junior-level staff. Reporting is centralized around the CEO. The mid-level staff supervise the casual workers which are primarily

¹ In the view of the CEO the lack of regulation may not be an inhibition as more regulation would entail more levels of (male) bureaucracy which would bring further challenges, especially of patriarchal power and possible opportunities of corruption

² SMEs are defined in terms of assets/employees as follows: Micro: ≤ \$US10,000/1-5 employees; Small: \$US10,001 ≤ 100,000/ 6-29 employees; Medium: \$US100,001 ≤ 250,000/30-50 employees

shea pickers represented by an association. They work seasonally during shea harvesting and processing. The junior staffers perform the mixing, packaging and labeling of products.

The company has a weak board with low internal controls although management is expedient in meeting regulatory and monitoring requirements. The CEO provides the directives. The centralized structure for this small company has been effective in delivering timely export orders especially resulting from the familial work rapport established with casuals and contractors who provide input supplies.

Key Success Factors



Entrepreneurship, product chain characteristics and social capital are the driving forces for the business sustainability and export performance of Ele Agbe. These, forces coupled with direct linkages are what have improved the company's reputation. Comfort Adjahoe-Jenning's connections to world leaders and renowned personalities have put Ele Agbe in the limelight. Comfort Adjahoe-Jennings was selected to participate in African Women's Entrepreneurship Program (AWEP) an outreach, education, and engagement initiative that targets African women entrepreneurs that are making a positive impact. AWEP was an initiative founded by former US Secretary of State, Hillary Clinton as a support to boost trade under the Africa Growth Opportunities Act (AGOA)³ in Africa. Comfort also had an opportunity to join the Cherie Blaire Foundation Mentoring Program 2012. Her final blog gave her the opportunity to meet Cherie Blaire and develop a business linkage. These two programs were instrumental in boosting the image of the company worldwide.

The outcome is in line with the company's vision to support sustainable jobs for rural-urban women and youth, which it does through its community business-based model for shea-pickers and processors. The company has developed bonds with over 300 shea pickers and processors belonging to about 10 groups or associations, which provide downstream input supplies of raw shea butter. The community business model concept provides the shea pickers and processors a market for their produce at competitive prices. The women and youth are also taught to apply Fair trade practices and quality standards as part of their work.

Although the company has not yet registered its trade secret⁴ as intellectual property, it has closely guarded it. It has an agent in the United States who provides other input supplies (oils, fragrance) not available locally. The quantity mix of various inputs and the processing forms a part of the trade secret that gives Ele Agbe the competitive edge in its final products.

A strong network alliance with its suppliers and buyers has developed a formidable bond. This has been achieved through the CEO's long term vision to maintain familial relations, built solidly from the foundation of relationship to ensure sustainability. Work relations do not end with one generation but is carried to their younger generations as well. There is also the desire to remain in business to mentor young people who aspire to start their own businesses. The pillars for these relationships are good work ethics, trust, and, sound principles. The strong alliance has opened up different markets which provide valuable consumer feedback which has enabled the CEO to make optimal buying choices. The strong network alliance creates a buffer for the company from the unregulated and seasonal shea sector; and strong competition. Ele Agbe also considers the welfare of its suppliers. The competition evolves from large companies (local and foreign) including their agents that move

³ The AGOA is a US initiative to promote exports of developing economies.

⁴ The process and admixture for products constitute Ele Agbe's trade secret

to buy huge volumes of the shea nut (unprocessed). The price offered by these large companies, though cheap, is higher and distorts local market prices. The shea pickers are rationally attracted by better prices since shea is seasonal and not available year round. Shea grows in the wild and is not farmed. Shea processors (some of whom are shea pickers) process the shea nuts into shea butter using a local rudimentary approach. Because of the increasing demand, the government has received requests to regulate this sector similar to the cocoa sector.

The ability of Ele Agbe to integrate its shea supply chain from downstream shea pickers to upstream bulk buyers has enabled the company to spread risk and costs of production in a way that harnesses its driving force of:

- Fair trade practices and quality standards acquired under a USAID programme is applied in all contract dealings downstream and upstream.
- Operation of one centralized production location ensures effective supervision and guarded trade secret.
- High expansion drive and involvement from staff in decision-making, particularly things that affect them, promotes innovation, and has led to the introduction of 20 new products within the past five years.
- Strong network and rapport facilitates timely market information from visits to export markets. Feedback from buyers and agents is used to offset constraints arising from frequent changes in regulations from importing countries and the need for more learning.
- Use of product differentiation and quality processes are core business strategies to meet market entry requirements and consumer expectations.
- Work is executed in small cohesive teams with employees (contractors) that are able to work in all areas of production.
- A positive business outlook is supported by novel products, bold initiatives, and innovation by the CEO.
- Meeting local regulatory and monitoring requirements; and financial audits.
- Complete ownership of business property, equity financing, well-equipped warehousing facility, and application of free-on-board export channels eliminates operational shocks occasioned by fluctuations in debt servicing.

Another key factor is that the products are non-perishable and can be held in stock for more than two years. This, coupled with the high profile network linkages forged by the CEO, boosts the image of the company as a credible trade partner. The contact networks of the company are very well-known and provide the company with valuable information. The product brand is catching on abroad. This is clearly shown by buyers such as, 'Ten Thousand Villages' in the United States of America who only places assured or quality products on its website and also included Ele Agbe's products on its website. Consequently, the company has seen a significant increase in export orders with sales revenue increases of more than 200% over the last three years. It has had to decline some requests because of its small production facility.



Despite the increased demand for shea-based products, the CEO is concerned that the lack of a national policy on the shea sector means that it is difficult to ensure that quality standards are maintained by all producers and exporters. The activities of foreign companies remain unregulated as they have unlimited access to the shea pickers. They are competing with indigenous companies for the raw shea nuts resulting from the increase in global demand. The competition drives up prices and limits supply for a product that is seasonal. This practice hampers year-round production of shea products as the demand erodes the possibility for local shea stock build-up.

Strategic Issues for Ele Agbe

The company has concretized strategic linkages with leading personalities and appears to have focused less on local strategic linkages with the exception of downstream input suppliers. The company considers it would be beneficial to link up with local shea associations such as the Shea Producers Association and Shea Network to which some known shea exporting companies belong. Such links would help the company identify other companies within these associations it can partner with for group exports. For example, AWEP targets female entrepreneurs. There is an advantage to male entrepreneurs to take opportunity from such partnership especially as the export market is already established. They would therefore not have to develop the export chain.

Ele Agbe is taking steps to register its trade secret as a sure way to prevent seepage or industrial pilferage. Next steps include the possible franchising of the trade secret in contract arrangements with shea butter producing associations such as Christian Mother's Association, Pagsung Sheabutter Association, and, Gubdanda Women's Group. This will help to generate increased revenues from the franchise and from export volumes.

The company's upstream buyers are mostly retail outlets in the US, Japan, and, UK. Management is initiating an arrangement whereby the retail outlets provide links to others who are interested in shea products. This will increase existing market for the products and serve as an incentive to contract arrangement with the shea butter producing associations. The shea butter producing associations will find the venture profitable as higher revenues can be expected. Promoting the welfare arrangements that the company has with its current input suppliers (in the contracts with the shea butter producing associations) suggest that gain from the social setting is assured. This strategy is in line with the company's vision of targeting rural women and the youth.



An analysis of 14 other shea exporting companies supports Ele Agbe's perception concerning the challenges faced in the shea sector. Some of these companies export to other African countries such as South Africa, Liberia, Sierra-Leone, Nigeria and Asian countries such as India, China, and Japan. Since these companies do not mention frequent changes in regulation covering imports as a constraint, Ele Agbe may consider venturing into these other markets.

The government now has a draft shea policy in place awaiting legislation for implementation. Effective communication among shea producers and government will enable beneficial implementation of the policy. In particular, indigenous shea producers could lobby government to formulate a policy either limiting the proportion of shea nut exports or determining the percentage of a company's exports in shea nut and processed shea. The company hopes to work to seize this opportunity to make the platform for shea exports more favorable to local companies through advocacy to government.

Looking Ahead

Ele Agbe appears to have positioned itself for international (especially Japan and US) markets based on the networks developed through leading world personalities in these areas. While the social network of familial relations has helped the company with its branding and market penetration, frequent changes in export market regulations for the shea sector is costly to the company. The question for the company now is how to sustain its network which is linked solely to the CEO and to a lesser extent to the company? Should more effort be made to harness local social networks and exploit other network opportunities in the sub-region to reduce costs further? How should the company expand its business model of operations without compromising its vision? Could the strategy of developing network ties with world personalities be used for international markets or in sub-regional markets?

The concept of developing the capacity of rural women and youth through a franchise of registered trade secret is appealing. This is because business model can be replicated in different communities. Although, it is not clear how viable this may be given the constraints associated with intellectual property registration at national, regional and world levels, and the tightly guarded trade secret.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Wild Fruits of Africa: Commercializing Natural Products to Improve Rural Livelihoods in Southern Africa

Edward Mabaya^a, Jose Jackson^b, Gretchen Ruethling^c, Casandra Marie Carter^c, and Jack Castle^c

^aResearch Associate, Charles H. Dyson School of Applied Economics and Management, Cornell University, B75 Mann Library, Ithaca, New York, 14853, USA

^bFood Scientist & Director, Research and Partnerships, Botswana Institute for Technology Research and Innovation, Maranyane House, Plot 50654 Machel Drive, Gaborone, Botswana

^cGraduate Students, Cornell University, c/o CIIFAD, B75 Mann Library, Ithaca, New York, 14853, USA

Abstract

Wild Fruits of Africa (Pty) Ltd (hereafter referred to as Wild Fruits) is an emerging agribusiness based outside Gaborone, the capital of Botswana. Frank Taylor, the CEO, has spent much of his life researching indigenous plants, and is currently commercializing natural food products made from local fruits. Wild Fruits collects wild fruits harvested by rural villagers who have limited income-generating opportunities. Wild Fruits processes the fruit to make healthy snacks targeting the country's growing tourism industry. The company is currently marketing and distributing its products to airlines, supermarkets, and safari lodges in Botswana, and is now seeking expansion into regional markets. This case illustrates the challenges and opportunities facing entrepreneurs in a niche market, as well as issues surrounding blended-value businesses in Southern Africa.

Keywords: natural food products, social enterprise, Botswana, Marula

^aCorresponding author: Tel: + 1. 607.280.0264

Email: E. Mabaya: em37@cornell.edu

J. Jackson: josej@bitri.co.bw

G. Ruethling: gretchenruethling@gmail.com

C. Carter: casandracarter16@gmail.com

J. Castle: jdcastle1@gmail.com



Company Background

Wild Fruits makes dried snack products from indigenous fruits and vegetables that are sustainably harvested from the wild. The four key raw materials - Marula, Wild cucumber, Kalahari Melon, and the Kalahari Desert truffle – are described in Table 1. Key among these is Marula, dubbed by some Bantu tribes as “food of kings.” Marula fruits are the size of a plum and have thick yellow skin and white, soft flesh. Marula trees grow most abundantly in dry, open woodlands and have few pests or diseases.

Table 2. Natural products commonly used by Wild Fruits

Common Name (Scientific Name)	Harvesting Months	Common Uses
<i>Marula</i> (<i>Sclerocarya birrea</i>)	January - March	Fruit used for dried snack foods, jelly, jam, juice, beer; kernels used for snacks and high quality cosmetic oil; bark is used to treat stomach ailments and is used for dye
<i>Wild cucumber</i> (<i>Cucumis metuliferus</i>)	June - November	Dried fruit snacks, chutney
<i>Kalahari melon</i> (<i>Citrullus lanatus</i>)	May - November	Dried slices, Dried fruit snacks, cooked with porridge, seeds roasted and ground for consumption; seed- oil used for cosmetics
<i>Kalahari desert truffle</i> (<i>Kalaharituber pfeilii</i>)	April - July	Similar to black and white truffles, used in food, income generation

Source. PhytoTrade Africa and Botswana College of Agriculture

Wild Fruits gathers the raw materials through community groups of trained harvesters in local villages. The group leaders notify villagers about when and where Wild Fruits will be coming to purchase products. Villagers collect marula and other wild fruits from trees in their village and nearby areas. Many of these fruits occur in such abundance that without a commercial use they would otherwise go to waste.

After purchasing the wild fruits from the villagers, Wild Fruits processes and packages snacks in an 800-square-meter factory located in Gabane, about 15 kilometers outside the capital city of Gaborone. Figure 1 describes the process for creating marula snacks. The products have a shelf life of about six months to 18 months, with the browning of the yellowish products being the key deciding factor for shelf life.

Wild Fruits currently sells 11 products in 50-gram and 20-gram plastic bags and 450-gram jars. The company also offers smaller packages of its products that can be customized for the client to use in hotel rooms, on safari drives, and on airplanes. In Gaborone, Wild Fruits products are currently sold at international grocery store chains such as Spar, Pick n Pay, Food Lovers Market and Choppies, and at tourist shops. The high cost of supermarket merchandising has led the company to shift its target market from local shoppers to corporate buyers. The airline Air Botswana offers Wild Fruits' Marula Stix and Marula Nuggets to passengers on flights as a way to promote local foods, and provide passengers with a more authentic African experience.

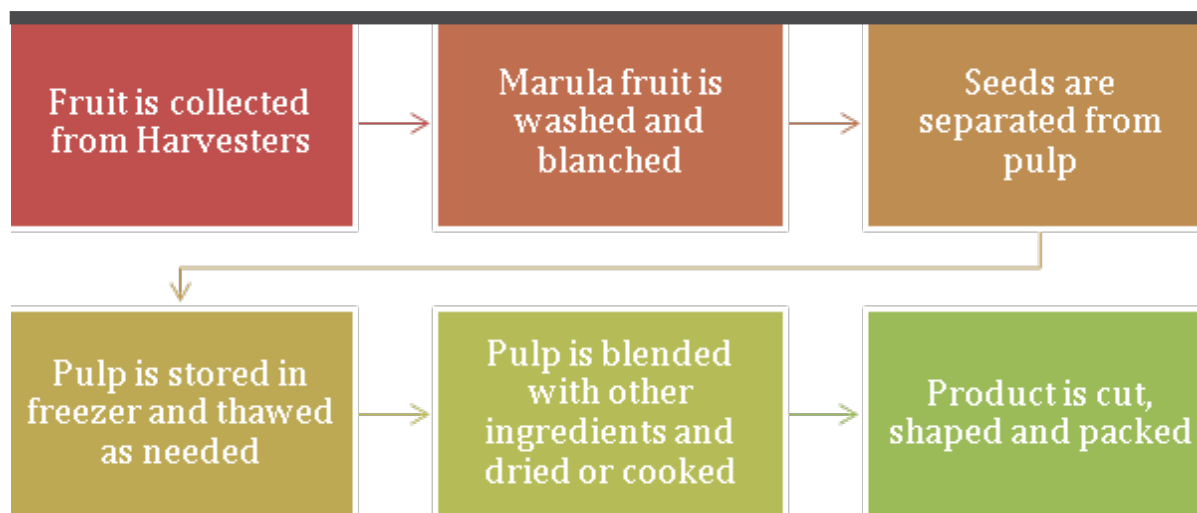


Figure 1. Production Process for Marula Snacks

Current Management Structure

Wild Fruits currently has 19 employees, including management staff and non-management staff, based in Gabane. The primary leadership and vision for the company is provided by the Owner/Managing Director, Frank Taylor, who is supported by a Production Manager, Production Supervisor, and Marketing/Buying Manager. Functionally, the company has four primary internal departments: Production & Operations, Marketing, Finance/Accounting and Transport. Taylor makes all final decisions for the company in consultation with the management team. The non-management staff consists of a bookkeeper, assistant bookkeeper, driver, and 12 operations staff. As the company plans for the future, it is looking into how to provide ongoing experienced executive management.

Key Success Factors

Wild Fruits is establishing itself among a growing niche market that satisfies consumer demands for natural foods, environmental sustainability, and nutritious and flavorful products. A driving force behind Wild Fruits' success is the vision and dedication of Taylor, who has lived in Botswana for nearly 50 years. After working as a trader and game skin tanner, Taylor started Pelegano Village Industries in 1975, a non-governmental community development organization he still directs. He also established Veld Products Research & Development, a non-profit company that researches and develops uses for non-timber forest products to benefit local communities.

Taylor is passionate about helping local communities through market solutions. Hundreds of local rural people, primarily women, have harvested fruit for Wild Fruits' products. Many of the harvesters use the income to pay for healthcare, school uniforms and building improvements.

"We can really have a big economic impact on these small subsistence farmers," Taylor said. "The more products we can offer, the more people we can employ, the greater the economic impact we can have."

Wild Fruits tries to purchase all the fruit a community has harvested even if it is more than needed. “We cannot refuse to buy because we see what happens when we do that,” Taylor said. “People make all sorts of promises and then never follow through. That’s the worst thing you can do to people in the subsistence economy.” Storage space for the products, however, has been a limiting factor.

At the 2008 Natural and Organic Products Show in Cape Town, South Africa, Wild Fruits (then called WildFoods) won the Africa Natural Product Award from PhytoTrade Africa, Africa’s only trade association dedicated to the development of a sustainable natural products industry. The award, which has increased brand awareness in the region, is given to a business in southern Africa that is committed to ethical and sustainable products that use natural ingredients.

“Frank Taylor has long been a driving force behind the commercialization of natural products in southern Africa,” PhytoTrade’s CEO said in a press release. “He has led by example through his commitment to environmental sustainability and community development.”

After facing constraints in export opportunities due to food safety regulations, Wild Fruits took a significant step forward in 2012 by earning Hazard Analysis and Critical Control Points (HACCP) accreditation. This means the company is meeting international food safety standards and will allow the company to tap into new markets domestically and internationally as many retailers require this certification. Taylor has been in conversations with Woolworths (a high end supermarket), which is considering purchasing Wild Fruits products. In addition to HACCP certification, Taylor would like to pursue organic and Fair Trade certifications.

Wild Fruits has exceptional capacity for building partnerships and leveraging support and resources. The company has established relationships with various local and international development institutions that provide support to the company and harvesters. For example, the Centre for the Development of Enterprise (CDE), an international small enterprise support institution, recently prepared a diagnostic evaluation of Wild Fruits and recommend key changes to the business structure and operations. Wild Fruits has also developed relationships with the Botswana Investment and Trade Center, and the Local Enterprise Authority.



Taylor (far right) explains the importance of HACCP certification to Cornell University students.

Strategic Issues

Wild Fruits is the only business in the country to produce snacks made from indigenous fruits, and the only processor in the whole of Southern Africa to successfully process the Marula fruit into snack foods, so it has a clear potential advantage in the uniqueness of its product. Wild Fruits currently offers about a dozen different snack products, many of which are similar in taste and consistency but differ in shape and size. Taylor, a scientist by inclination, is constantly developing new ideas for products, including chutneys, spreads, pickles and juices. The product that consistently sells the most, however, is Marula Stix, which are dried sheets of processed marula fruit pulp mixed with sugar and cut into strips.

On the supermarket shelves, the marula jam competes well with many international brands as its distinctive new logo makes it stand out from the competition. There is limited competition at local supermarkets in dried fruit snacks, so Wild Fruits is becoming a prominent player in the market for consumers who are looking for health-conscious snack options. Among local consumers, however, there may not be a large demand for dried fruit snacks. Taylor would like to target mothers who are seeking healthy snacks for their children, but he does not have a marketing strategy to do so. He recently changed the name of the company from Wild Foods to Wild Fruits after discovering that consumers associated the former name with wild animal meat and animal products rather than fruits. Since rebranding, sales have increased substantially.

Beyond the novelty of the product made from native fruits, Wild Fruits has a story of community development that other competitors are lacking. The company is a social enterprise that benefits local communities where the fruits are harvested. The story of community development, however, is not communicated on the product packaging. Some clients, including the government schools, prefer to buy from Wild Fruits because it is a local business, but the price they are willing to pay can be lower than the cost of production.

One significant challenge facing the business is a lack of working capital. Although sales of the product have been growing each year (150% from 2010 to 2011, 12% from 2011 to 2012 and 19% from 2012 to 2013), the business is still operating at a loss, which has required Taylor to rely on his own savings to keep the business going. He considered getting a loan from the local Citizen Entrepreneurial Development Agency, but it would have required an expensive valuation of his land to use it as collateral. The cost of the valuation put the loan out of reach. This financial limitation prevents Taylor from making necessary product improvements such as investing in a new cutting machine to ensure that fruit is cut consistently.

Staffing issues are another significant constraint. There is high turnover in one single post in his staff, that being the post of production manager; this post requires someone who can “think out of the box”, be proactive and identify potential problems before they arise. Another staffing challenge is a lack of ownership among senior staff to take initiative and follow up with issues involving their departments. This results in Taylor handling problems himself and often working 16-hour days. Taylor also recognizes that his passion and strengths lie in product research and development, not marketing and management. He would like to bring someone into the company who can lead on managing and marketing, but he has not been able to find a candidate with the right skill set.

Looking Ahead

Despite the challenges, there are great opportunities for Wild Fruits. One of these opportunities is in the tourism industry. Botswana is one of Africa’s fastest growing tourist destinations due in large part to wildlife hotspots in locations such as the Okavango Delta and Chobe-Kasane National Park that offer Africa’s renowned “big five” game animals (elephants, lions, buffalo, leopard, and rhinos). Many international tourists are interested in trying local foods and supporting local businesses, and Wild Fruits is a natural fit for this niche. Wild Fruits is currently selling to Air Botswana, which is their largest customer, so tourists are introduced to their products on their flights. Wild Fruits is exploring new markets in the EU, the US and Japan, from where there have received product enquiries.

Taylor is also considering expanding the line of products offered by adding sugar-free products, pasteurized marula puree for flavoring yoghurts and ice cream, chutney as well as marula cider. He is also exploring the production of cosmetic oils from marula seeds. In Taylor’s eyes, the opportunities are endless, as is his passion for engaging local communities and helping them to improve their livelihoods by creating healthy products made from native fruits.

Acknowledgements

Research for this case study was supported by the Student Multidisciplinary Applied Research Team (SMART) program at Cornell University. The views expressed here are those of the authors and not necessarily those of the organizations for which they work.



New label of Wild Fruits' snack product served on Air Botswana.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Conflict Resistant Agribusiness in Democratic Republic of Congo

Shahriar Kibriya,^{®a} Vincente Partida^b, Joseph King^c, and Edwin Price^d

^a*Research Lead and Assistant Director, Center on Conflict and Development*

^b*Communications Officer, International Coffee Organization*

^c*Managing Fellow, Conflict and Development Foundation*

^d*Howard G. Buffett Foundation Endowed Professor on Conflict & Development*

600 John Kimbrough Blvd., 411 Agriculture & Life Sciences Bldg., 2124 TAMU,
Texas A&M University, College Station, Texas, 77843-2124, USA

Abstract

ESCO Kivu SPRL, located in Beni and Butembo North Kivu, is one of the few successful medium sized agribusiness enterprises in the region. ESCO pursues a line of conflict-resistant enterprises: chinchona (quinine), cacao and vanilla. Chinchona is the most conflict resistant product, while cacao is the most profitable. The company operates 26 trucks and 31 small stores, utilizing over 50 agronomists and 16,000 small stakeholder farmers. Farmers receive production support and a 15% premium for quality and exclusivity. ESCO exports cacao to the USA to specialty organic chocolate processors such as Theo's, in Seattle, USA. Vanilla exports also go to USA buyers assisted by VANEX (Association Vanilla Exporters of Uganda). This study focuses on ESCO's conflict resistant business strategies in the Democratic Republic of Congo.

Keywords: Conflict resistant agribusiness, North Kivu, Chinchona, ESCO Kivu SPRL, supply chain

[®]Corresponding author: Tel: + 1. 979.458-9399

Email: S. Kibriya: Shahriar@tamu.edu

V. Partida: Vince.partida@tamu.edu

J. King: Joseph.king@tamu.edu

E. Price: Ec-price@tamu.edu



Company Background

North Kivu, located in the Democratic Republic of Congo is a violent conflict-prone region of Africa. Even after the peace accord of 2008, conflict escalated in the region resulting in loss of lives, farmer displacement, looting, smuggling, ethnic tension and destruction of infrastructure in agriculture (Vlassenroot and Raeymaekers 2004; Vlassenroot and Huggins 2005). The involved parties include state actors of from the Democratic Republic of Congo, Rwanda and Uganda as well as rebel groups such as M23 and Mai Mai (Baaz and Verweijen 2013).

ESCO Kivu SPRL (ESCO) is a privately owned agribusiness company operated from Beni, North Kivu. Established in 1970, ESCO initially focused on coffee production. However, due to a severe outbreak of coffee diseases in the region and local conflict, the company ceased its functions during the 1980s. ESCO was restructured in 1995, with a focus on conflict resistant business strategies. The newly structured company initially invested in quinquina. The bark of the chinchona (or quinquina) tree contains quinine, which is used to treat Malaria. ESCO started diversifying with cacao in 1998 and again in 2000 with the production of vanilla.

The rebirth and success of ESCO can largely be attributed to quinquina. Although, quinquina has been growing in Eastern Congo since the 1800's, ESCO is the main company to develop the industry in North Kivu in the modern era. From 1996 onwards North Kivu has been affected by violent conflict causing land displacement of farmers, pillaging of farms, and destruction of market infrastructure. However, quinquina is largely conflict resistant. It cannot be readily converted to cash and it is not useable in its raw form. The trees can be neglected for weeks or years, and only gain in value. The bark can be harvested when safe and convenient. The trees can withstand violence and vandalism due to their tall, sturdy structure and they offer no apparent benefit for the actors of violent conflict. Needing no day-to-day attention, they are not affected by cyclical farmer displacement due to conflict. Normally the crop becomes profitable in two -three years; trees are cut and the bark is stripped every 5-12 years. The next crop grows from the stumps left behind. The bark is bought and collected locally by the ESCO personnel. The business owns six quinquina stores and six trucks are used to collect the bark. ESCO dries and packs the bark and exports it to Europe, Asia or the USA for the quinine extraction. ESCO has set up a small research plant for extraction and further development in partnership with local plant pathology and pharmaceutical companies: Pharmaquina, Plavuma and Dankis. The company has also initiated collaboration with CIDIP, an organization that conducts research on quinquina and markets improved seeds.

After ensuring sustainability of their business through quinquina, ESCO focused on cacao. Since 2000, cacao has become the most profitable product for ESCO. The profitability of cacao can be attributed to ESCO's astute supply chain management during conflict, relying on local production, research and development, judicious investment strategies on small stakeholder farmers and a fair price mechanism. The company works with local farmers to produce purely organic cacao. Currently, ESCO is working with about 16,000 stakeholder partner farmers. A usual ESCO stakeholder farm is about one acre and typically comprises 1,000 trees. Each of these trees produces approximately one kilogram of dry seed every year. ESCO partners with INERA-North Kivu in Yangambi and other resources in Kisangani to distribute improved seed varieties to the local farmers. They have established a community nursery that disburses production inputs and provides basic training to farmers.



Cacao Beans

Farmers can become impatient and shortcut the cacao bean fermentation process, leading to a lower quality bean. They will attempt blend their lower quality beans with others higher quality beans. To promote accountability and entrepreneurship, ESCO requires each farmer to conduct their own fermentation. Following the cacao harvest, farmers are able to sell and transport their produce through ESCO trucks and locally owned ESCO stores. The business currently owns 20 trucks and 25 small stores for cacao marketing that operate in Beni, Lubero, Nambasa and Enuhumu. ESCO promotes fair prices and production incentives for local farmers who continue farming under economic stress and conflict. ESCO usually pays a 15% premium over the usual wholesale market price of cacao to small stakeholder farmers. This premium provides incentives to farmers to produce and ferment cacao during conflict, provides support for any loss due to violence, and ensures better produce quality and loyalty to ESCO.

ESCO only recently diversified into vanilla production and markets it in Uganda. Currently, they produce only about 200 Kilograms of vanilla per year, which contributes to less than .001% of their total revenue. The challenges with vanilla production and marketing include but are not limited to labor intensive production, low domestic demand and no government research or other industry support. However, the potential for export keeps ESCO interested in vanilla production.

Current Management Structure

ESCO is owned and financed by a group of entrepreneurs from Switzerland, who are long-term investors in the region, understand this regional market, and are motivated by its profit potential. They are led by Mr. Philip Betts who resides in Kampala, Uganda, which is a relatively short distance from Beni and Butembo. He relies on Executive Manager, Ms. Eva Mbanona to make decisions on daily administration. Ms. Mbanona's parents are from Madagascar but she was born and raised in DRC. Mbanona has a depth of knowledge of Congolese agriculture and on the specific industries that ESCO operates. Ms. Mbanona received advanced technical training from the Catholic University of Graben in Butembo. She expresses satisfaction with the achievements of ESCO and projects a long-term association with the company. Her staff includes several managers, plant pathologists, agronomists and extension workers.

ESCO considers local leadership and small stakeholder farms to be the driving force of the company. ESCO collaborates with several national and international plant research and development companies to provide its stakeholder with better expertise and improved inputs. In-house plant pathologists visit stakeholder farms to assist with plant production and to identify diseases. In 2011, ESCO collaborated with GTZ and Dome Foundation to facilitate farmer-training programs.

Key Success Factors

ESCO's underlying success factors include leadership from by empowered local managers, foreign financing, business strategies that can withstand violent conflict, and an efficient production-supply chain. Strategic partnerships with national and international processing firms, combined with an emphasis on human capital development, strong community support and incentive programs are also key components. External financing from the West provides ESCO with stability and shock resiliency to operate in a financially insecure fragile society. Its visionary local leadership and strong stakeholder participation makes ESCO thrive under challenging conditions.

Initially, ESCO was unsuccessful in its coffee business due to plant diseases, lack of market infrastructure and violent conflict. Since its reorganization, the company has developed conflict resilient strategies, local stakeholders and an incentive structure. Quinquina was identified as a conflict resistant crop because of its shock resilient characteristics. The efficient supply chain system of quinquina bark has also contributed to its success. After securing sustainability with Quinquina, ESCO invested in the most profitable business in the region, cacao. Their 15% premium to the farmers serves as an assurance for stakeholder farmers and provides them rent for possible displacement, theft, hardship due to violence etc. Conflict and poverty in the region are chief drivers' of low agricultural training, weak technology, poor roads and transportation systems in North Kivu. ESCO provides farmers with improved seeds, scientific assistance and a transportation facility to counter these issues.

The company has also initiated a savings program for farmers to enable its stakeholders to invest and use their resources wisely. Often, small local farmers are unable to invest their earnings safely, conveniently and with a good return. The savings program tries to support its stakeholders by offering them to manage and invest their funds. ESCO strategic partnerships with local seed and agricultural companies provide them significant leverage in assisting their stakeholders. Partnerships and business relations with international companies such as Theo Chocolate ensure the local product gets exported. ESCO leadership understands the importance of trade and growth; hence the company is always looking to expand both vertically and horizontally.

ESCO's agronomists and buyers serve essentially extension agents who recruit and train farmers. Mr. Bets and Ms. Mbanona themselves were trained and are continually updated by the local Catholic University of Graben, and they in-turn participate in farmer recruitment and training.

ESCO has generated trust among cacao farmers through frequent contact by their agronomists and who assist farmers in solving problems of disease, insect pests and product quality. ESCO's provision of dependable product transport and a 15% price premium, and supporting farmers' financial stability through the savings program are also factors for eliciting farmers' trust. Farmers' reciprocation by remaining loyal to ESCO as their buyer, and by becoming identifiable with the quality of their product (e.g. not mixing their product with that of other farmers) helps to strengthen the bond of mutual trust.

Strategic Issues Provide Business Justification and Plans for the Future

ESCO plans to expand its business in the near future. Cacao is commonly regarded as the most lucrative agricultural product in North Kivu, but will require constant vigilance with respect to disease. New varieties that are resistant to disease and insect pests will be part of the answer. Soil fertility is also a concern. Organic cacao production has been taken to mean non-use of chemical fertilizers. Farmers, agro-processors and regional scientists say that North Kivu soil quality is declining. Research is needed to determine if and how soil fertility for cacao production can be maintained through organic practices. ESCO has excellent scientific talent and ties to Western product markets, financiers and input suppliers. An interactive approach among these parties is needed in order to identify the technologies and operational principles.

North Kivu chinchona is being challenged in the international markets by Asian chinchona. North Kivu has the advantage of ample land with excellent growing conditions. However, it will be important for ESCO to introduce new chinchona varieties that show higher yields of quinine. Continuing steps toward local extraction of quinine will also help the industry remain competitive.

Looking Ahead

The biggest challenges for ESCO and other similar firms in North Kivu region are: armed conflict and violence, insecurity among stakeholders, lack of institutional assistance, absence of farmer co-operatives and training facilities, border smuggling, difficulty in legal international trade, plant diseases and stakeholder credit issues.



ESCO's enterprises are often hindered by conflict as they are compelled to close their stores during armed violence. Their stakeholder farmers feel insecure and at times abandon their own farms. The government and NGO's are not actively assisting agricultural production in conflict prone Beni, North Kivu. Although ESCO tries to train and assist their farmers as much as it can, the absence of farmer training schools, co-operatives and micro-credit facilities hurt the growth of agriculture in the region. The government and international organizations do not have any farmer rehabilitation programs to provide shelter and empowerment to displaced and conflict-affected farming households.

ESCO wishes to empower women stakeholder farmers and train the youth population to encourage an efficient work force. Lack of medical facilities is one of the biggest problems for the underprivileged population of Beni, especially for women. The available medical facilities are expensive and are not efficient. The situation is exacerbated due to oppression against women and child soldier recruitment in the area. They believe conflict and poverty can be alleviated through legitimate income earning employment generation. Border smuggling and tension are also hindering ESCO's growth and creates barriers for agribusinesses. The produce is often smuggled to Rwanda and Uganda by illegal means and are sold as a Rwandan/Ugandan product. ESCO wishes to have a larger domestic market and competition created through more businesses such as theirs. They recommend the government intervene on illegal border trade and help create new agribusinesses in North Kivu.

ESCO has not been affected by serious plant disease since its reorganization, however it still remains a threat for the enterprise. Black pod, ring spot, verticilium diseases are most common in the region. Stakeholder farmers also suffer from attacks of insects in their farms.

Optional Perspectives

Until recently, international development agencies and specialists have tended to regard economic regimes that are dominated by armed conflict to be beyond the tools of developmental science. They are relegated to the domain disaster relief. North Kivu firms like ESCO demonstrate that conflict regimes are tractable to modern business principles and provide the framework for communities to emerge from conflict. Young agribusiness scholars, researchers, analysts and advisors would do well to invest their attention to improving conflict regimes.

There is a body of practices and principles in economies afflicted by armed warfare waiting to be identified and utilized in the some of the world's poorest communities. These practices and principles are likely as useful in Afghanistan, Myanmar, Mali, and El Salvador as they are in North Kivu.

Non-traditional business models should be used to understand the ESCO's market dynamics. Conflict-development frameworks are needed for understanding and communicating the relationships between political and ethnic conflict with economic and social development. These frameworks should include non-market competition over resources, threats to human health and human life, and insecurity of land access. From these frameworks, business strategies can be designed to mitigate the risks and build economic and social resiliency into ESCO's supply chains. Such strategies might include farmer communications systems, diversification of its supply base, and increased research collaborations.

Acknowledgements

Information referring to ESCO Kivu SPRL and North Kivu was collected during a field trip to Democratic Republic of Congo in May, 2013. The authors would like to thank The Howard G Buffett Foundation for their financial support and Ms. Mbanona for her input. However, the observations and views presented in the article are solely of the authors.

References

- Baaz, M. E. and Verweijen, J. 2013. The volatility of a half-cooked bouillabaisse: Rebel–military integration and conflict dynamics in the eastern DRC. *African Affairs* 112(449): 563-582.
- Vlassenroot, K. and T. Raeymaekers (Eds.). 2004. Conflict and social transformation in Eastern DR Congo. Academia Press.
- Vlassenroot, K., & C. Huggins. 2005. Land, Migration and Conflict in Eastern DRC. From the ground up: land rights, conflict and peace in sub-Saharan Africa. 115-195.

More photos here:

<https://www.flickr.com/photos/kingjn/sets/72157644499986390/>

Chapter 2

Cooperatives Creating Opportunity



C H A P T E R 2

Chapter 2

Cooperatives Creating Opportunity





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Inclusiveness of the Small-Holder Farmer Key Success Factors for Ethiopian Agribusiness Development

Marc Steen^{®a} and Woody Maijers^b

*^aChief of Party, Chief of Party, USAID's Livestock Market Development Project, CMC Road,
Palm Building 3rd Floor, Addis Ababa, Ethiopia*

*^b Professor Integrated Value Chain Management, Inholland University of Applied Sciences,
P.O. Box 3190, Delft 2601, The Netherlands*

Abstract

This case uses an example of a progressive women farmer entrepreneur (Hiruth) operating a dairy business in Ethiopia and offer valuable lessons for businesses operating in Africa and elsewhere in the world. While on the market side, the demand for milk based products is on the rise in Ethiopia, the supply side poses several known challenges. Due to supply shortage of the right quality milk, most processing facilities operate at 50% to 60% of their capacity. In such an operating environment, Hiruth has managed to create and grow her business at a rapid pace. This case demonstrates how Hiruth managed to build her supply base loyalty by assuring purchase and quality based price premium and managed to build a fool-proof supply chain. By positioning herself as an orchestrator of the chain rather than just as a buyer has enabled her to build a robust chain and a growing business.

Keywords: chain innovation, entrepreneurship, quality based payment, trust building

[®]Corresponding author: Tel: + 251.0.912639097

Email: M. Steen: msteen@cnfaethiopia.org



Breaking with Traditions

Hiruth Yohannes is an Ethiopian business woman with a milk production and processing enterprise located in the ChaCha area of Amhara region. She began retailing vegetables at a village level then started a dairy business in 2006. With two cows and some business connections, she managed to collect up to 15 liters of milk per day from a few small-holder women farmers. Back then, she used to dream of expanding. Today, the business supplies the market with 4,500 liters of milk per day. Hiruth bought a dairy processing plant in 2013 and now purchases milk from over 400 small-holder farmers via three collection centers of her own and two dairy cooperatives which are contributing to the livelihood of more than 2,000 people in the ChaCha area.



Hiruth Yohannes showing her stock of provolone cheese

The processing plants manufacture provolone, cheddar, gouda, feta, ricotta, cottage and smoked cheeses. Other dairy products include pasteurized milk, cream, butter and yoghurts. Products are sold directly to restaurants and supermarkets in the Addis Ababa area and she owns *Tsega and Family*, a dairy outlet, in the capital city.

To understand how Hirtuth's, business model is both innovative and unique in Ethiopia, it is imperative to understand the dairy industry in Ethiopia.

Why Traditional Chain Interventions Fail

In 2011, Ethiopians produced 3.3 billion liters of milk valued at \$1.2 billion USD and imported an additional \$10.6 million in dairy products.¹ The average annual milk consumption of 19 liters (with a population around 93.9 million²) in Ethiopia is well below the African average of 40 liters³, contrasted with a worldwide consumption of 105 liters. However, Ethiopia has the largest cattle population in Africa: 52 million head, including 10.5 million dairy cattle.⁴ The demand for dairy products is very volatile because of the prevalent fasting days, which in some cases can be up to 260 days per year. During a two-month religious fasting season, about 50% of the Ethiopian population refrains from consuming dairy and animal based products. Due to this fasting season, raw milk purchases by processors and consumers fluctuate making it risky for small-holder farmers to invest in dairy production. Consequently, Ethiopia has 10.5 million dairy cows which on average only produce 1.5 liters of milk per day, for 180 days a year, making it among the lowest in the world (Figure 1). Consequently, Ethiopia increasingly imports dairy products into the country.⁵

¹Production data from FAOSTAT, 2011; Import data from UN COMTRADE, 2011.

²www.indexmundi.com (26-1-2014)

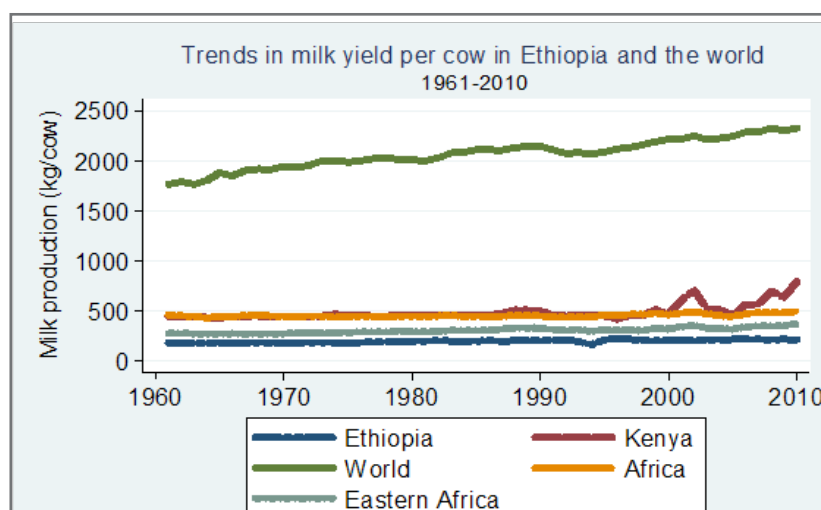
³FAOSTAT, 2007

⁴Livestock and Livestock Characteristics, 2012; FAOSTAT, 2011

⁵Value Chain Analysis for Ethiopia, USAID's Agricultural Growth Program – Livestock Market Development Project, 2012

Table 1. Productivity per Cow⁶

Country	Yield (KG)
Republic of South Korea	9,616
Israel	9,583
United States of America	9,118
Sweden	8,152
Algeria	1,320
Egypt	997
Sudan	378
Ethiopia	270
Tanzania	174

**Figure 1.** Trends in Milk Yield per Cow ⁷

The Ethiopian dairy value chain is characterized by both formal and informal channels. Only 5% of the milk produced in Ethiopia is sold in formal commercial markets.⁸ There are 23 formal dairy processors currently active in Ethiopia and their new processing facilities are in various stages of development. These processing facilities operate at 50 to 60% of their total processing capacity⁹. The challenges which lower capacity utilization are the lack of reliable milk supply and the demand fluctuations (peaks and valleys) created by the fasting seasons.

Overall, the market for dairy products is on rise because of population growth, increased urbanization and income levels. The economy has experienced strong and broad growth over the past decade, averaging 10.6% per year in 2004 – 2011 compared to the regional average of 4.9%. The expansion of services for the agricultural sector accounts for most of this economic growth. Private consumption and public investment explain the demand side of the growth. Additionally, the government aspires to help Ethiopians reach middle income status over the next decade.¹⁰

Need for a New Approach to Bridge Demand and Supply

The Ethiopian dairy production and market systems face typical constraints that exist throughout the agricultural sector and other developing countries. Productivity at 1.5 liters per cow, per day is relatively low due to poor genetics, insufficient access to proper animal feed and poor management practices. Furthermore, as the critical distribution elements such as milk collection, chilling and transport are not well organized; it leads to lower economies of scale. Consequently, transaction costs are high, and up to 20-35% of milk is spoiled or otherwise lost. On the value addition side, lower utilization of processing facilities is leading to relatively high production costs. All the above indicate status-quo conditions where expanded services result in pasteurized milk produced at about the same price as in the US (where the average GDP per capita is about 40 times that of Ethiopia).¹¹

⁶Ethiopia data is IBID, all data is for production year 2006 – 2008, from Statinfo.biz <<http://statinfo.biz/Geomap.aspx?act=6243&lang=2>>

⁷FAOSTAT, 2011

⁸Livestock and Livestock Characteristics, 201

⁹ Value Chain Analysis for Ethiopia, USAID's Agricultural Growth Program – Livestock Market Development project, 2012

¹⁰The World Bank, Ethiopia Overview; <http://www.worldbank.org/en/country/Ethiopia/overview>

Opportunism Leads to a Stand Still

Central to these problems is the lack of a solid supply chain for small-holder producers to get their milk to the market. Business-to-business relationships are not well developed and in most cases non-existent, making it very risky for small-holder producers to invest in production and productivity. Although investments at a small-holder level could enhance milk productivity it does not make sense in a less established value chain or in a market where the demand volatility is also high.

Investments in Soft Skills and Trust Represent a Good Base for a ROI

In order to overcome the chain-wide problems, a new value chain development model was introduced and developed in Ethiopia that focuses on strengthening the business-to-business (B2B) relationships to enable win-win opportunities for all chain players (producers, processors and consumers). The new development model builds upon the existing production systems and focuses on market driven business relationship development for small-holder farmers and looks for ways to increase productivity, limit transaction costs, while reducing spoilage and increase investments.

A New B2B Development Model Based on Trust Building

Hiruth found a way to overcome both challenges: 1) improve the quantity and quality of milk production and 2) overcome the volatility in the consumption during the year. Hiruth received support from USAID's Livestock Market Development project to develop her business and supply chain. This holistic approach was the key to her success in more precisely establishing business relationships with her suppliers. Among her suppliers, only two are relatively big supplying about 250 liters a day; the rest are small scale dairy producers supplying an average of eight liters per day. Hiruth receives her daily raw milk from two cooperative unions and three personally owned collection centers. In addition to milk collection, the collection centers ensure quality control before purchasing the milk from the producers. In essence, Hiruth's success was derived out of her ability to establish a supply network based on partnership.

The other challenge was to overcome the consumption fluctuation. The USAID project also provided technological support for processing milk into dairy products thus enhancing both the value and shelf life. Additionally, project support enabled the production of pasteurized milk into wide varieties of cheeses and other dairy products.



Milk/cream separation at Hiruth's processing plant.

How to Achieve, the Details of Success

The procurement and processing strategy outlined above does not guarantee Hiruth's raw milk supply is of the required quality and quantity. Hiruth must regularly compete with other buyers and competitive informal markets for her milk supply. In order to overcome these challenges, Hiruth works with her producers in a

¹¹GDP per capita, PPP (current international \$), World Development Indicators database, World Bank

¹²Visser, P. M. Steen e.a. 2012. *Pro-poor value chain development. Private sector les innovative practices in Ethiopia. SNV Business Organisations and their access to markets BOAM Program.*

number of different ways to establish long-term, win-win relationships with small-holder dairy producers. These key actions include:

1. Hiruth provides feed to her suppliers—feed availability is a major constraint in the Ethiopian dairy sector.
2. Not only does she provide feed to suppliers, she also provides it to them on credit which is paid back through milk sales. This reduces the risk for producers in having to invest in feed.
3. Hiruth works with feed suppliers to educate producers on the benefits using additional animal feed.
4. A crucial element in Hiruth's outreach program is that she buys the milk from her suppliers every day, independent of fasting seasons during which Ethiopians consume little animal based products when the majority of buyers do not buy from producers.
5. A transparent quality based payment system is implemented. (Two grades include the quality criteria per grade; transparently announcing prices for the grades of milk; and quality control done at the collection center in the presence of the supplier).
6. A higher price is paid to suppliers for premium quality milk.
7. Hiruth has contracts with the two cooperatives she is buying from. Although, in the Ethiopian context this is not a major guarantee as there is no enforcement or in many cases an intention to sell.

Hiruth's business model is built on a foundation of trust. Trust needs a solid base, positive transactions and operational experience. These are the principles by which Hiruth operates the business.

By offering milk producers a guaranteed market for their milk, she motivates them to make necessary investments. Hiruth's strategy is to focus on the quality of the milk as defined by bacterial count and fat. While a lower bacterial count reduces the loss of milk due to contamination and waste, a higher fat content provides a better value extraction.

Quality Incentive Alignment

Hiruth introduced a quality-based payment system, mainly on fat content, for her milk supply. Accepted milk is classified into two grades based on measuring the bacterial and fat content. The better graded producers are compensated with 9,00 birr while the other graded suppliers get 8,60 birr per liter. This progressive incentive mechanism motivates milk producers to focus on quality and carry out investments such as the purchase of better quality feed, lower adulteration and better storage conditions for the milk. Consequently, the quality based payment system and the rejection rate of milk decreased from 7.5% to almost 0% soon after introduction.

Hiruth supplies high quality animal feed to her suppliers on credit in order to increase the volume of milk produced. Due to the better feed availability, producers now get from two to three liters of additional milk per cow, per day. This results in \$5 USD of additional turn over and \$2.50 in additional income per day, more than doubling their income from dairy production. Farmers also make use of the feed supply opportunity and invest in better animal feed, due to the embedded service of knowing that Hiruth will buy their milk.

Hiruth is guaranteed a milk supply of both quality and quantity while producers are assured they will be well compensated with almost no rejections. This leads to higher quality products and better prices for consumers: a win-win situation for farmer, processor and consumer.

Applying the B2B Development Framework

Based on Hiruth's case study, it can be concluded that the key success factor for the B2B development framework is that of a private business person who is able to build relations along the chain. Bridging the huge market potentials and constraints in the supply chain require building trust, creating long-term partnerships, economies of scale and most importantly creating win-win opportunities for all chain players including consumers. A holistic market and business driven approach contain these key elements: innovation to increase production and quality at the level of the farm, input supply and farm services, new logistic concepts to collect farm products from smallholders to create major flow of products, new governance structures based on quality controlled supply, fair share and transparency and embedded services (input supply, veterinarian, training etc.) for small-holders, product diversification to create high added value, extended shelf life, and new contract forms and loan systems.

This whole package of chain actions increased the level of trust between Hiruth and the small-holder farmers. Hiruth signed supply contracts with two cooperative unions which would enable her to procure most of the milk supply from the cooperative unions.

Next Steps and Challenges

Hiruth's main challenge is access to working capital. Due to the fasting seasons, which last up to two months, a significant number of the Ethiopians consume no animal based products. Hiruth only sells limited quantities of pasteurized milk, and dairy products while she continues to buy from her suppliers to keep her business relationships protected while fully using her processing capacity. During this period she produces butter, cheeses and yoghurts, which she stockpiles. At the same time she pays her suppliers every two weeks for the supplied milk. Supermarkets only pay her every 45 days for the milk and dairy products she supplies them. The bank loan payment is also due, so consequently, her liquidity problems are significant. This implies that Hiruth requires three months of working capital to meet her turnover and bank loan obligations. This is Hiruth's primary challenge. Hiruth is seeking support from USAID's Livestock Market Development project in order to overcome this obstacle.

Hiruth sees opportunities to serve other areas of the country (other urban areas foremost). But, this will require additional business plans and access to additional funds and finance. A key component to realizing this goal is by further expanding her territory and setting up additional collection centers. The USAID's Livestock Market Development project is supporting her in this regard as well.

Acknowledgement

The author's views expressed in this publication are his own and do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Building a Better Livestock Market in Benin and a Safer, More Reliable Food Supply

Eric A. Newman^{®a} and Mark D. Newman^b

^a Senior Agribusiness Consultant, 01 BP1739 Abomey Calavi, République du Bénin

^b President, Market Solutions LLC, 4306 Leland St., Suite 101, Chevy Chase, Maryland, 20815, USA

Abstract

The Nikki Regional Livestock Cooperative (UCOPER-Nikki) was concerned when Benin's national government made local authorities responsible for livestock markets. They knew that improved markets and infrastructure were essential to their economic future and a reliable, safe livestock/meat supply for customers locally and in southern Benin, Nigeria and Togo. A cooperative managed market was proposed in partnership with local government. Three years later the market is a reality. Total sales in 2011-13 approached \$10 million USD, and the market is more profitable for producers, with positive impacts along the value chain including feed and animal health, livestock trade and processing, retailers and consumers.

Keywords: African agribusiness, livestock marketing, value chains, regional trade, private-public partnerships, cooperatives, producer self-managed livestock markets

[®]Corresponding author: Tel: E. Newman +229 95 42 89 79, M. Newman +1 301 654-2949

Email: E. Newman: eanewman2001@yahoo.fr

M. Newman: marknewman@marketsrus.com



Introduction

Boubacar M. Djaouga, DVM the president of the Nikki Regional Livestock Cooperative (UCOPER-Nikki or the Cooperative) and his 72 cattle producer group members were concerned when Benin's national government approved decentralization laws that shifted responsibility for the country's livestock markets to local government authorities.¹ They knew that improved markets and infrastructure were essential to their economic future. They saw potential benefits of a more reliable, safe livestock/meat supply for their customers locally and in southern Benin, Nigeria and Togo. They also knew that in some areas municipal governments had decided to take over the markets as a way to collect tax revenues with few benefits to producers. The cooperative proposed a partnership with the local government whereby the Cooperative would develop and manage a livestock market, and share tax revenue with the local administration.

Almost three years later the market is a reality. Livestock sales have grown to exceed \$5 million annually, and are more profitable for producers. Benefits are seen along the value chain with improving access to animal health services and products, better access to feed and water, more humane and efficient livestock handling and trade. The growing market center has resulted in the launch of a new dairy processing project by some cooperative members and consideration of a number of other options to improve livestock and meat sales. The retail sector is also seeing new growth, in areas ranging from animal health products and animal feed, to consumer products. This includes sales of food, clothing, household goods, motor cycles and even electrical generators. Producers, local businesses, customers and the local government are all very happy with progress to date, and others are trying to replicate the project.

Company Background

Livestock and meat subsector development is increasingly seen as essential to meeting growing demand for meat and dairy products in Sub-Saharan Africa. However, across much of the continent, agribusiness development faces a variety of challenges. Many successful efforts to expand production rely on external and large scale investment, leaving initiatives that offer potential opportunities for small and medium scale farmers and livestock producers more limited (Newman 2009, World Bank 2011).

In parts of West Africa cattle raising and herding has traditionally been a migratory (transhumant) activity especially linked to the Peulh or Fulani ethnic group. Over time, more production has become anchored in specific locations. The latter is the case in Northern Benin, around the growing urban center of Nikki. As a result, the area has become a source of livestock and dairy products, not only for the local region, but for traders who purchase livestock that are then shipped toward the central and coastal regions of Benin, including the economic capital, Cotonou, and to neighboring Nigeria and Togo.

¹ Leadership of the Cooperative is elected by the members. Both Dr. Djaouga, the President and Mr. Saïdou Saadou the Secretary General are medium to large cattle breeders in the local context with 50-100 breeding cattle each. They are also members of the Fulani ethnic group, and formally educated, which facilitates their interaction with local officials. Dr. Djaouga also provides veterinary advice to other producers and is an elected member of the local Municipal Council.



Nikki Livestock Market
Source. usadf.gov

Figure 1. Nikki (Red arrow) in Northern Benin is important in West Africa livestock trade
Source. http://www.lib.utexas.edu/maps/africa/benin_pol_2007.jpg

Growth Prospects for African Livestock, Meat and Dairy Demand

Africa is home to 240 million head of cattle, 16% of the global total, about the same as Brazil and India. Total livestock and meat demand are expected to grow faster in Africa than in other world regions over the next 20-30 years, according to Morgan et al. 2013. Africa accounted for 15.5% of the world's population and only 4.3% of meat consumption in 2005-07. With 2.8% annual growth meat demand is forecast to increase from 11 million metric tons (mmt) to 35 mmt by 2050, making Africa the world's second fastest growing meat market.

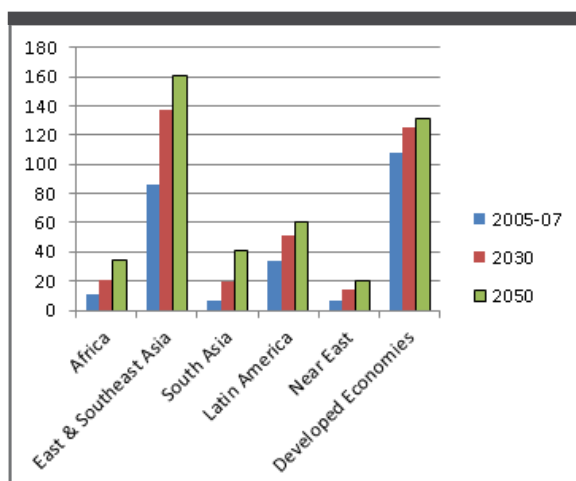


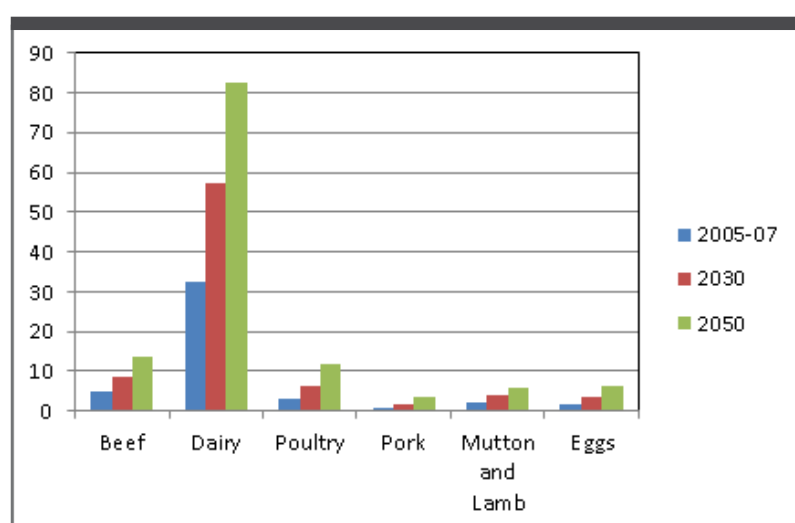
Figure 2. Regional Meat Demand Forecast to 2050

Table 1. Regional Meat Demand Forecast - Estimated Consumption, million metric tons (MMT)

Region	2005 – 2007	2030	2050
Africa	10.5	20.8	34.8
East & Southeast Asia	86.6	137.4	160.3
South Asia	6.7	19.5	40.4
Latin America	33.9	50.9	60.6
Near East	7.1	14.1	20.2
Developed Economies	108	124.8	131.5

Source. Morgan et al. 2013 based on FAO

Dairy and beef consumption are expected to see the fastest demand growth in Africa, followed by poultry. By 2050, the region is forecast to consume an additional 50.2 mmt of dairy products and 8.9 mmt each of beef and poultry meat annually. The combined value of beef and dairy markets in Africa is forecast to grow from \$33.2 billion in 2005-07 to \$90.1 billion by 2050. West Africa accounted for 16.2% of the total in 2005-07.

**Figure 3.** African Animal Products Demand Forecast**Table 2.** African Animal Products Demand Forecast - Estimated Consumption, MMT

Product	2005 – 2007	2030	2050
Beef	4.7	8.6	13.6
Dairy	32.4	57.2	82.6
Poultry	2.9	6.5	11.8
Pork	0.8	1.9	3.5
Mutton and Lamb	2.2	3.9	6.0
Eggs	1.6	3.6	6.1

Source. Morgan et al. 2013 based on FAO

Production of livestock, meat and dairy products has not been keeping up with demand. Imports already account for 10% of beef supplies and about 12% of milk supplies. This means that there will be significant business opportunities in meat and dairy markets, and effective initiatives to help increase local supplies will be critical. The UCOPER-Nikki case reveals some of the opportunities that exist in local livestock production and how

producer cooperative self-managed markets can play an important role in meeting this growing demand. It is especially interesting because it includes improvements in market outlets for small and medium sized producers, and is facilitating local and regional trade. As such it represents an example of commercial agribusiness development that is contributing to more efficient markets, and at the same time increasing producer incomes, contributing to local economic growth and poverty reduction, with regional benefits for Benin and neighboring countries. It also provides a useful model of how small scale financial assistance can help overcome a number of constraints to agribusiness development, increasing the likelihood that future expansion can become self-sustaining, and more attractive for commercial financing.

Management Structure

Producer Cooperative self-managed livestock markets are a relatively recent complement to traditional informal livestock markets in Benin. They take place one day each week, providing a central location for livestock transactions, while also playing a growing social and economic role in the community. Participants in the markets include livestock producers, including sedentary farmers who raise livestock and migratory (transhumant) livestock producers, livestock merchants, butchers and traditional broker/intermediaries. In traditional market arrangements, traditional brokers visit producers in their rural camps and villages, purchase livestock from producers, often on credit, and bring them to markets where animals are resold to itinerant livestock merchants. Brokers also collect a livestock tax from buyers and sellers.

Under the self-managed market system, a producer cooperative establishes a Market Management Committee (MMC) for the market. Sales are direct between the producer and the livestock merchant. The traditional brokers continue to facilitate transactions, but are paid a commission as “witnesses” and market tax collectors under the supervision of the MMC. One important difference is that transparency in pricing has been improved and producers report receiving a larger share of the sale price. Brokers obtain smaller margins, but at least for some, their income has reportedly been maintained because of increased transaction volume.

The Nikki Regional Livestock Cooperative (UCOPER) brings together seven smaller sub-regional livestock cooperatives with 65 local ruminant livestock cooperative groups at the township or *arrondissement* level. UCOPER- Nikki is in turn a member of a State or Department level cooperative group for the Borgou/Alibori.

The Nikki Self-Managed Livestock Market is operated by a Market Management Committee (MMC – or *Association Locale de Gestion du Marche de Nikki* – ALGMB in French) overseen by a steering committee of the officers of the Regional Cooperative. The MMC (ALGMB) in turn has officers, a Board of Directors (Assemblée Générale), a Management Committee (Comité de Gestion) and an Audit Committee (Comité de Contrôle). Membership is selected for renewable terms of five years, but the Board has the power to replace management and audit committee members in exceptional cases, such as perceived management deficiencies.

The market is financed by a transaction tax of 2,000 FCFA per bovine animal sold (West African CFA francs (FCFA or XOF) - about \$ 4.40 based on a three year average exchange rate of 450 FCFA = \$1 (USD). In May 2014 the exchange rate was about FCFA 480= \$1). There is a 200 FCFA per head tax for sales of small ruminants (sheep and goats). Half is paid by the buyer and half by the seller. The transaction tax revenue is used to pay the various staff of the market and the management committee, and for a variety of other initiatives of the Cooperative discussed below. Beginning in 2014, 35% of the revenue will be provided to the local government and 25% will go to the regional cooperative, with the remaining 40% retained by the MMC for operations and salaries.

Two important challenges to more effective markets have been physical infrastructure and staff training. While in other parts of the world, commercial financing might be available; this has not been the case in Northern Benin. Dr. Djaouga and his Board heard that the U.S. African Development Foundation (USADF) had provided support for improvements at another livestock market in a neighboring region, and approached USADF's Country Coordinator (disclosure: the first author) with a proposal for improvements and training to help establish and develop the new Nikki livestock market.

In July 2011, UCOPER Nikki and USADF signed a grant agreement for USADF to provide \$149,000 in financing for market infrastructure improvements and capacity building training. Infrastructure improvements included a large (1.5 ha) fenced area, a well, watering troughs, and a loading dock to provide for more secure and safe livestock handling and transactions; store rooms to facilitate sales and storage of veterinary products and animal feed ingredients; an office and computer system to improve market management and sales tracking and reporting; and two covered areas to protect market participants from the elements and to serve as meeting areas.

Training support has included market business management, general accounting, financial management and internal controls; physical market management including hygiene and waste management; cooperative management and arbitration/conflict resolution; basic French language for cost accounting since participants speak several different local dialects and an exchange visit to another successful livestock market.

Sellers and Buyers

The average number of sellers at the market each market day has increased from 54 in 2011 to 79 in 2013, up 46%. Most sellers are from the municipality of Nikki and surrounding areas. Some migratory livestock producers from Niger and Burkina Faso sell livestock through the market, working with others from their countries who have settled in the Nikki area.

Buyers include butchers, traders and farmers purchasing cattle for animal traction. The average number of buyers per market day increased from 108 in 2011 to 177 in 2013, up 64%. Buyers are from the Nikki municipality and surrounding areas. Some buyers come from as far as Parakou (57 miles) and Cotonou (263 miles). The market draws significant numbers of buyers from Nigeria, as Nikki is close to the border. Nigerian buyers are reported to come from Saki, Illesha and Okuta (100 miles). Occasional buyers come from Togo.

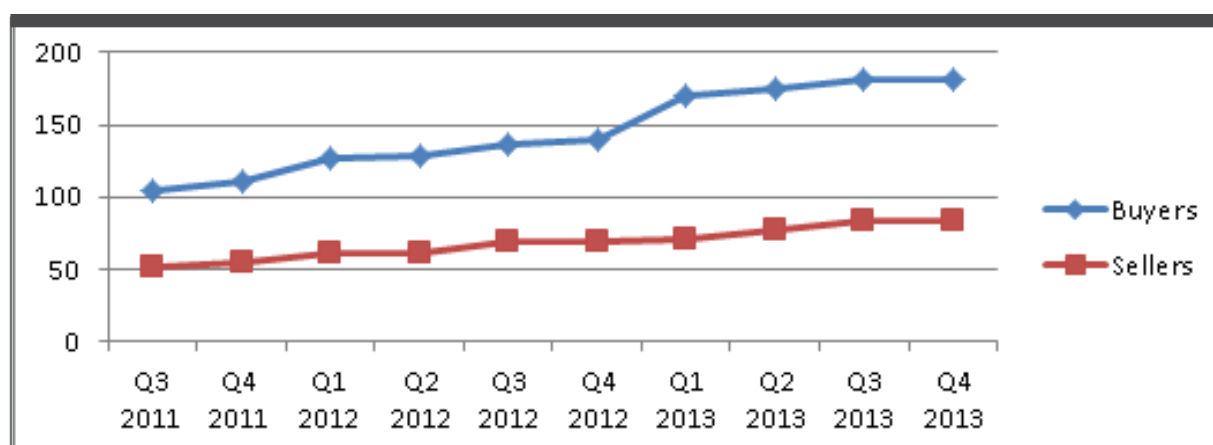


Figure 4. Evolution of Numbers of Buyers and Sellers Attending Nikki Market, 2011-2013

Source. UCOPER- Nikki data

Table 3. Evolution of Numbers of Buyers and Sellers Attending Nikki Market, 2011 - 2013

Average Numbers Per Market Day	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013
Buyers	105	110	126	128	137	140	170	175	182	182
Sellers	52	55	61	61	69	69	70	77	84	84

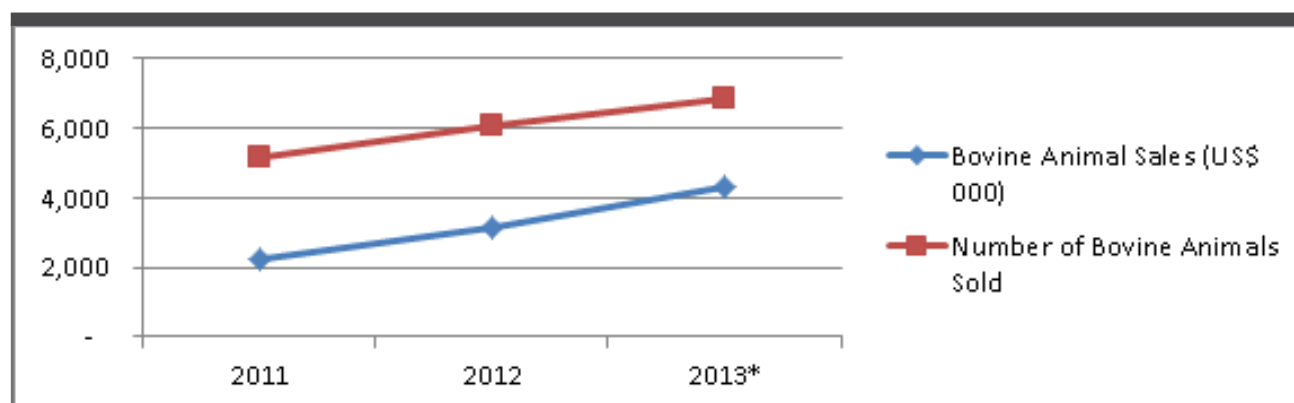
Source. UCOPER-Nikki data

Key Success Factors

During 2011-2013, more than 18,000 bovine animals (cattle) have been sold in the Nikki market, with the number of animals sold annually up 33% since 2011. As seen in Table 4, the total value of cattle sold in the market during the three year period was \$9.7 million. The value of sales almost doubled between 2011 and 2013, approaching \$5 million when cattle, sheep and goats sales are included. The average per head sales price for cattle increased 44% due to a more competitive market, improved animal quality and other factors.

Livestock market transaction fees or taxes have generated \$80,000 in revenue, with half going to the local government, and the balance to the MMC and the Cooperative. Sales of veterinary products at the market were valued at \$124,000 in 2013, up seven-fold since 2011. The MMC began to sell feed products in 2013, with sales valued at \$161,000.

This has made livestock production more profitable for producers, with impacts along the value chain including feed and animal health, livestock trade and processing, retailers and consumers. As Benin's per capita national income is only about \$1,570 according to the World Bank, these results are especially significant.

**Figure 5.** Evolution of Cattle Sales Volume and Value at Nikki Market, 2011-13

*Estimate based on 9 months data

Source. UCOPER-Nikki Reports

Table 4. UCOPER-Nikki Market - Reported Sales, 2011-13

Item	2011	2012	2013	Total 2011-13	2011-13 Pct Change
Cattle Sales (FCFA)	1,005,653,000	1,425,438,000	1,929,438,000	4,360,529,000	92%
Cattle Sales (US\$)	2,234,784	3,167,640	4,287,640	9,690,064	92%
Number of Cattle Sold	5,142	6,084	6,832	18,058	33%
Market Tax Collected (FCFA)	10,284,000	12,168,000	13,664,000	36,116,000	33%
Sales of Veterinary Products (FCFA)	4,968,795	10,875,450	40,159,000	56,003,245	708%
Sales of Animal Feeds (FCFA)	-	-	72,598,745	72,598,745	-
Average Bovine Animal Sales Value (US\$)	435	521	628	537	44%

Source. Based on surveys conducted among market participants

- Livestock producers indicate that market price transparency has been increased. More sales are on a cash basis, with fewer thefts. Access to animal health products and animal health are improving. Producers say that they are more likely to be paid at the time they deliver an animal. They also have improved confidence and understanding of marketing as a result of training and market visits.
- Survey findings from about one hundred livestock producers indicate that sales prices have averaged 25-35% higher than when they sold through the itinerant brokers who visited their camps. Furthermore, they are paid cash, while sales through brokers have often been on credit, with risk of non-payment (E. Newman and APIC 2013).
- UCOPER-Nikki reports that 98% of cattle now receive two key vaccinations as part of its work with breeders. Vaccinations and veterinary medications are being made available for sale by licensed veterinarians at the market. UCOPER-Nikki has also arranged for additional animal feeds, especially cottonseed cake to be available during the dry season. Producers were surveyed regarding their needs and sales were launched in 2013. This is contributing to improved livestock management, and healthier more valuable animals (UCOPER-Nikki).
- Butchers and Livestock Merchants report that they are able to make better use of their time because they no longer have to go from camp to camp looking for animals to purchase. Animals purchased in the market are in good health and inspected by a veterinarian. However, prices in the market are somewhat higher than when purchased in local camps.
- Some of the traditional livestock brokers, about 7 on an average market day, are now paid as witnesses for transactions in the market, receiving payment for services rendered from the MMC.
- The MMC also makes payments to traditional leaders who often play a role in resolving disputes that may arise during and after the market takes place. For example, in cases where livestock being sold are reported to have been stolen, or where livestock going to or from the market damage crops or property of farmers along their route.

Development of the livestock market is also resulting in a number of social investments that benefit the region. Many livestock herders belong to the minority Fulani ethnic group which traditionally provides only limited schooling for their children, in part because they often migrate with their livestock. With funds earned from the market UCOPER-Nikki has supported teachers to help create two primary schools in two camps, so that now 60 percent of the children in those camps are attending school. UCOPER – Nikki is also working with USADF to provide literacy training in the local language. More than 300 men and women have received literacy training.

Success from the Perspective of a GLIMPSE Framework

Connolly and Phillips-Connolly's GLIMPSE framework, provides a useful basis for looking at the challenges and opportunities that the Cooperative faces:

G - The National Government's decision to turn over responsibility for livestock markets to local government presented a threat to the usefulness of the local livestock market to producers. In some locations, the local administration's focus only on collecting tax revenue without ensuring adequate market infrastructure or transparency resulted in sharply reduced producer participation in markets (Onibon, 2004). The Cooperative – Government partnership in Nikki to develop and manage the market has resulted in growth beyond expectations. While half of the market tax revenue is retained by the cooperative to operate the market, the local government has actually seen an increase in revenue because of successful volume growth and increased tax collections. As a result, the local government has agreed to take only 35% of the transaction tax during 2014.

The local government initially agreed to a public-private partnership with the UCOPER in order to attract the market to Nikki. It then agreed to reduce its share of tax revenue retained based on the suggestion of UCOPER-Nikki and the MMC. Under the original market management agreement the local government was to use part of its tax revenue to support market infrastructure investments and repairs. These resources are now retained by UCOPER and the MMC. This will benefit the Cooperative because reportedly the municipality has not actually been providing support for infrastructure and repairs from its share of the tax revenues.

L - Losses in the supply chain. Evidence to date suggests that animal welfare in handling animals has been improved, with fewer injuries and economic losses as a result of improved handling of animals purchased at the market. Improved feed, watering and animal health services for animals before and after sale also add value.

I - Infrastructure improvements, including a fenced area to help prevent loss of animals, a deep well which assures reliable and adequate clean water for animals and humans, improved sanitation facilities, and improved loading facilities have all been beneficial to livestock, livestock producers and buyers and those who work in the market.

M - The Market offers producers additional transparency and liquidity, along with documented higher returns which provide an incentive to continue participating. For buyers, increased participation in the market by more producers offers additional assurance of reliable, cost competitive supplies.

P – Politics and Policies. Market development and management have been as successful as they have to date as a result of policies that appear to be working for all involved. As noted above, the situation that led the Cooperative to propose to develop and manage the market was a direct result of a challenge due to political decisions to decentralize responsibility for markets.

S - Science and Innovation. Increasing the share of local ruminants, including cattle, goats and some sheep, sold via the market, has resulted in opportunities to take a more scientific approach to animal health and disease management with veterinary inspections on-site, currently after sale. The Board realizes that there are some risks to allowing producers to bring animals into the market prior to health examinations, and is looking at ways to address this.

E - Environment. In developing the market, ensured availability of adequate water was one key to attracting market participants. The cooperative also provided training for staff members and some producers on environmental managements of wastes from the market. One idea being explored would involve development of a methane digester for market wastes.



Nikki Livestock Producers Cooperative Market Management Committee

Source. Eric Newman photo.

Strategic Issues – Looking Ahead

The challenge for the Cooperative is to decide on a five year plan, including priorities for their own growth and ways to finance it. Cooperative members need to assess potential advantages and disadvantages of a number of options that have been suggested and/or tried as pilot efforts and could be expanded, including the following:

The market is held on a weekly basis. Traditionally, traders traveled to livestock producer villages and camps to purchase animals, then resold the animals at village markets. Part of this market's success rests on having more buyers and sellers, and a more transparent and liquid market. Yet, animals are brought from some distance. To avoid situations where prices fall because there are fewer buyers than sellers, the Cooperative has launched a small initiative to purchase animals and hold them until the next week's market.

- Buyers and sellers come from fairly long distances and the town of Nikki lacks accommodations. Cooperative members have suggested building additional sanitary facilities including showers, and adding overnight accommodations so that buyers can stay in Nikki.
- Some of the members of the Cooperative have launched a dairy processing initiative in the town of Nikki, with pasteurized milk products available for the first time. The cooperative could encourage expansion of this and other potential efforts to add value to livestock and products locally and diversify market outlets.

- The market is in an area where there has been an abundance of trucks from Central and Southern Benin. These deliver goods to Northern Benin and return empty. Some merchants and truck drivers have taken advantage of this situation to purchase livestock in the Nikki market to ship to markets in Central and Southern Benin where prices are significantly higher, even considering the transportation costs. Some members of the Cooperative have suggested that the Cooperative take the initiative to purchase and market cattle in Central and Southern Benin markets on behalf of its members. As seen in Table 5, 2013 prices were about 18% higher further south in Parakou, and 42% higher at the coast in Cotonou. Because of backhaul opportunities, transportation costs about \$6 per animal for the 1.5 hour trip to Parakou and about \$12 for the 8 hour trip for live cattle shipped to Cotonou. Other costs would include feed, various taxes and risks.

Table 5. Potential Value Addition in Selling Beef Animals in Central or Southern Benin, 2013

Live Bovine Animal Prices	FCFA	US\$	US\$/kg	US\$/lb
Producer Price – Nikki	267,000	556	2.65	1.20
Delivered – Parakou	315,000	656	3.13	1.42
Delivered Cotonou	378,000	788	3.75	1.70

Source. Industry communication

- Animal health is an important concern. A number of animal diseases have been reported in Northern Benin in recent years. The market currently provides veterinary inspection of animals when they are sold, but some think that animals should have health inspections before they arrive in the market. Veterinary inspections are currently paid for by buyers and sellers once a sale has been agreed upon. If inspection is to take place before animals get to the market, there is a question of how it will be paid for. Some have suggested that the Cooperative should hire a veterinarian and collect payment once animals are sold.
- Nikki does not have a bank. This means that buyers and sellers must carry large amounts of cash before and after the market. There have been some cases of theft reported. The Cooperative would like to attract a commercial bank to locate in Nikki, at least for the day of the market.

Final Observations

As Dr. Djaouga and his members look back on the accomplishments of the last three years they are satisfied with their progress, and their ability to successfully navigate the shift toward cooperative market management as part of a private public partnership. However, they also have to consider how best to address opportunities and threats for the future.

They are especially proud that local government officials have decided to reduce the share of the livestock transaction fee or tax collected that will be retained by the local government, as this will allow them to invest more in the market and potential activities to make it more successful. One of their biggest challenges is how best to achieve balance as they plan for growth. Investments in the Nikki market can help to make it a more important market center, but may also leave them more vulnerable to a relatively limited set of customers.

Some of their members and the community would like to see them expand along the value chain, getting more involved in efforts to ensure stable prices by purchasing more unsold livestock, expanding into value added products and exploring the potential to sell livestock on behalf of the cooperative and its members in markets in Central and Southern Benin. Yet, their members are livestock producers. They have had the benefit of a USADF grant to help to begin this effort, and they now have a revenue stream that can help them expand for the future. How should they set priorities and make a plan for growth over the next five years?



Nikki Livestock Producers Cooperative Market

Source. Eric Newman photo

Finally, the Nikki market is already becoming relatively more important for international trade with neighboring countries by land. Transportation costs from international ports on the coast are relatively expensive, but as they consider the longer term, it would be useful for the cooperative to consider its international competitiveness, both as a potential exporter, and to be able to assess the prospects for competition from imports in the longer term.

The Nikki Livestock Producers case study provides a useful example of improvements in livestock marketing with valuable benefits for a range of stakeholder groups. USADF is supporting a similar initiative in Burkina Faso. Swiss and Dutch development organizations are supporting self-managed market development efforts in Benin, Burkina Faso and Cameroon. This has resulted in some groups visiting UCOPER- Nikki and its market. Lessons learned can also be considered in the broader context of research and analysis of livestock and meat marketing in West Africa, and efforts to improve it. For further reference see: Josserand and Sullivan 1979; Holtzman et al. 1991; Williams, Spycher and Okike – ILRI 2006; Kamuanga, et al. SWAC-OECD/ECOWAS 2008; World Bank 2011; and Morgan et al. 2013.

Acknowledgements

Views expressed are those of the authors and do not necessarily represent the official positions of the U.S. African Development Foundation (USADF), UCOPER-Nikki or Market Solutions LLC. The authors gratefully acknowledge information provided by the members of UCOPER-Nikki, Action pour la Promotion des Initiatives Communautaires (APIC) and USADF that contributed to this case study. Helpful review comments were provided by anonymous reviewers and Christine Fowles and Paul Olson of USADF.

References

- Connolly, A. J. and K. Phillips-Connolly. 2012. Can Agribusiness Feed 3 Billion New People and Save the Planet? A GLIMPSE into the Future. *International Food and Agribusiness Management Review* 15 (B):139 – 152.
- Holtzman, J.S., N. Kulibaba and C. Stathacos. 1991. *Liberalizing Livestock Marketing in the Central Corridor of West Africa*. Abt Associates Inc., USAID.
- Josserand, H. and G. Sullivan. 1979. *Livestock and Meat Marketing in West Africa: Volume 2*. Benin, Ghana, Liberia, and Togo. CRED, University of Michigan.
- Kamuanga, M. J. B., J. Somda, Y. Sanon, and H. Kagoné. 2008. *Livestock and regional market in the Sahel and West Africa: Potentials and Challenges*. Sahel and West Africa Club/OECD and ECOWAS.
- Morgan, N., U. Pica-Ciamarra, D. Baker, C. Ly and S. Nouala. 2013. *Investing in African Livestock Business Opportunities in 2030-2050*. A joint project of the World Bank, FAO, AU-IBAR, ILRI with support from the Gates Foundation. Presentation to International Meat Secretariat, Dublin, Ireland.
- Newman, E. A. 2013. *USADF and Action pour la Promotion des Initiatives Communautaires (APIC)*. Survey of Members of UCOPER-Nikki.
- Newman, M. D. 2009. *Market Solutions LLC. IFC's Strategic Approach to Support for Food and Agribusiness Growth and Productivity: Evaluation Findings and Recommendations*. Prepared for International Finance Corporation, Independent Evaluation Group.
- Onibon, P. 2004. *Capitalisation et évaluation des marchés à bétail autogérés au nord du Bénin*. Centre Technique de Coopération Agricole et Rurale (CTA) Ministère des Affaires Etrangères.
- Saadou, S. 2014. Secretary General, UCOPER-Nikki, Benin, Personal Communication
- Salifou, Aboubacar. 2014. Butcher, Parakou, Benin, Personal Communication
- UCOPER-Nikki. 2010 – 2013. Annual and Quarterly Reports.
- UCOPER-Nikki. ALGMB (MMT). 2009- 2013 Various reports.
- U.S. African Development Foundation (USADF). 2011- 2013. UCOPER-Nikki, Quarterly Reports and Project documents. Property of USADF. All rights reserved.
- Williams, T.O., B. Spycher and I. Okike. 2006. Improving livestock marketing and intra-regional trade in West Africa. International Livestock Research Institute, Nairobi, Kenya.
- World Bank. 2011. Independent Evaluation Group: World Bank, IFC, MIGA. Growth and Productivity in Agriculture and Agribusiness: Evaluative Lessons from World Bank Group Experience.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

From Economic Vulnerability to Sustainable Livelihoods: The Case of the Oromia Coffee Farmers Cooperatives Union (OCFCU) in Ethiopia

Tadess Meskela^{Da} and Yalem Teshome^b

^aGeneral Manager, Oromia Coffee Farmers Cooperative Union (OCFCU)

*^bAdjunct Assistant Professor, Department of Anthropology and Women's and Gender Studies Program
318-C Curtiss Hall, Iowa State University, Ames, Iowa, 50011, USA*

Abstract

As the fast growing agribusiness cooperative in Ethiopia, Oromia Coffee Farmers Cooperative Union, OCFCU was established in 1999 by 34 cooperatives with \$90,000 USD in capital. Today, OCFCU has 240 cooperatives and capital exceeding \$12,000,000 USD. Well known in the specialty coffee market, OCFCU works with growers across Ethiopia influencing communities economically and socially. Using the GLIMPSE perspective, we investigate the raw-bean procurement, transportation, quality control, and economies realized through coordination, on-going initiatives to capture value-added in processing, and associated challenges in the East African context of small-holder farmers, credit and infrastructure constraints.

Keywords: Ethiopia coffee farmers co-operatives, specialty coffee market

Corresponding author: Tel: + 1. 515.294.0687
Email: Y. Teshome: teshomey@iastate.edu
T. Meskela: tadessemeskela@gmail.com



Introduction

Oromia Coffee Farmers Cooperative Union (OCFCU) was founded in 1999. OCFCU has been one of the fastest growing green-coffee exporters in Ethiopia. OCFCU started with 34 cooperatives and \$90,000 USD in capital. Its first exports amounted to 72 metric tons and \$130,000. Today, its exports have grown to 7,000 metric tons and sales exceeding \$40 million. OCFCU represents 240 cooperatives with 250,000 members. OCFCU is a member-owned democratically structured business, which operates under the principles of the International Cooperative Alliance and Fair Trade. It is the largest exporter of organic coffee and the second largest in fair trade coffee exports in the world. The majority of its members are indigenous small landholders located in the Oromia region of southern and southwest Ethiopia.



OCFCU directly links Ethiopia's smallholder farmers to specialty export markets, a remarkable feature, adding value and improving farmers' incomes. The promotion of specialty coffee – fair trade and organic certified combined with scale economies has been an attractive concept for growers.

Farmers secure better prices while indigenous farming practices promote environmental sustainability with intercropping coffee growing and food crops (OCFCU). Further, OCFCU has been improving community infrastructure and services in these remote farming villages, building roads, storage facilities, bridges, clinics, and schools. OCFCU has also started offering banking and credit services to its members. Seventy percent of the union's net profits are disbursed to the cooperatives and their members. To date, OCFCU has paid more than \$3 million in dividends to its farmers. OCFCU employs 1500 seasonal and permanent employees. This case study uses the GLIMPSE framework of Connolly and Connolly (2012) to analyze the challenges and opportunities OCFCU has been facing in its growth and transformation process.

Company Background and Early Challenges

Ethiopia is the birthplace of coffee; and coffee is vital to the economic, social and traditional life of the people. While millions are dependent on the coffee sector (farming, picking, transportation, etc.), coffee is the principal export commodity for Ethiopia. However the coffee industry has gone through paramount changes since the socialist regime of the 1970s and 1980s.

OCFCU was founded in 1999 after the new cooperatives proclamation act in post-socialist Ethiopia. Prior to that, cooperatives arrangement was based on the structure of central marketing, a legacy of the former socialist military regime of 1974-91. Subsequently, the opening of the Cooperatives Bureau in Ethiopia was instrumental in the conception of OCFCU. In its early days, the union has benefited from USAID in training and capacity building through Self-help International Ethiopia Program.

Since the socialist administration imposed collective ownership and forced membership, farmers had little control on what they wanted to plant and were impoverished (Dessalegn 1990; Kodama 2007). Consequently, the initial step for OCFCU was centered on training. Breaking away from the socialist legacy, OCFCU started training farmers, agricultural staff, cooperative promoters, and government officials into genuine cooperative

principles under a market-oriented approach and such for about eight months. Subsequently, OCFCU came into being and started exporting in 1999.

In the early years, building knowledge about coffee consumption in the West was another pivotal breakthrough to expand its export market. In 2000, with support from USAID/ACDI, a member of the management staff attended a conference of the Specialty Coffee Association of America in San Francisco. This experience was a breakthrough to understand how coffee was appreciated and consumed in the West and to understand the strategic value of the high qualities of Oromia coffee to develop niche markets. Samples of coffee varieties brought to that conference were rated as among the best in the world by roasting houses.



OCFCU also realized early the importance of uniform quality while sourcing from numerous smallholders. While building its export markets, OCFCU offered training to farmers on best practices to maintain and improve the quality of coffee beans to deliver attributes sought by foreign buyers. That strategy paid off. In the 2012 Coffee of the Year Competition, coffee from Oromia was ranked first out of 250 different coffees. This achievement came about by integrating interaction with buyers worldwide to elicit valuable coffee characteristics, feedback received from coffee houses, and the assistance to coffee farmers to consistently produce desirable quality coffee. Other improvements included creating an identity preservation system to trace and guarantee coffee quality from farm to cup. OCFCU collects six high-quality, organic Arabica coffee beans, characterized by outstanding and valuable flavor characteristics. If anything, scalability is not an issue with OCFCU; rather it is a virtue. Because, the number of members had increased, economy of scale and scope occurred more easily.

Current Management Structure

The current CEO (the senior author) of the organization is a member of the original team, which set up the union. In the mid-1990s, the current CEO spent two months in Japan as a trainee in cooperative initiatives; and, he returned to Ethiopia with DVDs on Japanese cooperatives. Subsequently, the DVDs were shown to the Oromia agricultural bureau management. The idea was accepted and a market-oriented democratic organization was established in post-socialist Ethiopia. The immediate priority was the training of farmers and agricultural staff, a task, which took 8 months. During this period, the organization has benefited greatly from ACDI/VOCA, a USAID funded American NGO which has played a big role on training and awareness creation of farmers. Similarly, the FAO has also supported the union in capacity building. Further, the government of Ethiopia has also played a big role by facilitating cooperative by laws and with International Cooperative Alliance.

The organization structure includes the general assembly with 240 members, which corresponds to one chairperson from each cooperative. The Annual General Assembly Meetings are the biggest decision making bodies including evaluating and deciding strategies. Policies approved at the annual meetings of the assembly are given to the board for execution; and, the board delegates to the management to undertake the day-to-day activities. While the management is answerable to the board of directors, membership in the general assembly, the board, as well as in the controlling committee is restricted to farmers.

Key Success Factors

There are two fundamental success factors. First, OCFCU realized early the importance of the export market and started building a direct connection between small landholders growing coffee and international coffee markets. The second factor has been to focus on establishing and improving the quality of coffee varieties while sourcing the beans from numerous small growers.

After fifteen years of export expansion, export destinations now include: the USA, Japan, the Netherlands, UK, France, Germany, Australia, Hong Kong, Scandinavia and more. Today, OCFCU is the largest coffee producer and exporter in Ethiopia. It has a capital of \$15 million, with two major coffee cleaning facilities and annual sales of \$40 million.

Another important aspect is that the number of intermediaries between coffee growers and the export market has been reduced dramatically. OCFCU has captured a significant share of the value added chain and reaped economies of scale by becoming large, and economies of scope by offering different coffee varieties catering to different taste. The high willingness-to-pay by consumers for specialty organic and fair trade coffee (Jena et al. 2012; Wissel et al. 2012) rewards growers for the costly quality improvements they have made to consistently supply high quality.



Finally, in early stages, the assistance from USAID/ACDI has been instrumental in attending the annual coffee specialty conferences mentioned above for several years. Since 2006, OCFCU has done so independently.

Beyond farm income opportunities, OCFCU has also brought social development to its members. OCFCU has been involved in fully financing social and economic development projects throughout member communities. These include building all-weather roads, standardized and all-weather storage facility, water services, schools, access to credit and banking, quality control and traceability training, youth education in coffee production; flour mills, and community clinics.

Strategic Issues and Challenges for OCFCU

Grower Vulnerability

The growth in the number of cooperatives from 34 to 240 has given us an opportunity to work with a large number of rural families in the Oromia region. The size of land holding by these families is heterogeneous and some communities are more vulnerable than others. This is more evident when coffee prices are low and the farmers become cash-strapped. When they face such situations, the farmers used to borrow at high interest rates from private lenders. Nonetheless, in 2005, OCFCU opened its own bank, the Cooperative Bank of Oromia and has been offering financial services. Accordingly, the organization has been providing pre-finance and loan advances to 70% of its members. In the future however, the goal is to increase credit access to 100% of

its members; so that, they can break away from the cycle of economic hardship which has been perpetuated in part, by high interest loans from private lenders.

Value-Added Capture

The specialization in Fair Trade and Organic labels has been vital in the expansion of market opportunities. However, OCFCU is well aware that there are further value-added opportunities to capture by delivering the coffee directly to retail stores in importing countries. To that end, OCFCU is currently collaborating with a US company. The goal is to build direct access to the consumer by further removing intermediaries. Given the demand for high quality coffee, OCFCU is confident that the return to members will expand significantly.

Agronomy

Another critical concern is the aging of coffee trees. Throughout the community, coffee plantations are getting old; hence, there should be strong support for better agronomic practices. Farmers need to get the financial and educational support they need in order to invest in new coffee plants. Back in the 1980s, with a support from the European Union, Ethiopia had a coffee-improvement scheme for several years. The initiative supported the coffee industry by expanding nurseries and stamping of old coffee trees. The project also offered training for farmers; and it improved all aspect of the coffee industry. However, since that initiative was completed over 20 years ago, these agronomic issues have been neglected.

Sustainability

OCFCU members have been supportive of environmentally sustainable farming, which has existed for generations. Much of the coffee is grown under a shade and it is bird-friendly. However, to further promote environmental stewardship, the managers of OCFCU have been looking for ways to minimize the reliance on firewood in growers' communities. To address this concern, they are in the process of building partnership with a roasting house in the Netherlands. This partnership is special because its goal is in producing carbon-neutral coffee from the farm to the cup. It is the first of its kind and the arrangement is geared to saving energy. According to the plan, farmers are incentivized to participate in the scheme with bonus payments of \$500 Birr (1 USD= 19 ETB) and cooking stoves are being distributed to families so that, they will stop using wood for their cooking needs. Subsequently, the goal is to minimize if not eliminate the reliance on wood for household use such as cooking.

Looking Ahead

The characterization of coffee quality (geographical indication and varieties) is an important issue to address. Third-party labeling and characterization of coffee are vital quality features in the coffee export business. The attention given to food quality and safety concerns motivates these important features. They are also consistent with product differentiation leading to higher value-added opportunities and greater willingness to pay with increasing consumer sophistication in the appreciation of coffee varieties and growing regions. This important step will require government's involvement to establish and implement geographical indication labelling and recognize coffee varieties. As OCFCU looks forward to the future, assisting farmers in diversifying their income sources and reduce their exposure to the volatility of coffee prices is an area which the organization hopes to expand further.

References

- Connolly, A. J. and K. Phillips-Connolly. 2012. Can Agribusiness Feed 3 Billion New People and Save the Planet? A GLIMPSE into the Future. *International Food and Agribusiness Management Review* 15(B).
- Jena, P. R., B. B. Chichaibelu, T. Stellmacher and U. Grote. 2012. The impact of coffee certification on small scale producers' livelihoods: a case study from the Jimma Zone, Ethiopia. *Agricultural Economics* 43(4): 429-440.
- Kodama, Y. 2007. New role of cooperatives in Ethiopia: the case of Ethiopian coffee farmers cooperatives. *African study monographs. Supplementary Issue* 35:87-108.
- Rahmato, D. 1990. Cooperatives, state farms and smallholder production. Ethiopia: Rural Development Options.
- OCFCU (Oromia Coffee Farmers Cooperative Union). n.d. Profile of Oromia Coffee Farmers Cooperative Union/OCFCU LTD, mimeo.
- Wissel, S., A. Berghofer, R. Jordan, S. Oldfield, T. Stellmacher and J. Forster. 2012. Certification and Labeling. In: *The Economics of Ecosystems and Biodiversity in Local and Regional Policy and Management*. Editors, Wittmer, H., H. Gundimeda. Earthscan from Routledge, Abingdon and New York. 273–288.

Chapter 3

Innovation in Practice



C H A P T E R 3

Chapter 3

Innovation in Practice





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Agribusiness Model in Africa: A Case Study of Zambeef Products PLC

Lal K. Almas[Ⓐ] and Oladipo Obembe^ᵇ

*[Ⓐ]Fulbright Scholar and Professor of Agricultural Business and Economics, Department of Agricultural Sciences
West Texas A&M University, WTAMU Box 60998 Canyon, Texas, 79016-0001 USA*

*^ᵇ Graduate Research Assistant, Department of Agricultural Sciences, West Texas A&M University,
WTAMU Box 60998 Canyon, Texas, 79016-0001 USA*

Abstract

Zambeef is one of the largest integrated agribusinesses in Zambia with operations in other West African countries and annual gross revenues of approximately \$255 million USD. Its group strategy is to increase efficiency and capacity in primary production and expand the retail and wholesale distribution channels to ultimately increase market share. Zambeef's success lies in the vertical integration of its activities from primary production to the end user through extensive retail networks. The company's vertical business model has made the group prominent and it is one of the few African companies listed on the Alternative Investment Market of the London Stock Exchange.

Keywords: Zambeef, agribusiness model, vertical integration, production efficiency

[Ⓐ]Corresponding author: Tel: + 1 806.651.2552
Email: L. K. Almas: lalmas@wtamu.edu
O. Obembe: osobembe1@buffs.wtamu.edu



Introduction

Zambeef was a small beef company before its incorporation in 1994. With limited capital and a staff of 60, they began by slaughtering 180 cattle per month in a rented abattoir, delivering meat in a Land Rover and selling the meat through two rented butcheries. Since its inception, Zambeef has expanded exponentially to become one of Zambia's largest agribusinesses with annual revenues of more than \$255 million USD and currently employs over 5,500 people. Zambeef has become one of the biggest players in the Zambian agricultural industry by overcoming major problems hindering its rivals and forging ahead in delivering low cost protein in the West Africa region. The company is expanding through an acquisition of other companies involved in agricultural production. Zambeef reached a concessional agreement with Shoprite back in 1995 to manage 20 butcheries owned by them throughout Zambia. Between 2005 and 2007, Zambeef expanded to Nigeria and Ghana in partnership with Shoprite, and in 2008 acquired Master Pork Limited, Zamanita Limited, Chiawa Farm Asset, and Zampalm. Zambeef was listed on the Lusaka Stock Exchange in 2003 and only carried out its first equity capital raise in 2008. In June 2011, Zambeef successfully concluded its dual listing on the Alternative Investment Market (AIM) of the London Stock Exchange and the rights issue in Zambia. The majority of the proceeds from its listing on the AIM of the London Stock Exchange are used to expand the company's cropping operations through the purchase of Mpongwe Farm. The Zambeef group is principally involved in the production, processing, distribution and retailing of beef, chicken, pork, milk, dairy products, eggs, edible oils, stock feed, flour and bread (Zambeef Products PLC. 2012).



The Company's revenue increased from \$162 million in 2010 to \$207 million in 2011 and eventually rose to \$255 million in 2012 (Zambeef Products PLC. 2012). The process of integration links following four divisions of the company:

- The farm division mainly consists of Huntley Farm, Sinazongwe Farm, Chiawa Farm, Mpongwe Farm and the palm plantation. Zambeef has one of the largest irrigated cropping operations in Zambia;
- The meat and dairy division consists of feedlots and abattoirs, chicken layers, chicken broilers and abattoirs, dairy farms and piggery and pig abattoirs. Zambeef started as a small beef company, but has grown to be the largest supplier of beef in Zambia. The company has the following operational facilities in Nigeria: two processing plants, four self-operated butcheries, five Shoprite butcheries and a farm site to house proposed feedlot, abattoir, cold room and processing operations;
- The third division is the manufacturing /processing division which involves the production of edible oils, stock feed, leather and shoes. Zambeef has different plants involved in manufacturing, processing and adding value to agricultural produce. The company has a wheat mill and a bakery for bread production, tannery, and shoe plants to add value to the byproduct from the beef abattoir like cattle hides that are used in producing leather and footwear;

- Zambeef has its own retail division which is involved in the distribution of its products in Zambia, Africa, Europe, and Asia. Zambeef is in partnership with Shoprite to distribute their products in countries where ShopRite is located.

The stability in Zambia's economy and politics cannot be excluded from the company's history. The increase in Zambian prosperity has been the engine for the growth of Zambeef. As one of the largest employers in the country, Zambeef provides jobs to thousands of Zambians and has helped to reduce unemployment in the country. Staff training provides enormous opportunities to local businesses through business dealings and knowledge transfer which increases their manpower to perform more efficiently. Zampalm¹, a subsidiary of the company worked with the community of operation to address the issue of health, education and agriculture. The subsidiary also collaborated with local government development to establish a health clinic for the benefit of the villages and the workers. The company also subscribes to United Nations Millennium Development Goals, which aims at reducing child mortality and malaria in Zambia.

Current Management Structure

The company is led by a Board of Directors consisting of ten executive and non-executive directors. Francis Grogan and Carl Irwin², two of the joint directors on the Board, have led the development of the business since 1994. The management team consists of directors with backgrounds in managing public companies. Specific fundamental, strategic and formal matters are reserved for the board's decision. The Board has sub-committees headed by different directors to assist the board in developing strategies that will make the company sustain profitability in the market. The committees operate within a defined terms of reference as instructed by the Board.

The main emphasis in such terms is to promote the company's success in the light of strategic, operational, business and industry issues as they rise from time-to-time and make recommendations to the Board and ensure strategic goals and objectives shaped at the Board meetings are translated into tactical delivery with mechanisms for key performance criteria in place to monitor progress. Directors of Zambeef recognize the value of corporate governance and endorse principles of openness, integrity, transparency, accountability and the application of high ethical standards in the conduct of business. The directors are of different nationalities with years of experience in multidisciplinary professions.

Key Success Factors

Zambeef's vision and strategy is to be the most accessible and affordable quality protein provider in the region and to increase the efficiency and capacity of its primary production facilities. Zambeef has been able to overcome some of the challenges facing agriculture as a business in Africa by continuously pursuing a vertically

¹Zampalm signed a social responsibility contribution agreement with Kopa Community Development in October 2009 to contribute \$1USD per hectare per year.

² Francis Grogan is the Chief Executive Officer with over 22 year experience in agriculture and meat including experience with the United Meat Packers Ireland, one of Europe's largest meat companies. Carl Irwin is the director of strategy and development with over 20 years of experience in accounting and finance.

integrated business model (farm to fork). The company integrated its operations through acquisition and expansion of existing operations, which has also increased its efficiency in the delivery of products to end users who prefer fresh agricultural produce due to lack of basic amenities such as electricity and storage facilities. This strategy has significantly reduced the Zambeef's risk profile by allowing it to supply its own processing divisions with the required raw materials and to sell the finished products directly to the end consumer through its extensive retail networks reducing high distribution costs caused by poor transportation networks. Zambeef has one of the leading distribution and retail footprints in Zambia, which currently consists of 91 retail outlets, three wholesale centers, six fast food outlets, and 20 Shoprite butcheries. The vertically integrated model offers a significant ability to control production and distribution processes and costs. Zambeef also guards itself from price risk fluctuations related to input because most of the inputs used are self-produced. The unused materials, such as soya bean cake or cattle hides from other production activities, are processed as inputs for further value adding processes within the company. While producing the edible oil from soy bean, the soy bean cakes are a source of feed meal, which is the primary ingredient used in livestock feed production.

Strategic Issues

With 60% of the world's uncultivated arable land and seven of the top ten fastest growing economies, Africa is a natural home for the next agricultural revolution. Zambeef's future plan is to become one of the biggest food producers in the West African region. Zambeef plans to operate with reduced risk and earning volatility, increasing production and efficiency in all areas of the farm, securing the supply chain and the addition of more wholesale and retail outlets in all countries of operation (World Bank 2013).

Irregularities of regulations across borders are a major threat to Zambeef's market share. Food and drug regulations in countries where they have operations are different. This may affect their market penetration as bottlenecks, restrictions, and import laws may add another layer to their cost of operation. Ghana allows the importation of beef, dairy and poultry products, with stringent conditions, but Nigeria does not. Even with the modification of the Tariff Book 2008 in Nigeria, beef and poultry products have not disappeared from the Tariff Book and the restriction continues. With this regulation, animal products have to be produced locally.

With the increase in the number of ShopRite outlets in Nigeria from one in 2005 to 12, demand for Zambeef products will soon surpass supply. Meeting the demand for beef, dairy and poultry products through local production might be difficult to achieve in the long run. Other products that are not banned may be imported by Zambeef. To avoid a deadweight loss of profit as a result of banned importation of animal products, capital investment will be necessary for expansion to occur and acquisition of new facilities in Nigeria will be necessary in the long run to address supply constraints.



With the majority of their market share in Africa, infrastructural challenges add to Zambeef's overall production cost. The company has the following in Nigeria: two processing plants, four self-operated butcheries, five butcheries owned by Shoprite and a farm site to house proposed feedlots, abattoirs, cold rooms and processing operations. The efficiency of these centers is affected by an incessant electric supply. The use of a generator to power these facilities will only increase Zambeef's operating cost. An unstable electric supply may affect products stored in the refrigerators at a certain temperature, leading to change in quality and taste thereby resulting in loss in addition to the added cost. The management has to rely mainly on the generator in the short run for the facilities to run efficiently. The president of the Zambeef stated recently that the company may face future challenges due to global economic volatility with minimal growth in the USA and European economies leading to volatility in share indices and commodity prices (Zambeef Products PLC. 2011).

Apart from defending the relatively stable business in Africa through vertical integration, the company should be positioned well in terms of brand management. The impact of the media on the company's image cannot be underestimated. Any negative news release about the company can affect its revenue and acceptance by consumers leading to loss of market share and consumer trust.

Zambeef brands are well known to consumers based on the company's marketing slogan "farm to fork" and through their extensive distribution network of low cost protein. In 2013, a news report about one of their products deteriorated consumer trust. This created market concerns in Ghana because market share was affected adversely. Such isolated events may be difficult to identify in the short-run, however, Zambeef's management has been seriously reviewing and seeking consultations in areas of public relations and brand management by discussing the company's mission, goals, and plans to achieve long-term business objectives.

Zambeef Future Growth Plan

Targeted investment by the company will continue to drive organic growth and increase production and processing capacity in order to meet local consumption and export to Asia, Europe and the rest of Africa. The major issues for management will be:

- Being able to contribute to feeding the growing population of Africa by replicating the success they have in Zambia through vertical integration in other countries of operation;
- Integrating the vertical business model will be relevant in tackling future challenges;
- Maintaining a competitive advantage, market share and avoiding price decline with an increase in local production in countries of operations; and
- Competition from North America and Europe to emerging markets of Africa for cheaper animal products for protein consumption. These companies have a competitive advantage in terms of economies of scale and are able to sell at a lower price and supply their products in large quantities. With the Mandatory Country of Origin Labeling (MCOOL) and other factors affecting meat packaging and production in North America, the main focus of some will shift to the emerging markets for cheap protein consumption. With the MCOOL law imposed by the US on other North American meat producers, their next market will be an African market with tendency for growth.

References

- Byerlee, Derek, A. F. Garcia, A. Giertz and V. Palmade. 2013. Growing Africa - *Unlocking the potential of agribusiness. The World Bank*. <http://documents.worldbank.org/curated/en/2013/03/17427481/growing-africa-unlocking-potential-agribusiness-vol-1-2-main-report>.
- Zambeef Products PLC. 2012. *Annual Report. Who are we?* 4-6.
- Zambeef Products PLC. 2011. *Our History*. 4:39.
- Zambeef Products PLC. 2010. *Annual Report. Segmented analysis of turnover and gross profits 2010*. 3.
- Zambeef Products PLC 2013 Annual Report (reference for photos). Company website. May 14, 2014.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Building Professional Capacity in the Livestock Industry Through ITC in East Africa

Tricia Beal^a, Francesco Braga^{®b}, and Bayella Thiam^c

^aChief of Staff, Novus International Inc., 20 Research Dr., St. Charles, Missouri, 63304, USA

^bAssociate Professor, Department of Management, College of Business and Economics, University of Guelph, 19 Halesmanor Crt., Guelph, Ontario, N1G 4E2, Canada

^cExecutive Manager, Sales and Distribution Africa, Novus Nutritional Products Africa

Abstract

Novus International is committed to supporting animal agriculture in Africa with a multi-step strategy: the delivery of reliable nutritional solutions, attending to the needs of small farmers, and providing technical instruction and educational opportunities. NENO Information Communication Technology (ICT) was first introduced into East Africa in 2012 to enable mobile phone communications with customers for the purpose of training and awareness. Farmers using NENO get knowledge and advice in practical, user-friendly ways that are accessible to them at all times. After a successful pilot project launch in East Africa, Novus plans to extend the pilot to Nigeria.

This case is positioned at the time of the proposed expansion into Nigeria, before the final outcome is decided. The case will challenge readers to reflect on the innovative, inclusive and modern approach that Novus follows, its value structure, and how it will be implemented before moving to the decision point as to whether introducing NENO to Nigeria is a sound business strategy.

Keywords: African agribusiness, Triple Bottomline, NENO ICT, capacity building, feed industry

[®]Corresponding author: Tel: + 1. 519.824.4120 ext 52763

Email: F. Braga: fbraga@uoguelph.ca

T. Beal: tricia.beal@novusint.com

B. Thiam: bayella.thiam@novusint.com



Building Livestock Industry Professional Capacity through ITC in East Africa

Novus International, Inc. is a global leader, creating animal nutrition products for livestock, pets and people. Privately owned by Mitsui and Company, Ltd and Nippon Soda, Novus is a science-based organization with a very ethical and market focused vision, mission, and core values. Novus has augmented the traditional Triple Bottomline of social, environmental and financial performances with a Triple S Bottomline: Solutions, to reduce feed costs, optimize gut health and support the maximum genetic potential; Service, to customer, community and industry; Sustainability, social, environmental and economic obligation to deliver products services and programs to ensure a sustainable future.

Novus Commitment to Africa and the NENO ICT Pilot Program

Novus is committed to supporting animal agriculture in Africa with a multi-step strategy: the delivery of reliable nutrition solutions, attending to the needs of small farmers, and the delivery of technical instruction and educational opportunities. Exhibit 1 illustrates:

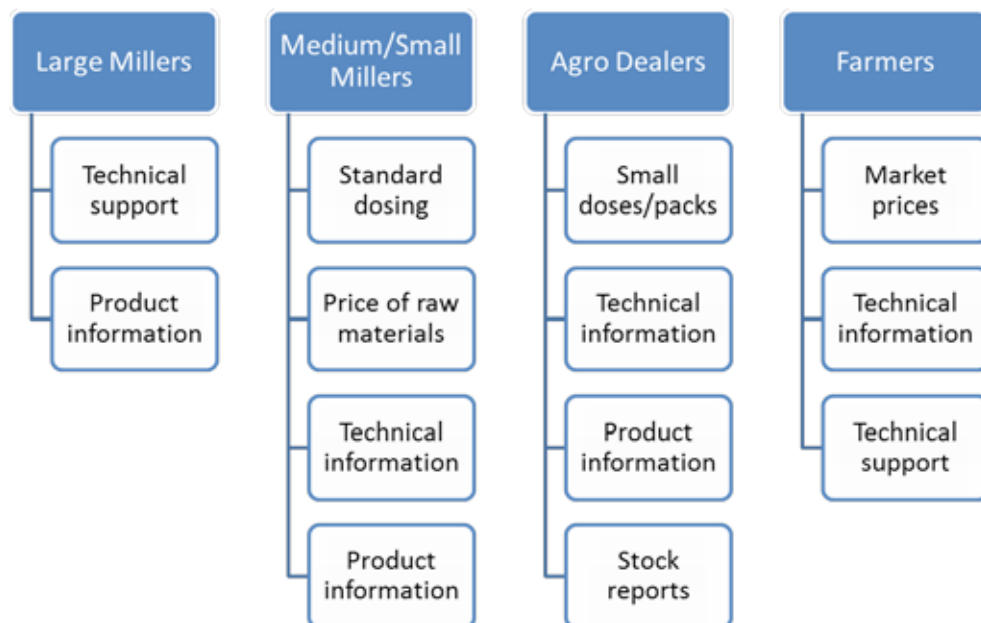


Exhibit 1. Novus initiatives supporting African Animal Agriculture

According to Bayella Thiam, Executive Manager, Sales and Distribution-Africa, serendipity and careful application of NMS core values and critical success factors have delivered significant successes despite difficult conditions.

*“In North Africa, the markets have been challenged in the recent years. Economic uncertainty, effects of the Arab spring, issues with European currency and the Eurozone, and high feed costs have collectively made this one of the most challenging years in this market. However, we have seen growth in agribusiness in sub-Saharan Africa. Investors are coming and there is a momentum to move forward. Doing business in Africa requires different ways of thinking. For example, most people do not have bank accounts, so other solutions are required. Novus’ retail approach is innovative and is adapted specifically to the needs of customers in this market, and will substantially increase the number of retail outlets which offer the Novus range of products.”*¹

In 2012, Novus piloted a very innovative mobile livestock sales and marketing information support system called NENO Information and Communication Technology (ICT) in East Africa. NENO means “word” in Swahili, which is a widely used language in East Africa. The descriptive term NENO in East Africa refers to the concept of trust. NENO ICT was conceived as a platform to improve management practices related to livestock nutrition, specifically in the broiler, layer and dairy industries. The mission was increasing industry growth, improving producer operations and ensuring long-term business sustainability. With a cell phone penetration of over 80%, mostly on basic 2G and SMS services, compared to only 16% for internet², the choice of using mobile phones provided a relevant answer and a competitive advantage for Novus as marketing and commercial tools.

As seen in Exhibit 2, NENO ICT is a simple platform enabling a diversified portfolio of activities. The mobile phone is not used to place orders, but for training and awareness. It becomes a cost-effective way of reaching farmers and other actors in the livestock value chain. It helps them understand how improved nutrition helps them better manage their livestock through improved health which can directly translate into increased income. The platform enables the creation of supportive partnerships and meaningful connections throughout the value chain of protein production—a core business for Novus. Tips and insights from livestock, market, weather content providers are coordinated by Novus and are sent to millers, dealers and farmer helping them gain knowledge and receive advice in a practical, user-friendly ways that are accessible to them at all times. NENO is a tool to market Novus’ solutions, not just to sell products.

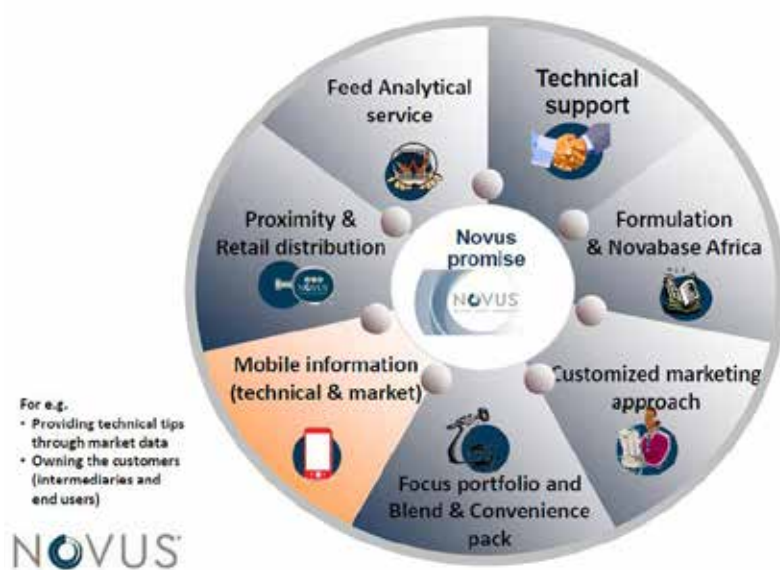


Exhibit 2. NENO ICT, component Novus Africa Promise

Exhibit 3 details NENO’s current structure and content. The SMS program keeps customers engaged and builds a relationship of trust by delivering timely, useful educative messages to farmers. Through NENO, a diverse base of producers, from small-holder to production scale, can access a consistent, accurate stream of

²Nmachi Jidenma, CNN Opinion, Marketplace Africa: <http://www.cnn.com/2013/11/07/opinion/real-mobile-revolution-africa-smartphone/> and Internet World Stats: <http://www.internetworldstats.com/stats1.htm>.

content through SMS information alerts. Each Novus sales person has access to a (protected) internet platform and completes a profiling for each customer visited, from offered seminars and trainings. A structured SMS program is defined for each species and by type of problem, and Novus personnel defines a dissemination plan for their area according to customer type, so that each sales target receives a tailored SMS message. Beyond the delivery of information, NENO supports communication between producers and experts. Through the NENO framework, producers have direct access to technical experts who actively work with them, often through dedicated visits, to help manage livestock at strategic times of the year. Subscribers to the NENO platform are invited to participate in ongoing, instructor-led-trainings and regional training events, known locally as “*Novus Days*”.

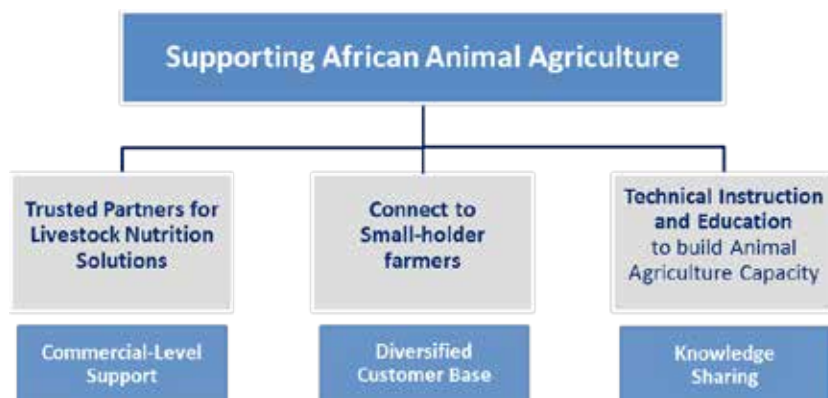


Exhibit 3. NENO ICT, its structure and content

Going Forward

A Much Larger Second Pilot?

The first NENO pilot delivered better knowledge for farmers, better productivity, improved livelihoods and more food to feed Africa’s populations. Producers love it.

“Since I received a message from Novus NENO my farming took a new twist. The market alert message enabled me obtain a reliable market for my broilers. I was able to sell my broilers at a reasonable price. If it was not for Novus NENO, I would have stopped this business.”

Mr. Lutaaya, Uganda

“My birds had cut their egg production from 69% to 40%. I had tried everything the vets had to prescribe in vain. Though, I had attended Novus Days I never considered using the solutions in my feed. It was one of the usual evenings counting my eggs of the day when I received a message from Novus NENO Uganda that changed everything. I honestly followed the nutritional advice though I did not really understand the communication well. Since I was desperate, I tried it out and the results are amazing. My birds can now afford to pay for their feeds and also pay something for my household. Thank you Novus for this.”

Mr. Kibirige, Jinja, Uganda

Early in 2013, Novus executives understood that good results from the first pilot in East Africa meant great opportunity moving forward with NENO ICT, as it would provide leverage and credibility which could be deployed in other markets.

Exhibit 4 illustrates Novus' moving forward strategy: commitment to NENO, awareness of its rich potential, and the determination to pursue it as part of its African Promise to deliver more.



Exhibit 4. NENO Moving Forward Strategy

Later that year, Thad Simons, President and CEO; Luis Azevedo, Executive Director, Africa and Latin America Sales and Distribution; Bayella Thiam, Executive Manager, Sales and Distribution, Africa; and Tricia Beal, Chief of Staff met to discuss the expansion of a second pilot in Nigeria. It was a sunny day, which is a good omen; the discussion was upbeat but also cautious and careful given the size of the commitment necessary to enter Nigeria, a much larger market than East Africa.

Reviewing NENO ICT East Africa Pilot

The discussion started with a review of what led to the NENO East Africa pilot, which was born from the desire to capitalize on the mobile boom in Africa and the unique opportunity for Novus to efficiently deliver on Novus's commitment to Africa. Indeed the East Africa pilot was an act of faith on their capacity to build on their core values, through the use of a simple technical platform, and Novus' specialized IP. The main objectives of the pilot were to reach a sizable number of farmers, including small farmers: targeting 3,000 subscribers in eight months; build a solid market base for Novus solutions and products and ensure that players from the entire supply chain had B2B access to the system. The most important challenge in this deployment was to deliver scientific content effectively through the mobile phone tool, with a capacity to work even with essential phones on 2G; including sound educational and marketing services.³

³Initially, local sales people identified and invited leading farmers to join NENO; early users were quite appreciative of the new service, quickly becoming NENO's best ambassadors in the local community and at extension events. They were instrumental in reaching 3000 users. As the cell phone SMS technology was already well known to farmers, very little technical training was provided to users. No program fees were charged by NOVUS to NENO users.

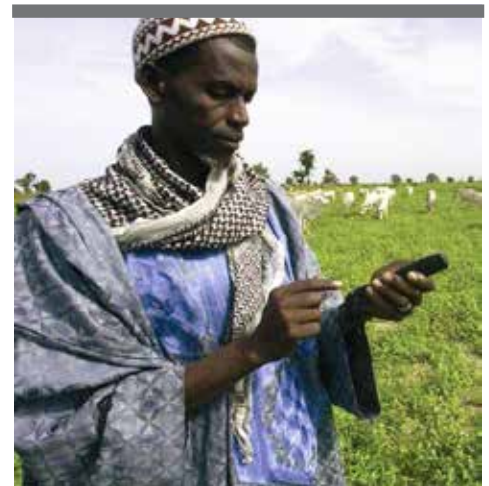
The pilot was going smoothly, but needed fine-tuning. A narrower focus on the health and science services, that are core to Novus, was needed. The addition of personal service was necessary to address complex solutions, not suited for short, SMS delivery. After a first connection was made via NENO; a quick addition of local languages to provide value to farmers followed with extension activities in both English, Swahili and other regional languages; the use of Novus Days to collect questions and to connect those questions with additional content enabled onsite follow-up visits—a true innovation for Africa.

NENO was made possible by the partnership with Esoko providing the technical platform solution, and Google, a specialized information technology provider for the SMS solutions. The cost of technical solutions was reasonable, up to 12k USD/year for the first pilot. The real cost was the time invested by Novus professionals to develop the IP of NENO; to complete the initial design and technical setup; to commit and complete content customization; to define and vet intellectual content.

After only 18 months, the pilot was effectively delivering on Novus' promise to Africa: deliver more (more than products). Possibility, the easiest way to accomplish this goal was through marketing and communication. Understanding and respecting cultural specificity was key to doing business with farmers and they had benefited using word-of-mouth marketing in local communities to reach more farmers, including smaller ones. Novus had created a need for this service, and kept it viable as farmers now counted on it, possibly with a different service focus for larger commercial operations than for smaller farmers. NENO was now an important part of NOVUS reputation in East Africa.

Considering the NENO ICT Nigeria Pilot

In preparing for the Nigeria pilot, Novus executives were aware that Nigeria, is a much larger, better organized, and more advanced country with larger producer organizations and infrastructures. This meant higher market potential even when focusing primarily on large poultry areas. The main challenge was to be ready for these numbers, both in terms of technical infrastructure and capacity to deliver content, adjusted to fit the new initiative. Why not delegate the management of this project to specialized partners with larger and more complex technical infrastructures while focusing on NENO's IP? The importance of delicate negotiations among large partners in both the public and private sector became apparent very early in the process.



It was clear that the hardware and system capacity needed appropriate technical solutions to be ready for the high number of users, potentially running in the millions. Specific due diligence led to the identification of possible partnerships with the mobile phone based government plan providing loans to farmers to finance fertilizer purchases, as many farmers in this plan were meeting NENO's definition of target customer. Another important opportunity was offered by Poultry Producers Association of Nigeria (PAN), after their endorsement of NENO, with PAN to run NENO on their mobile platform reaching all poultry producers, and Novus maintaining control of NENO's IP and commitment to deliver solutions, in addition to the possibility of positive externalities with other services offered by PAN. At the same time, Novus was well aware of the need to prevent the risk that small farmers could be less served, as business could primarily flow to larger operations.

The discussion clearly stressed the need that NENO be taken seriously, hence the need for a flawless delivery on expectations. True, NENO now had an extended reach made possible by excellent results from East Africa, and this was instrumental in making the PAN opportunity possible. NENO was now established. Novus could build on its reputation in partnering with PAN, which provided an opportunity to reach much higher numbers. It was certainly a much bigger challenge, but the Novus executives knew it could be done; there were ways to get there! They shared the desire to be working in Africa.

Going Forward: Issues for the Next Executive Meeting

The agenda for the next executive meeting was set. Issues that needed to be addressed included:

1. Was due diligence completed for the Nigeria pilot? After all, was NENO an easily replicable initiative? What key obstacles should Novus expect moving to Nigeria?
2. Was Nigeria core to Novus, was it worth the required resources? What could Novus get out of it?
3. Was the project well specified and properly defined, what were the key risks Novus was exposed to? How could these be controlled?
4. How could additional services be tied to the core NENO service, perhaps some financial services, or advertising? Would this be a great opportunity to grow the business or would it corrupt the nature or even the perception of the current service?
5. Should Novus try to earn a fee for service for NENO, for example charge a fee for the service? Perhaps negotiated with and charged directly by the phone carrier, keeping it free for clients reaching a minimum business volume?



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Dala Foods Nigeria Limited: Effective Product Development and Management in Nigeria

Musa K.K. Gambo^a and Ali Madugu Safiyanu^b

^aChief Lecturer, Department of Marketing, School of Management Studies, Kano State Polytechnic, Kano, Nigeria

^bManaging Director, Dala Foods Nigeria Ltd., Phase II, Sharada Industrial Estate, Kano State, Kano, Nigeria

Abstract

Dala Foods Nigeria Limited is a resilient indigenous food company founded in 1980. Their innovative business strategy has resulted in the successful launch of five unique instant food drinks into the Nigerian marketplace. Dala Foods has made some traditional foods and beverages which were once difficult to prepare, much easier. They have won numerous awards both locally and internationally and become successful through proactive product development and innovative niche marketing strategies despite a harsh business environment of inadequate energy supplies and occasional political and civil unrest.

Keywords: tea, Kunu, food drinks, innovation, Nigeria

Corresponding author: Tel: + 254.20.422.3483

Email: M.Gambo: gambokk@gmail.com

A. Safiyanu: alimadugu@yahoo.com



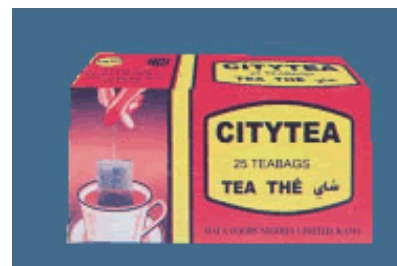
Company Background

Dala Foods Nigeria Limited was incorporated with an initial investment of N400,000¹ by the late Alhaji Safiyanu Madugu, a visionary and innovative entrepreneur who also served as chairman. The company, solely owned by Nigerians, is located in the North Western State of Kano. Operations began in 1980 in a rented apartment with a staff of 35. Today, they employ 135 with a capital base of over N 100 million (\$625,000 based on N160 per USD), with N 250 million (\$1,562,500), annually.

Dala Foods has a well-equipped laboratory manned with an experienced food scientist, technologist and qualified laboratory attendants. Its flagship brand, *Dala City Tea*, is a house- hold name in Kano (a state with a population above nine million people), and has competed with local and foreign brands for 32 years.

The tea market in Northern Nigeria and Kano is attractive and viable due to the dense population and stable demand. People in this area prefer to drink tea (*shayi* in Hausa language) any time of day. This opportunity is what attracted both local and foreign brands such as: Lipton, Top Tea, Tiger Tea, Highland Tea, Akbar and Tea King to the Nigerian market. Tea is also affordable to the mass market. For less than N10 you can get one or two tea bags to quench your thirst.

Market performance the tea was encouraging. The brand name, Dala City Tea emanating from the famous Dala Hill in the ancient city of Kano, a well-known landmark, made the brand name easy for people to pronounce and remember. The company followed by launching an aggressive campaign of radio and television jingles for the tea. They also sponsored a popular Indian television show in the evenings. Consequently, the brand gained massive acceptance from 1980 -1989 while sales and market shares grew steadily. Gradual population growth and better disposable income continued to increase demand for tea from 1990 – 2010, as sales for made a significant move upward.



Following the success of Dala City Tea, the company introduced instant *Kunun Tsamiya* in 2001. Immediately, sales of Kunun Tsamiya (a Hausa term for Tamarind millet gruel, started to grow as it followed and even better growth trend as Dala City Tea. This was because Kunun Tsamiya had no competitors in the market except for some local, informal businesses that were inherently insignificant. Another key factor in the success of Kunun Tsamiya was that the unique formulation has relieved consumers (primarily housewives) from the chore of dehusking, winnowing and grinding the millet in the process of making local Kunun Tsamiya. The traditional method takes more than five hours- from start to finish-but with the instant Kunu , the time is reduced to just five to ten minutes. That is why Dala Foods at present, cannot adequately meet the demand for this product.²



Similarly, the company introduced Diet Kunu to serve the market sector of diabetics.

¹Approximately \$ 2,460 USD

²Kunu (also known as kunun tsamiya) is a popular drink consumed throughout Nigeria, mostly in the north. It is usually made from a grain such as millet or sorghum, although it can be made from maize.

This is quite innovative and timely since there is a sizeable number of diabetic patients in Kano who are largely old and incidentally, consumers of traditional Kunu. In general, we can confidently say that, currently, instant Kunu is swimming in blue ocean waters as the only brand of its type in Nigeria. Other brands produced and marketed by the company are instant Fura (cooked, ground millet) and instant *Biski* (local couscous). All these brands have become accepted household names. Dala Foods has made some traditional foods and beverages which were once difficult to prepare, much easier.



Moreover, Dala Foods produces another food product called *Action Meal* – a food supplement for malnourished patients and children which has been formulated by the Institute of Human Virology, Nigeria (IHVN). It is a product comprised of maize, soybeans and groundnuts manufactured for global relief organizations. These contracts have increased sales and revenue while giving Dala Foods experience in sourcing other grains processes in meeting the need for this ready-made niche market. This initiative has given them easy access to foreign markets through donor organizations. Similarly, Dala Foods receives free promotion and corporate recognition in all areas served by the donor organizations through raising awareness and humanitarian aid for malnourished children. These products are registered and certified by the National Agency for Foods Drugs Administration and Control (NAFDAC) and Standard Organization of Nigeria (SON).

This innovative drive has garnered numerous awards over the years, including: the Quality certificate from SON in 1988; a gold medal in 1989 as one of the best product exhibited in Leipzig International Trade Fair; a Global Food Industry award in 2008 from the International Union of Food, Science and Technology (IUFOST); and the Nigeria50 Awards as a fast growing company in 2013 by the Tony Elumelu Foundation.

Current Management Structure

The company is governed by a five-member Board of Directors, headed by a chairman and four active members comprising of the Managing Director–CEO, Executive Director, Director of Production, and Director Marketing and Sales. Together, they form a Senior Management team and manage all staff through their respective managers. The directors are degrees in their chosen fields with more than twenty years cognate working experience.

Alhaji Aliyu Abdullahi, is Chairman and Chief Executive of Dala Foods. He is an experienced business mogul who worked with Lever Brothers Nigeria Ltd. for over three decades and rose to the position of Senior Manager. Later he started a hospitality company called Royal Tropicana Hotels in Kano. The hotel is now a highly successful business in the hospitality industry in Nigeria.

Alhaji Ali Safiyanu Madugu, has been the Managing Director and CEO of Dala Foods for 20 years. He is an excellent manager with an ability to successfully reposition businesses. He holds an MBA from Bayero University, Kano and is a member of numerous professional organizations.

Management and staff are all located in one central office located on the Sharada industrial estate in Kano. Employees are adequately remunerated based on the prevailing pay package in the industry. This is one of the secrets of the company's survival and its ability to withstand the harsh business environment where hundreds of other companies have failed.

Key Success Factors

The success story of Dala food is attributed to its ability to practice and maintain its core mission: “To produce clean, cheap and quality products that meet our customers need”. This is achieved through developing locally relevant, quality products that are not only affordable but also scalable. The company has been able to create a strong value proposition for its products at the right price points through a combination of product re-engineering, smaller package sizes and low-cost operating models.

Another important driver of success has been an effective brand-building strategy. Building brand recognition with consumers is important in emerging markets such as Africa. Armed with this knowledge, Dala Food vigorously built *Dala City Tea*, instant *Kunun Tsamiya*, *Biski* and *Fura* to acquire an indelible position in the consumers mind through aggressive promotion and marketing strategies. Similarly, the company has painstakingly developed a method of servicing customers through efficient account management, delivery, payment and in-store merchandizing. The late Chairman, Alhaji Safiyanu Madugu took some strategic steps to build a powerful and profitable route to the market, a feat that is being religiously implemented by his heirs today. The route to market (RTM) model combines the benefits of direct customer relationships with the cost advantage of outsourcing to achieve distribution economies. This strategy works because of a well-developed succession plan, which is reviewed periodically, keeping the original plan in mind.

Efficient management of the distribution network within Kano and outside the state has been another victory. By effectively developing a compelling retail value proposition led to increased volume, improved efficiency, and outlet loyalty. The distribution network for convenience products like food and beverages in Northern Nigeria is intensive—from the company to the distributor, retailer, and final consumer. This is done with a goal to make products readily available and accessible to the target market. However, this channel may likely change in the near future, when the company starts exporting its products to the neighboring West African countries like Niger, Cameroon, Chad, Togo and Ghana. To achieve this, Dala Foods intends to use indirect export, first, through domestic based export merchants and reliable export management companies. As the operation grows they will either: establish a home-based export unit to market the products directly, utilize export sales representatives to sell the products in foreign countries, or appoint a reputable but reliable distributor in the host country.

Furthermore, the company has absolute control of the production process. It is worth noting that the production process of Kunu, Fura and Biski was pioneered by the company and is the only entity producing these products using such technology, therefore giving them an advantage making it difficult for others to enter the market without permission from the company—thus creating a strong market entry barrier. Another critical success factor is the availability of raw materials which is sourced locally: fresh tea leaves, millet, ginger, cloves and pepper; all natural with no additives or artificial preservatives. This gives the company a competitive advantage by providing high-quality products which are readily available and affordable.

In a nutshell, the success of Dala Foods Nigeria has resulted from their instrumental role in supporting local agricultural produce, proactive product development, unique product line, management strategy, and the strategic marketing of niche operations.

Strategic Issues

The Nigerian food and beverages industry is very large with many local and foreign companies such as Unilever, Nestle, Promosidor, Dansa Foods, Nigerian Flour Mills, etc. But Dala Foods has a strong market niche with a strong base in Kano and surrounding areas. The company is now trying to fully cover the 19 states of Northern Nigeria, serving a population of 80 million. This is part of the company's current business expansion program. In the same vein, Dala Foods Nigeria Limited intends to target the malnourished children with its Action Meal Formula with technical support from Institute of Human Virology Nigeria. This promises to be a highly lucrative and socially-responsible effort, especially with the added opportunity to expand to West African Markets made possible by the Economic Community of West African States (ECOWAS) protocol. Dala Foods Nigeria Limited is looking for co-investors to provide the funding needed for expansion and meet the growing demand from the market. In other words, the expansion is planned to be funded by a bank facility and shareholders' equity or both.

However, these opportunities notwithstanding, Dala Foods faces some daunting challenges for doing business in Nigeria. Foremost in these challenges is the lack of a constant power supply. Power is undoubtedly the back bone of any manufacturing industry. But in Nigeria today, manufacturers' only get an average of eight hours of power supply, per day, and the remaining power requirements are met through using generators using LPFO or AGO. This is pathetic as it increases the cost of production. Other disturbing challenges include the influx of cheap foreign goods due to smuggling, high interest rates, corruption, double taxation, inconsistencies in government policy, uneasy access to finance and growing buyers bargaining power.

Looking Ahead and Future Plan

The market for Kunu beverages is expected to grow both in production, sales and market share to about 200% in the next five years. Therefore, the company is working on an instant Zobo drink (made from Hibiscus juice) which it will introduce to meet the growing demand for it in local and export markets. It is estimated that by 2020 this market will grow to achieve at least 100% of its projected market. However, as the market grows the demand of clean, hygienic and affordable locally processed food products is critical. The most important question is whether Dala Foods can meet the consumer needs amidst these challenges.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Adding Value to Aquaculture Products: Kati Farms (Uganda) Ltd.

Jean-Joseph Cadilhon^{®a} and Lovin Kobusingye^b

^a*Senior Agricultural Economist, International Livestock Research Institute, Box 30709, 00100 Nairobi, Kenya*

^b*Founder and General Manager, Kati Farms (U) Ltd, Plot 88 Buganda Rd., 30026 Kampala, Uganda*

Abstract

Kati Farms (U) Ltd is a fish agro-processing enterprise led by Lovin Kobusingye, a young entrepreneur linking Ugandan fish farmers with markets. Because fish farmers were having trouble finding marketing outlets for fresh farmed fish, Lovin started adding value to fish. Her breakthrough came when she thought of making sausages from fish. Lovin went through the process of developing her and her suppliers' capacities and finding markets for her innovative products with the support of Ugandan government institutions. Kati Farms and her fish suppliers now reliably deliver processed fish products to 30 local supermarkets and 23 hotels, in addition to many low-income consumers through street vendors.

Keywords: fish processing, supply chain management, business incubator, Uganda

[®]Corresponding author: Tel: + 254.20.422.3483

Email: J. Cadilhon: j.cadilhon@cgiar.org

L. Kobusingye: katifarms@yahoo.com



Introduction

When Lovin Kobusingye first graduated from Makerere University in Uganda, she could only find a job with the Walimi Fish Farmers Cooperative Society (WAFICOS). So she started working in 2008 as a secretarial administrator for what was then a 34-member fish farmers' cooperative. Lovin was to conduct training programs helping farmers produce more fish. Very quickly the productivity of aquaculture ponds increased and the farmers started bringing in more fish to the cooperative office every day and complaining that there was no market for their fresh fish. So Lovin also started looking for marketing outlets for the farmers' fish. She approached processing plants in Uganda. None wanted to consider processing fish: small volumes, bad taste, too many bones, and irregular supply by smallholder farmers. WAFICOS managers did not wish to invest into processing but they encouraged Lovin to start her own fish processing business as a side job. That was the start of Kati Farms (U) Ltd, based in Kampala, which now buys 15 metric tons of fresh fish from Ugandan farmers every week for processing into various fish-based processed foods for the local market and for export to East, Central and Southern African neighboring countries.

Company Background

Uganda is an East-African land-locked country between Kenya, Tanzania, Rwanda, the Democratic Republic of Congo (DRC) and South Sudan. Uganda lies on the Eastern shore of Lake Victoria and captured fish is a usual food source for Ugandans living close by. However, based on data from the Ugandan Ministry of Agriculture, Animal Industry and Fisheries – Department of Fisheries Resources (MAAIF 2012), per capita annual consumption of fish is only 5.7 kg in Uganda. Per capita income is growing thanks to economic development in the country (World Bank data). Furthermore, governments of developing countries are being encouraged to promote sustainable



fish consumption given its importance as a source of energy, protein and nutrients in these countries (FAO and WHO 2010). Therefore, it is likely that fish consumption in Uganda and in neighboring countries will increase in future. However, there are likely to be difficulties in marketing fish. First, farmed fish is not a regular diet item for a majority of Ugandans so product promotion will be needed. Second, many consumers are still dependent on very small daily wages so portions of fish products will need to be cheap enough to be bought by poor consumers. Third, sanitary infrastructure is still a luxury for most of the country so untreated waste waters end up in waterways and undermine the safety of fish raised or captured in these waterways. Thus, although there is likely to be a good market potential for farmed fish products, new products will have to be inventive to address these challenges.

Lovin's idea was to use all the fish being delivered by WAFICOS farmers to launch a brand new product: fish sausages. But because she didn't know how to run a business let alone produce a sausage, she needed to build her own capacity in business management and food processing. She heard about the business incubator at the Uganda Industrial Research Institute (UIRI). It funds, trains and hosts the businesses of young entrepreneurs to develop industrial innovations. UIRI's Head of Production had never thought about fish sausages before.

Lovin assured him that she had a reliable source of fish meat with the WAFICOS farmers and she prepared her business plan to complete her application for the business incubator. She got accepted at UIRI and followed a course in food processing there. UIRI also suggested a fish sausage recipe made from captured Nile perch; Lovin started experimenting around it with different types of captured fish in 34-kg batches of sausages but was unsatisfied with the result. All her savings were used up in buying the raw materials for her sausage trials until she went back to her original idea of using live farmed catfish supplied by WAFICOS farmers to produce fish sausages. Everybody who tried this batch liked it: the sausages had white flesh, the filling was clean of bones, and the texture was soft. She used this recipe to start marketing her new product. Lovin started selling her fish sausages to friends and to small itinerant street sausage roasters. Her customers were always asking: where did these fish sausages come from? Word-of-mouth created her initial customer network which allowed Kati Farms to move on to a semi-industrial scale of 500 kg of sausages per week, all the while using the food laboratory of UIRI.

Lovin was lucky to be identified by the Department of Fisheries Resources which invited her to showcase her products in a trade fair. Giving out samples of her fish sausages to representatives of the media, hotels, restaurants and supermarkets made Kati Farms' fish sausages famous on the Ugandan market and opened up regular supply contracts. She got more free publicity when the Smartfish Program identified her to join a fish products trade event in Zambia where Lovin showed off her product to an international audience. At this event, Lovin received extremely useful suggestions on how to improve the labeling and packaging of her product. All agreed the sausages were delicious; she now had to work on other elements of the product. This event was Kati Farms' international breakthrough. It provided international and free press coverage of the business's fish products; this resulted in numerous phone calls from all over East and Southern Africa to start doing business. So Kati Farms now had to increase production to supply all its orders while further improving the quality of its products.

Capital was needed to fund this expansion. Lovin was unsuccessful obtaining loans from commercial banks because the enterprise was considered too risky. The only people that helped out financially were the fish farmers of WAFICOS. The fish suppliers agreed to provide their raw material on credit and only be paid at the end of each week. With the fish production training program ongoing at WAFICOS and the new market outlet created by Kati Farms, the cooperative now has 1000 members. Kati Farms purchases 15 tons of fish every week, equivalent to 75% of the cooperative farmers' total production. The fish meat is processed into 1.5 tons of sausages and other products like chilled gutted whole fish, chilled fish fillets, fish samosas, fish mince for pet food, etc. To produce fish sausages, the fish purchased from farmers are cut to separate meat fillets, trimmings and fatty tissues; all are cut into small pieces. The fish fillet and fats are ground separately in 3-mm mesh. The resulting fish mince and fats are chopped together with ice, spices and food additives and chilled to +12°C. This mixture is stuffed into sausage casings of 26–28 mm diameter, and sausages are linked and twisted to form 50-g individual pieces. The sausages are packed in plastic pouches to reach retail weight of 0.5 kg (10 pieces) or 1 kg (20 pieces). Finally, the packed sausages are frozen to –18°C, at which temperature they can be stored for three to six months. It is recommended they be heat-treated only before consumption.

Having started alone in the UIRI business incubator with US\$800 of savings, Lovin's Kati Farms is now worth an equivalent of \$400,000 USD shared between three investors and provides direct employment to 38 people. Through its extended networks of fish supply and fish product sales, Kati Farms helps support the livelihoods of at least 500 other people as well as the WAFICOS farmers.

Current Management Structure

Lovin is the general manager and main investor in Kati Farms holding 75% of the shares. She is also directly in charge of international sales and marketing. To help her manage the business, Jackline Ahimbisibwe holds 20% of the shares and is in charge of the domestic marketing of fish products. Jacky had experience in marketing and finance and shared a similar business-orientation mind to Lovin's. So when they met, Lovin requested her to join her in running Kati Farms. James is employed as a production manager to oversee the processing. Joseph is the accountant and makes sure that all aspects of the business stay profitable. WAFICOS is still a very close collaborator employing one person to provide technical assistance to the fish farmers and make sure that the quality of the supply to Kati Farms remains satisfactory. Finally, Lovin recognizes the invaluable contribution of the free legal advice provided by Prof. Sempebwa Fredrick. She submitted all decisions for his legal advice and is now in a position to pay for it through a legal services contract.

Key Success Factors

An innovative product. The most important success factor was the innovative fish sausages. Kati Farms is still the only producer of fish sausages in the region; this gives Lovin a leading advantage over potential competitors. She intends to stay ahead of other food processors by sticking to providing outstanding, quality products.

Unlimited supply of main raw material. Kati Farms was lucky to have an abundance of raw materials. When Lovin started her business, nobody wanted to use farmed fish, so she had no difficulty in sourcing her main ingredient.

Customizing products to customers' different tastes. Kati Farms' flagship product is fish sausages. Despite the supply contracts with supermarkets and hotels, the main customers are still informal street roasters and consumers from Kampala who buy 2/3 of the weekly production. Large fish are gutted and sold fresh to DRC consumers. Smaller fish are filleted or smoke-dried for the emerging middle class which cannot necessarily afford to buy a whole fish. Likewise, small pre-cooked fish products like samosas are cheaper than whole fish and allow fish protein to reach mouths of lower-income households. Even the leftovers and bones from the filleting are processed into fish mince for pet food. All parts of the fish supplied from the farmers are put to productive use by Kati Farms.

Regular endorsements boost entrepreneur's confidence. Joining the UIRI business incubator allowed Lovin to start a business while inside an enabling environment. The incubator provided her with technical knowledge on food processing to develop the product, a working space for her firm after she completed the training, and the institutional encouragement needed by young entrepreneurs to keep going. Her selection to participate in local and international trade fairs gave her free promotion and press coverage. Lovin has won the Rising Star Award of the Uganda Women Entrepreneurs' Association in 2012. Kati Farms also won 1st prize in the 2012 African Agribusiness forum in a competition between 52 African countries sponsored by the European Markets Research Center and Rabobank. Recognition has given Lovin a sense of purpose and encouragement to keep going despite the real challenges of doing business in Africa.

The trust of 1000 mainly small fish producers. Because Lovin had worked for WAFICOS, there was some mutual trust between the fish farmers and the young business entrepreneur. Lovin was the one who helped

train most of the farmers in successful aquaculture fish production. She also personally started the whole marketing venture to create an outlet for the farmers. In the end, they were instrumental in getting the business growing by providing their fish on credit trusting that Lovin would pay them back at the end of each week. The private company is thus founded on its reliance on a cooperative supply base and a history of interpersonal trust. It is now in the interest of Kati Farms to help the fish farmers keep improving their quality by securing and stocking better fish feed so Lovin has invested into feed storage units where she can stock large quantities of relatively scarce good-quality fish feed ready for sale to her supplier farmers.

Strategic Issue: Doing Business in Africa is Hard

Especially in the land-locked country of Uganda, it is difficult to find adequate packing material, spices for the sausages or machines for processing. Everything has to be imported at high cost and high risk. Chilling and transport infrastructure is also lacking, particularly challenging to market a perishable product made from fish. Most challenging is the lack of money for investing; commercial banks seem mainly to be interested in funding projects that are safe and guarantee a return on their investment.



Kati Farms thus plans to import the feed for its suppliers, processing and packing material, and exotic ingredients. It is often less risky and quicker to ship the goods by plane than by truck, overland. Lovin is also relying on new private investors who are aware of, and passionate about, the development potential of agribusinesses in Africa to help fund her expansion. One of these is Anu Frank Lawale of Gloucester Point, Virginia. He was introduced to Lovin by a common friend: Nelly Isyagi of Aquaculture Management Consultants.

Looking Ahead

Replicating Successful Fish Processing for Other Untapped Raw Materials

Lovin's father is a farmer with a small plot of avocados. Every year at harvesting season avocados fall down and rot because there is no processing plant to make use of all this raw material. There are thousands of other small avocado growers like Lovin's father in East Africa. Lovin is now thinking of how she could replicate what she has achieved with fish farmers on other African agrifood commodities produced in abundance but unfortunately wasted for lack of markets and processing into innovative products.

Acknowledgement

The write-up of this case study was funded by the CGIAR Research Program on Policies, Institutions and Markets (<http://www.pim.cgiar.org/>).

References

- FAO and WHO. 2010. Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption Executive Summary: 25-29.
- MAAIF. 2012. Ministry of Agriculture, Animal Industry and Fisheries – Department of Fisheries Resources. Department of Fisheries Resources Annual Report 2010/2011. Kampala, Uganda.

Chapter 4

Human Capital Development

CHAPTER 4



CHAPTER 4

Chapter 4

Human Capital Development





International Food and Agribusiness Management Review
Volume 17 Special Issue B

The Journey from Subsistence to Commercial Viability: The Case of Meru Herbs, Kenya

Fred Yamoah^a, Conall O’Caoimh^b, Christina Donnelly^c and Sally Kimotho Sawaya^d

^a*Research Associate, Kent Business School, University of Kent, Medway Campus,
Chatham Maritime, Kent, ME4 4AG, United Kingdom*

^b*Director, Value Added in Africa – Ireland, 133, Capel St., Dublin 1, Ireland*

^c*Lecturer, Department of Management, National University of Ireland, Rowan House, Maynooth, Ireland*

^d*Assistant General Manager, Sally Kimotho Sawaya, Meru Herbs Cooperative Kenya, P.O. Box 14343, 00800 Nairobi, Kenya*

Abstract

The genesis of Meru Herbs, Kenya is traced to a decision to grow plants as a means of providing an alternative source of revenue to pay for a balance due on a water-project about 14 years ago. Such a modest initiative has enabled 600 families to move from subsistence to commercial farming. As a cooperative, Meru Herbs has made significant improvements to their products by moving up the value-chain through processing organic certified ingredients into gourmet foods. Critical factors contributing to the success of Meru Herbs include a creative product-mix designed to overcome logistics costs, customer focused, and strategic partnerships with *Friends of Meru Italy* and *Value Added in Africa* which provided provisions for investment and market brand development respectively. The performance of Meru’s own branded tomato sauces, which are the first to bear the *Proudly Made in Africa* label, enter international markets provide new opportunities and challenges going forward.

Keywords: Meru herbs, ethical supply chain, value-added in Africa,
Commercial viability, international markets

①Corresponding author: Tel: + 44. 163.488.8844
Email: F.A. Yamoah: f.a.yamoah@kent.ac.uk
C. O’Caoimh: conall@valueaddedin africa.org
C. Donnelly: Christina.donnelly@nuim.ie
S. Sawaya: sally@meruherbs.com



Company Background

Meru Herbs is the trade name of herbal teas grown and packaged in the Meru region of Kenya, on the eastern slopes of Mount Kenya. All produce is grown along a stretch of the Kithino River (a tributary of Kenya's largest river, the Tana) in Tharaka-Nithi District of Kenya. Originally this area was semi-arid, but in 1989, the Catholic Diocese of Meru (DOM) in collaboration with the Italian government formed the Nguuru Gakirwe Water Project (NGWP) to provide water for domestic and irrigation use for a group of 430 families in a three phase process. A major result of this irrigation resulted in increased agricultural production and higher food-crop yields. In addition to this, the supply of domestic water direct to households precluded the need for valuable time and labor to be diverted into collecting and carrying water from other rivers and boreholes—a burden normally incumbent on women and children.

After the completion of Phase 1, it became clear that NGWP beneficiaries were going to have to contribute towards the water project's operational and maintenance costs, by paying a fee for the water they were receiving. The nominal fee, originally set at KSh 100 per household, per year (amounting to KSh 1,350 in 2003), fell well short of covering the project's costs, so alternative ways of raising funds to cover the costs had to be considered. At the same time, both the DOM and the Project Coordinator were interested in stimulating agricultural production within the area. In particular, they wanted to establish a commercial venture that would increase incomes from irrigated agriculture, while providing an alternative source of revenue for meeting the balance of the water project's costs.

After much deliberation, it was agreed that growing Hibiscus, Lemongrass and Chamomile organically (using no inorganic pesticides or fertilizers) for export as herbal teas might be worth a try. So, in 1991 a commercial venture known as Meru Herbs was established as part of the NGWP. Today, they produce an assortment of herbal teas and jams from locally found tropical fruits and more recently tomato based sauces which are processed and packed in a factory built on the site of the original NGWP base camp. This factory implements an entire food safety quality assurance system, using skilled quality assurance managers.

Meru Herbs currently operates in the Fair trade market for herbal teas, jams and sauces, exporting 90% of their produce through Fair trade outlets in various export markets, with 10% of their produce being sold domestically. Currently, products are sold in Japan, Italy, France, Austria and Germany, and more recently the UK. This is a competitive market but one in which Meru Herbs feels it is accommodating as they have created long-term relationships with various Fair trade market outlets. In the beginning, all Meru Herb's produce was sent in bulk but later machines were purchased to add value so they could export finished high-quality gourmet products to Europe and Japan. Meru Herbs now turns a reasonable profit on a turnover of roughly KSh 15-million per annum (approx. USD \$ 140,000), and is able to finance more than 50% of the NGWP's costs. As such, Meru Herbs has become an integral part of the NGWP, with whom it currently shares the same management.

Current Management Structure

The farmers of Meru Herbs are geographically bound by the irrigation system. These farmers are members and owners of the cooperative. The business is held by a Project Manager in a Trustee for the Diocese of Meru. The Project Manager is responsible for a quarterly report to the Diocese, but typically the Diocese does not interfere with the day-to-day running of the company. Instead these decisions are taken up collectively with

an Executive Committee comprised of the Project Manager and the respective department heads from the tea and jam factories. The Executive Committee manages the planning for the entire year: coordinating the orders (supply and demand) between markets and farmers, development and marketing of product packaging, as well as human resource decisions. Typically logistics and communications are managed by the Meru Herbs head office located in Nairobi, Kenya about 250km from the Meru farming area.

In addition to a shared management structure, Meru Herbs has created strong strategic partners with Friends of Meru Italy and Value Added in Africa (VAA), for investment and the provision of market information for brand development respectively. The first strategic partnership started over 20 years ago with Friends of Meru Italy, who helped build the jam factory where the fruit is processed. Additionally, they have facilitated numerous projects for the benefit of the workers. The farmers of Meru Herbs have benefitted from such projects as: school bursaries for the children of Meru Herbs' workers and community farmers, bicycle schemes, and irrigation kits sold to the farmers for half price while the project pays the remaining half.

A second central and strategic partner to Meru Herbs is VAA, who has been integral in connecting them to potential new international buyers for the last five years. In addition to networking opportunities, VAA provided support for new packaging and formulation of Meru Herb's international marketing strategy. This assistance has been a major advancement for Meru Herbs who until this point had no structured strategy for market expansion.

Key Success Factors

Meru Herb's vision is to become a successful and dynamic Fairtrade organization that creates employment and provides sustainable livelihoods for people in the local community. This vision supports the businesses mission to:

- (1) Empower women
- (2) Alleviate poverty
- (3) Improve living standards

A significant achievement of Meru Herbs is women empowerment. Most of the people working in Meru Herbs are women. Initially women in this society were not given a say in the decision making at home and it was more important to educate the boy child as opposed to the girl child. This has changed tremendously and the need to educate children equally is seen as very important. The women working for Meru Herbs have a source of income that allows them to make financial decisions for their families and even have bank accounts where they can save their earnings.

Consequently, the financial success of Meru Herbs has allowed them to achieve the following objectives: provide sustainable income for employees and farmers; contribute towards eradicating poverty in the area and educate the community on organic farming methods. This is possible due to the number of ongoing activities within the company which include: production, processing and packaging of teas, jams and sauces; product marketing and sales to enable both domestic sales and export; irrigation, education, best farming practices and the introduction of the MH Rural Saving Sacco (a bank for Farmers), a microcredit union. In 2005, Meru Herbs



Sacco was started as a saving and credit cooperative (mini local bank). It has over 600 members consisting of Meru Herbs workers and farmers/water users.

Success has largely been achieved through good leadership. Key decision makers include Italian, Andrew Botta, coordinator for Meru Herbs who arrived in Kenya as a missionary, married and ended up making Kenya his home. Through his Italian network, he instigated funding support from the Italian Government. Andrew is supported by Sally Kimotho Sawaya, the assistant general manager of Meru Herbs Cooperative Kenya. She is responsible for international marketing and logistics. She first started working with Meru Herbs as an intern and was subsequently offered a full-time position working with the cooperative in July 1997. She chose to work with Meru Herbs because of the impressive story behind the farmers at the cooperative. These two decision makers are integral to Meru Herbs core management team. This team enabled the vision and mission to be achieved, by navigating through the Fair trade system and by also efficiently and effectively managing the economics of Meru Herbs products. For example, the higher the fruit content in the jams, the less sugar is required to be purchased. The company prides themselves on producing a 65% fruit concentrate whilst also reaping more revenue from the product. Essentially this quality enables the company, to command a price premium – and so overcome the distance from market. The farmers are incentivized to produce high quality as a result of the time invested in achieving water and organic certification. The farmers receive a small financial bonus on the chamomile produce. The remainder of any additional profit is reinvested into the factories to purchase any equipment necessary to ensure the efficiency and effectiveness in running the two factories.

Through efficient sales and marketing, a successfully formulated product mix was designed to overcome logistics costs—illustrating Meru's creativity in overcoming challenges. Unique product offerings include high-quality, Fair trade, gourmet-food produce which have been created to stream-line costs, promoted using pro bono assistance – with packaging design and marketing strategies supported by VAA and delivered straight to consumers through Fair trade distribution channels. Ultimately this has eliminated the 'middle man', making the products price-competitive, resulting in higher return on margin for farmers which ultimately is a key motivating factor for growth and continued development of the product from the ground level.

Strategic Issues

Presently within sub-Saharan Africa, Meru Herbs is one of just two farmer-owned companies that are successfully selling high value-added agri- processed goods to export markets under their own brand. Based on the dedication of the core management, the company has worked hard to establish itself as number one in this very niche market, creating good long-term relationships with Fair trade partners in Europe and Japan. For example Meru Herb's Fair trade partner, the People Tree Japan, have assisted with day-to-day production efficiency, facilitating Fair trade workshops at the Meru Herbs base camp. In addition to this support, the People Tree have also assisted in the development of a particular type of Jam- Hibiscus and Papaya to sell to Japan as well as opening up this new variety to other export markets as part of a wider jam range. Meru Herbs is recognized as not compromising on quality and this brand value has been supported recently with the redesign of the packaging of Meru Herbs produce with the assistance of VAA and Zeus Creative, an Irish design company. Through this redesign Meru Herbs has been able to see their potential as an export capable brand which aligns their internal brand values with the external marketing of the produce to ensure competitiveness in the international market.

Going forward Meru Herbs are continuously planning for the future. These plans include the desire to increase Fair Trade partners in various new export markets, in particular the Irish and UK markets. There is also a

desire to spend more time on the development of Meru Herb's dried tomato produce to satisfy Japanese and Italian market demands. In recent years the company has been impacted as a result of the economic downturn, but management view the option for new tomato product range, new assortment of herbs and new Fair Trade contacts as efficient and effective ways in which they can strategically negate against the downturn in orders in recent years.

Looking Ahead

The current challenge facing Meru Herbs directly links to their desire and need for relevant and marketable certification. At present they possess organic certification with the 'Soil Association of the UK', but they are currently in the process of navigating through HACCP certification which is costly but a necessary cost for the future of the business to show that they have a top quality food safety management system in place within their factory.

They recognize that they have lost potential contracts based on the fact that their competitors possess these costly certifications. One such opportunity and challenge for Meru going forward, is that Meru's own branded tomato sauces, is the first to bear the 'Proudly Made in Africa' label to enter international markets. This is a trademarked copyrighted logo which must receive VAA Board approval to companies who can demonstrate the following four criteria:

1. The product(s) they are producing are African made.
2. The product(s) are finished consumer ready goods.
3. The product(s) are produced through an ethical supply chain.
4. The quality of the product(s) is to hold a confident offering in the marketplace.

On the creation of this trademark, VAA carried out consumer research which highlighted consumer confidence in the label and the strong association with quality produce. This label provides an opportunity for companies across the continent of Africa to strive for this trademark which will receive strong global recognition as opposed to a country specific label.

This approved trademark received by Meru Herbs essentially will provide the potential target market with some confidence in buying the Meru Herbs produce. This does excite the Executive Committee as they try to advance the company in the international domain, establishing potential new partners and identifying opportunities. However, like any company, the Executive Committee does concern themselves with ensuring that Meru Herbs keeps afloat as a business, and finds ways they can recoup the money lost on the downturn of orders of containers during the recession.

In terms of scalability, Meru Herbs processes a portion of the farmers' produce into jams, teas and sauces. The bulk of their produce still goes for export as fresh fruit. So the company has the supply available to expand. Extra investment in HACCP, equipment, and marketing will be necessary to do this on a significant scale. Because Meru is the first to succeed in this, it has the first entrant advantage. Its story will command a listenership in the market. Buyers who see the success of Meru have specifically asked VAA to help them source other products from equivalent cooperatives in other parts of Africa.

The models of how cooperatives have grown internationally may provide Meru Herbs lessons on how cooperatives can grow from local farmer groups into larger networks that enhance the lives of many more farm

families. If the company is to achieve such scale it would benefit farmers in the wider region or county, they will at some point need to consider how to integrate other farmers. With time, the need for economies of scale will increase pressure on Meru to do this.

The other aspect of scalability is not just Meru's growth, but that others will replicate their model. The market will not bear 100 brands like Meru, but Meru's model of progressively moving up the value chain in small steps, and within their ability, has lessons for many others throughout Africa in different product areas.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Practicing Ergonomic Balance in Order to Avoid the Inevitable Addiction to Cheap Labor: The Case of Greenway Farms

Vito Rugani^a and Peter Goldsmith^{®b}

^aCEO, Greenway Farms (Pty) Ltd, P.O. Box 282, Tarlton, 1749, Gauteng, South Africa

*^bDirector, Food and Agribusiness Program, University of Illinois, University of Illinois,
318 Mumford Hall, 1301 W Gregory Drive, Urbana, Illinois, 61801*

Abstract

Greenway Farms is a family business owned by two families located 80km northwest of Johannesburg. It was started by Vincent Sequeira in 1988, as a typical mixed crop market garden. Today, Greenway Farms supplies 40% of Southern Africa's fresh carrots, and is marketed under the Rugani Carrot brand.

This is a case study of a typical emerging farming initiative that transformed itself into a highly productive modern agricultural enterprise. The journey of transformation was extremely challenging as the owners had to embrace concepts that were foreign to them. Quantum leaps in practice will challenge the mind-set of any small farmer immersed in an undeveloped agricultural world. The most difficult concept to rise above was the myth that labor is cheap. An abundance of labor means low wages, but low wages does not mean cheap labor.

Keywords: labor policy, mechanization, development, Africa

Corresponding author: Tel: +1 . 217.333.5131

Email: V. Rugani: vito@greenwayfarm.co.za

P. Goldsmith: pgoldsmi@illinois.edu



Company Background

In 1988 Greenway Farms was a 20Ha mixed produce farm. They grew a variety of fresh produce destined for the city of Johannesburg. In 1993 Vito Rugani, who also had a small neighboring farm, joined Vincent. Together they employed around 80 people who manually completed all tasks. By 1995 the partners realized that something was wrong. They worked an 18 hour day, made no profit, paid a horrendous wage bill, and were in essence going bankrupt. The root of the problem was a conundrum, how labor costs could be onerous when wages are low.

Both men realized that they were doing something wrong, but what? They needed to expand their minds, explore alternatives ways to produce vegetables, and truly understand the madness of their current business practices. They headed to Australia because the climate and markets were similar, yet Australian vegetable producers are some of the most efficient in the world. There they learned about equipment, mechanized processes, and a completely different human resource paradigm.

This case study attempts to expose the journey of understanding that they undertook. On returning from abroad they implemented a vision to bring ergonomic balance, the marrying of operator and machine, into their business. For indeed it turned out that the traditional developing country notion of competitive advantage through the use of cheap and abundant labor was their folly.

They had no capital resources when initiating their vision to achieve ergonomic balance. They knew they needed to raise the capital to mechanize and transform their business model, for to continue status quo meant sure death for the business. Bank finance was not an option due to their negative free cash flow. The pitch to the investor was anything but mechanization. Mechanization is anathema in any low-wage high-unemployment economy. Raising capital and mechanizing the business offered them a chance. Therefore there was only one way out, they sold 40% of the equity in their business to a silent partner in order to “kick-start” their vision. The deal was sweetened by offering a 10% equity stake to the labor force, and this had “political credibility” value for the investor. The labor force still holds this 10% stake in the enterprise, which has turned out well allowing the employees to share in the success of the company. Five years later they bought out that silent partner and doubled his original investment. By 2003 the farm had grown to 100Ha of irrigated land. The business continued to gain momentum, and by 2013 the enterprise had 2,200Ha under irrigation, producing 1,000 ton of carrots a week, 52 weeks of the year off two production bases located 280km apart.

There were a number of challenging paradigms that had to be overcome:

- Conventional wisdom says that machines destroy jobs. In the case of Greenway mechanization makes people efficient and therefore better paid.
- Conventional wisdom believes that labor is cheap, and imported machines are too expensive. In the case of Greenway, imported equipment leads to greater labor productivity, overall operational efficiency, and a higher quality product.
- Conventional wisdom believes your ground must work and that idling ground is an inefficient use of capital. Mechanization calls for specialization. Specialization calls for a three-year cropping cycle where land is left fallow for two years. In the case of Greenway ground must be rested to ensure the sustainability of soil health.



The decision to mechanize was immediate upon seeing an alternative way forward and knowing the consequences of not changing, but organization transformation was hard and slow in coming. Mechanization has to be piecemeal, mainly due to financial constraints, and enterprise adaptability. The process of mechanization dictates that you can only move as fast as your legs can carry you. There are aspects to mechanization that escape the casual glance that sees only the simplicity of a machine operating. The more manual an operation, the flatter the learning curve, as management and employees have few reference points on which to draw upon. The systems to manage mechanization from service and maintenance through to operator

training all had to be built from the ground up. There was lots of trial and error as the wrong equipment was purchased, or there was a poor understanding of proper usage.

After purchasing the shares back from the initial investor, Greenway sold them on to an Australian carrot farmer, with the sole motive of having good counsel available for the future mechanization choices. This allowed the management team to avoid the “school fees” associated with mechanization. Upon exhausting the benefits of counsel Greenway bought the Australian investor out. It was a win-win arrangement; the Australian firm made money and Greenway gained knowledge—or at least avoided making bad mechanization decisions.

Managerial Accounting and Ergonomic Balance

The conventional way that both banks and farmers consider the viability of the farming enterprise is as follows:

Table 1. Conventional accounting approach to determine business viability

Income		All revenue generated from product sales
	Less variable costs	All costs involved in the production of the crop
Gross Margin		
	Less overhead	Excluding interest and capital payments
Net Farm Income		An indicator of the fundamental viability of the enterprise
	Less interest	
Net Farm Profit		An indication of gearing
	Less capital expenses	
Cash Flow		An indication of business sustainability

Typically farmers and bankers view the enterprise based on debt levels, managerial capacity for expansion, and profitability. The conventional view provides many valuable insights into the performance and viability of the farm business. But standard accounting measures provide little understanding of the Ergonomic Balance in the enterprise.

This conventional approach does not indicate how well labor “marries machinery”. Critical for ergonomic balance is understanding that labor costs are a percentage of income. In fact the cost of labor is fragmented across the management accounts in terms of being both a fixed and variable cost. It is important to understand the change in the percentage cost of labor over time when achieving ergonomic balance in the firm. Another critical component is worker per capita contribution to income over time. Finally, the relationship between wages and cost of maintenance of machinery for the enterprise are examined, which is an explicit measure of the relationship between man and machine.

Farmers conventionally see labor costs simply as a function of market ruled wage levels. A farmer mechanizes if wages are high or labor is unavailable. There is however another dynamic at play in developing country business settings; the addiction to cheap labor. We argue the cheap labor myth and policy hold communities, both farmer and worker, on a course of mutual self-destruction and misery.

Consider the following alternative managerial accounting approach (Table 2):

Table 2. An Alternative Managerial Accounting Approach to determine business viability

Income		All revenue generated from product sales
	Less variable costs	All costs involved in production of crop
Gross Margin		What income is left after growing the crop
	Cost of labor	All remuneration of both salaries and wages
	Plus cost of maintenance	Not the capital cost of machinery, just the maintenance thereof
	Operational Costs	Handling the crop – both human and machine
	Less Operational Costs	
Farm Surplus		Income left after the crop has been grown and handled
	Cost of interest	
	Equipment replacement	
	New land and equipment for expansion	
	Dividend pay-outs	
	Obligatory capital repayments on bonds or lease agreements	
Cash Flow		The portion of this surplus is retained in the bank

The farm surplus, simply put, is what is left to reinvest into the enterprise to ensure long-term sustainability and growth. If an enterprise is to grow, and thrive, it must produce a surplus.

Variable Costs, Operational Costs and Farm Surplus are interrelated and must be kept in balance for the long run viability of the enterprise. The area of the circle in Figure 1 is the revenue of the enterprise. Exogenous ruling market prices and endogenous yield determine the revenue of an enterprise. Producers are price takers in the case of perishable products where supply is inelastic and demand is elastic. The only real control the producer has over the area of the circle is to increase yields. In carrot production the variable cost segment will range between 43 -50% of revenue, depending primarily on crop yield. Higher yields shrink variable costs as a percentage of revenue. If yields dip, the variable cost area grows and farm surplus contracts.

Very few producers can identify the ideal size the Operational segment because of the way they view management accounts. Clearly the association between these three segments is enterprise specific, but for carrot production we have found the ideal operational cost is 25% of income.

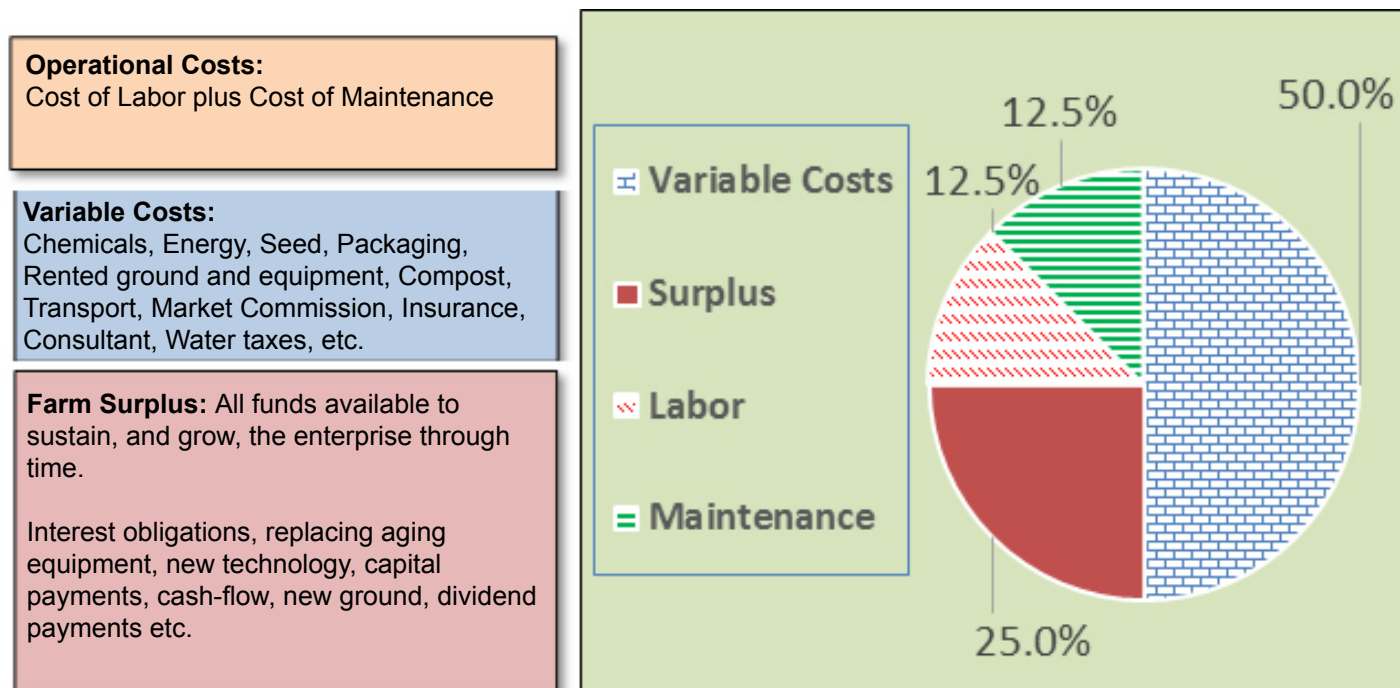


Figure 1. The Managerial Accounting Approach to Understanding Ergonomic Balance

The key is however not the aggregate 25%, but rather the balance between the cost of labor and the cost of maintenance; Ergonomic Balance. Labor could go as high as 20% in a highly labor intensive operation or enterprise, and that would leave a mere 5% for maintenance. In a highly mechanized enterprise the allocation might be equal at around 12.5% labor and 12.5 % maintenance.

Assume 50% of income is the variables costs to grow the crop. A Farm Surplus cannot be less than 25% if interest, capital expenditures, and dividends require resources. Therefore, Operational costs cannot exceed 25% of revenue. This implies that even in a labor intensive environment (countries with cheap labor), an enterprise cannot devote more than 20% of its total income to labor. If the enterprise is mechanized, then only 12-13% of its income can be devoted to labor, as maintenance becomes more demanding. Without ergonomic balance the Operational segment grows and consumes Farm Surplus.

Greenway Farms

In 1995 when the partners went abroad to see what they were doing wrong, their Ergonomic Balance had 45% Variable costs, 50% Operational costs (35% labor and 15% maintenance) and 5% surplus (Figure 2).

The farm functioned well from an agronomic perspective with excellent yields and high product quality. As a result Variable costs were only 45% of revenue. The problem though was the cost of labor to company, not the price of labor. The enterprise paid poor wages common in the industry. Low wages painted the illusion that labor was cheap. Workers labored long hours and work was arduous. Labor turnover was 35% per year,

adding additional Operational costs. The high labor bill meant low productivity per worker. Low levels of Farm Surplus constrained the company's ability to purchase new equipment or leverage any scale economies. Greenway was addicted to cheap labor. At the same time labor had no opportunity to become more efficient and garner higher wages. Thus both the firm and its employees faced a "lose-lose" dilemma. With Farm Surplus consistently below 25% Greenway Farms was doomed.

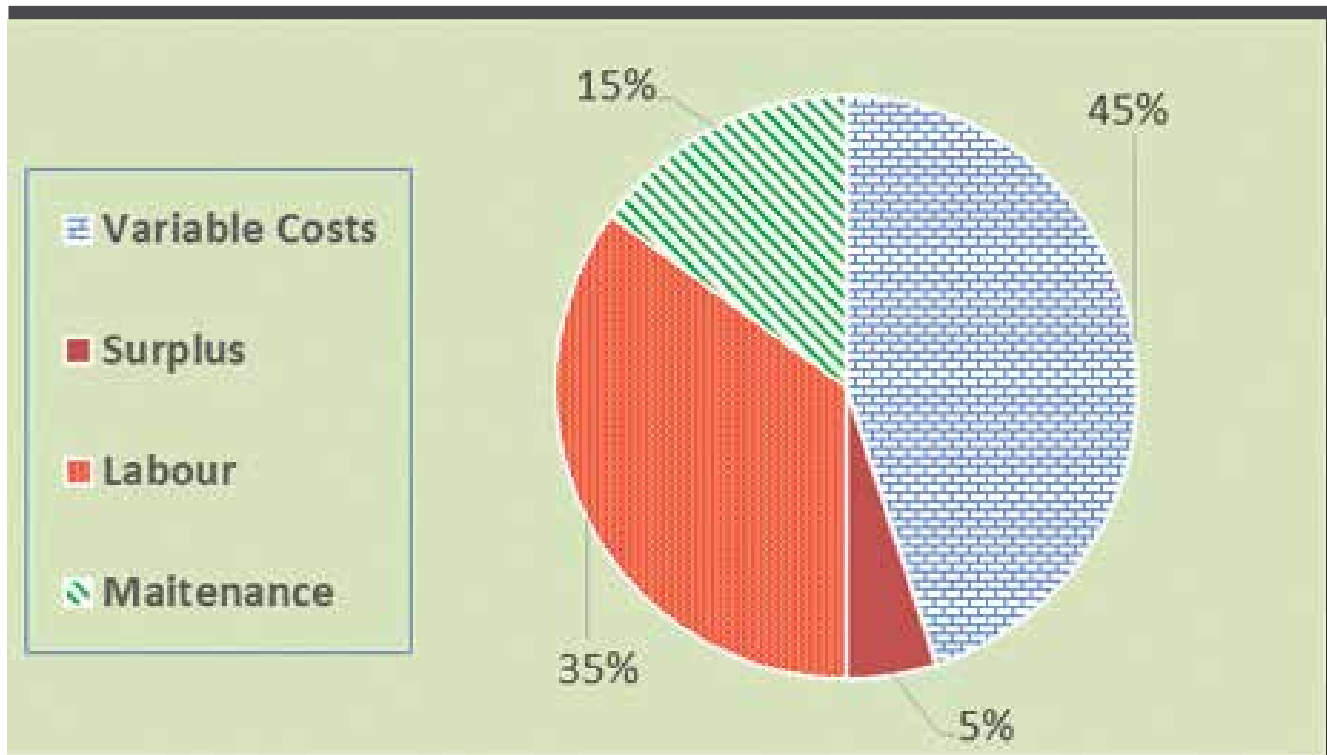


Figure 2. Ergonomic Balance Greenway Farms 1995

The situation required a radical step to get out of the cheap labor trap. They sold 40% of their equity with the explicit purpose of instituting Ergonomic Balance into their enterprise. Within three years the surplus had grown to 25% and the operational costs were down to 25% of revenue. Vincent and Vito repurchased their shares paying their silent partner a 100% profit after only five years.

Today, Greenway Farms pays four times the national minimum wage to its lowest paid staff members. Wage levels and work day length are often better than commercial and industrial levels, thus staff turnover is less than 3% per annum. The majority of the employees have now been with Greenway for more than ten years. Company policy prohibits laying off workers due to mechanization, and the annual labor force growth rate has been 5% per year since 1997. A worker now produces 35 times more revenue, and earns 15 times more salary than he did in 1995. The Farm has maintained a surplus between 25% and 32% since 2001, and has grown from 20Ha to 2,200Ha.

Clearly employment is a key policy issue for South Africa as every other developing or emergent economy. The South African government appreciates that Greenway has continued to expand its level of employment and provide annual wage increases in excess of inflation. The fact that expansion was only due to the success and the growth of the firm was missed by the government stakeholders. The employees understood though. The

covenant to not reduce the work force caused labor to embrace mechanization as their hope of getting out of poverty, and they never saw mechanization as the demon that would starve them.

But unfortunately Greenway would never have got anything right if we had not deliberately ‘flown-below-the-radar’. The government has a natural mistrust of the entrepreneur. The toughest challenge to an entrepreneur in a developing nation is how to limit government meddling. For example, the government would have blocked all plans to import machinery had they become privy to Greenway’s plan. The government also rejected all applications for financial assistance, forcing Greenway to rely solely on silent partner and private bank funding.

Conclusion

The key factor for success was not to believe the myths. It is very easy for both worker and employer to take the “moral high-ground” when an enterprise is addicted to cheap labor. The laborer claims that his wage is inhumane, and that the system has failed. The employer claims that s/he “cannot” pay more for fear of bankruptcy, and he is not a criminal as he “feeds” the nation and is a “good” citizen. The Greenway case teaches that it is the responsibility of the worker to “do an honest day’s work”, but it is the responsibility of the employer to ensure that worker does a productive day’s work. Clearly a policy challenge exists for high unemployment countries common in Africa. The exigencies of poverty reduction motivate full employment mandates, but such mandates create labor use inefficacies that hold down wages and promote labor turnover.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Agribusiness as the Anchor: The Role of KijaniAgro

Michael L. Cook^a, Rebecca Savoie^b, and Ronen Almog^c

*^aProfessor, Department of Agriculture Economics, University of Missouri, 125C Mumford Hall,
Columbia, Missouri, 65211, USA*

^bPrinciple Associate and Chief of Party, Abt Associates, Daar-es Salaam, Tanzania

^cFounder and CEO, KijaniAgro, Twiga House (5th Floor), Samora Ave. P.O. Box 2177, Daar-es-Salaam, Tanzania

Abstract

KijaniAgro is a Tanzanian-registered agribusiness that operates on the simple principle and model that Africa can benefit from professional, commercial, successful agribusinesses that are committed to sharing know-how with the farmers, providing access to technology, and creating a network of outgrowers interested in developing an integrated agricultural food producer value chain. The model has evolved into a successful framework. This case reviews the evolution and improvement of this integrative model – Tanzania is the focus of the successful implementation.

Keywords: integrated model, technology transfer, innovation

Corresponding author: Tel: + 1. 573.882,0127

Email: M. Cook: cookml@missouri.edu

R. Savoie: rebeccasavoie@gmail.com

R. Almog: ronen@kijaniagro.com



Company Background

Currently KijaniAgro has holdings in dairy, honey, and grape investments in Tanzania, and has land for horticulture, and is finalizing financing on a poultry project. Both will be operational by the end of 2014. For the past seven years, the founder and CEO has been working in Tanzania providing agricultural consulting services or turn-key operations in a range of services such as irrigation scheme development and installation, plantation design, farm planning, production management in coffee, wheat, dairy, honey, and horticulture. This experience has allowed the KijaniAgro team to learn about agriculture in Tanzania, identify suitable areas for investment, and build the necessary network.

The founder of KijaniAgro, Mr. Ronen Almog, learned scarce resource farming from observing Israeli agriculture and studying in Israeli educational institutions. He was schooled at Ben Shemen Youth Village and Agricultural Boarding School. From an early age saw his father and extended family produce high quality products in the desert climate. He also witnessed innovation and financial success in the agribusiness sector. After earning a degree in finance in Europe, Almog arrived in Tanzania in 2006 to explore opportunities to expand the Israeli agricultural production and marketing model designed to address strict resource management, particularly with respect to soil and water. He observed Tanzania had far more water resources and better soils for agriculture than Israel. Almog saw this as an opportunity to bring agricultural technology and innovation to Tanzania, which had the potential to be an important supplier of agricultural products to the region. He sees himself as a “practical pioneer”. The following paragraph is attributed to Almog in KijaniAgro company documents:

KijaniAgro considers itself to be practical pioneers. With natural resources becoming scarce and demand for food constantly on the rise, they seek to develop vertical integrated solutions. The focus is always on smart, fair and sustainable agriculture, as well as advanced food production and processing methods. The company also works to empower women and farmers in Africa. All of our solutions encompass cutting-edge Israeli know-how and technology proven over the last six decades. Based in Tanzania, we initiate and carry out agro projects across Eastern Africa.

To execute this vision, KijaniAgro has judiciously selected and attracted an experienced professional team. The philosophy of the company is to use a global approach with local expertise. The governance of KijaniAgro consists of a team of Israeli and international advisors together with local experts. Ronen Almog was originally supported by the late Prof. Bruno John Ndunguru who assisted in assembling this team compiled with the intention of achieving long term and mutually supportive relationships capable of carrying out highly advanced projects, best suited for sustainable agriculture production in Tanzania and East Africa. All projects aim to achieve minimum environmental impacts and maximize profitability for farmers and investors.



KijaniAgro's smart approach to agriculture includes using proven agricultural techniques, drawing largely from the founder's agricultural experience in Israel as a third generation farmer. The model is simple; a strong agricultural business as the anchor, for example the dairy business will include modern milking parlor, careful and intentional breeding and herd management. Corners are not cut. Many development projects focus on creating a going concern that will be handed over to a local farmer or group after the three or five year project. This model often results in a mediocre business since the model does not provide the necessary value proposition to the outgrowers to effectively engage the local farmers in a complementary network. KijaniAgro wants to show what successful, sustainable business is – using the most appropriate technology for local conditions. Maybe the local farmers will not be installing milking parlors, but they will, as partners of the KijaniAgro dairy, have access to great breeding services, have access to information about fodder systems, animal care, and other information that will give the farmer better returns on their dairy activity. KijaniAgro develops an anchor farm which is then connected with local farmers who coordinate with the anchor, creating a transparent value chain. Together, scale and scope economies are reached, benefiting the partners of this production model.

Key Success Factors

KijaniAgro has achieved organizational success because of four key factors; its strong culture, its familiarity with the most advanced technology, a unique proposed value chain model, and the professionalism of its team.

The most important success factor is the organization's corporate culture which is embedded into every decision and action taken by firm employees. Perceiving agriculture as a means of fighting poverty and hunger, KijaniAgro aims to improve life in Tanzania and East Africa by providing training and professional tools to local community partners and growers, in addition to improving infrastructures, water accessibility, education and services by attracting foreign and local investors to well-designed projects.

The KijaniAgro “nothing is impossible” and “can do” culture, permeates the work environment within and among the employees of KijaniAgro. This culture emanates from successes the leaders have previously experienced. Drawing on work knowledge in Israel, the leaders observed that Israeli agriculture developed against all odds. Israel achieved remarkable results in agriculture including high yielding varieties of tomatoes, grapes, olives, and more. In the livestock sector, the Israelis have the highest producing dairy cattle in the world in spite of very poor soil and a scarcity of water.

A second KijaniAgro success factor is utilization of advanced technology. The team operates with the concept of smarter technology yielding better results and includes advanced drip-irrigation, greenhouses, and precision-farming experts that follow quality driven principles. By utilizing highly sophisticated technologies such as GPS based geographical information systems, the team is able to gather and analyze information and optimize results in the most remote areas.



A third key success factor is the unique KijaniAgro supply chain design. KijaniAgro has introduced a new standard in supply chain transparency. The new standard for supply chain transparency that KijaniAgro is applying in Tanzania is one that better connects the outgrowers to the anchor farm. The model requires information to be shared, available, and explained to all of the relevant parties. This is based on an Israeli model that has proven that more transparent systems result in higher accountability as all of the actors can see what is happening along the chain. Quality assurance is key to differentiating KijaniAgro investments from other agricultural projects that connect with outgrowers thru contracting mechanisms but also commits to financial reward such as a royalty. It is this financial partnership coupled with a very transparent supply chain that will incent the outgrowers to stay committed. Modern Tanzanian farmers face severe lack of resources and growing hunger on the one hand and harsh competition with ever-changing technology and climate conditions on the other. To keep up with the competition and the rising demand for food, KijaniAgro provides agricultural communities, governments, growers, and supporting organizations with well-reasoned, beginning-to-end options that include holistic agricultural solutions from project planning, business strategy, professional management, technology advising and training, new product development and introduction, marketing, sales, and logistics. KijaniAgro is transparent in its profit sharing policies. For example, 2% of company profits for horticulture projects are returned to the growers and 5% of profits on apiculture projects are distributed to the producers. The model has evolved into a successful framework that includes strong focus on extension and other features of Israeli agriculture applicable in Tanzania.

The fourth key success factor is the professionalism of their team. The team brings proven commercial expertise to Tanzania in terms of field crops and grains, fruit growing and processing, practical agriculture (tunnels, greenhouses, etc.), horticulture, honey, dairy, livestock, poultry, aquaculture, and drip irrigation and water infrastructure and solutions.

KijaniAgro has completed a range of agricultural consulting projects, turn-key projects, and are creating a network of KijaniAgro commercial farms in the country with the intent of utilizing them as model demonstration farms. After seven years evolving through multiple stages of development, operationalization of the model commenced in late 2013. Financials will not be available until the end of 2014. To date, execution is proceeding as planned. All KijaniAgro investments are new within the last six months and no sales have been made, nor profits realized.

Strategic Issues

The strategy of KijaniAgro is to bring proven technology with partners that will bring specific value addition to agribusiness in Tanzania. This approach aims to first focus on establishing a strong, profitable agribusiness as the anchor, and then cascading the technology to growers in the surrounding areas with the focus on building supply chain partners. The model was established with the spirit of the kibbutz tradition in Israel with a unique application for Tanzania that includes a partnership model that has well-defined criteria for participation coupled with shared reward. This modified collective organizational model is designed to provide efficient value from seed to consumer. According to Mr. Almog,

“The KijaniAgro team is mostly field people who stick to what they know best; agricultural technology that can make a difference in terms of product, profit, and planet.”

Partnership is also a critical part of KijaniAgro's strategy. Supply and input partners provide technology transfer to growers and include companies such as Afimilk, HAPACH, AGI-AG Growth International, Agrigro, TESSA, and others. Investors such as Surya Capital provide a critical bridge between investors and KijaniAgro.

Looking Ahead

The business environment in Tanzania remains challenging as outlined in World Bank annual reports and other international publications. Even though cumbersome bureaucracy processes around land tenure and other important elements of business are improving, there are still many complex challenges. The Government of Tanzania has created a number of initiatives in recent years such as Kilimo Kwanza, Big Results Now, the Southern Agricultural Growth Corridor for Tanzania, and other initiatives designed to incent private sector investment in agriculture. These programs have ignited interest in agribusiness investment in Tanzania, although, as of yet, not yielded the expected level of investment. KijaniAgro, in constructing a viable platform to launch major progress, has been learning the complexities of operating in the institutional environments in Tanzania and is well-positioned to grow.

Another challenge; farming professionals are scarce in Tanzania, as are successful commercial farms that serve as resources for others. The KijaniAgro model is designed to showcase successful agriculture in Tanzania including innovative and profitable partnerships with the community. The leadership is well aware of the challenges facing sustainable success; the ability to develop an integrated value chain, the difficulties of minimizing collective decision making costs, the hurdles of developing unique risk management tools, and the willingness to maintain transparency even in complex financial times.

Learning Themes

This case offers the instructor/facilitator various platforms upon which to emphasize certain lessons depending on the objective of the exercise. If the facilitator wants to take an institutional view of agribusiness emergence in a developing environment, he/she could compare Douglas North's (1990) argument that institutions are formal and inform a system of interrelated rules, beliefs, norms, and organizations each of which are man-made, nonphysical social factors with their enforcement mechanisms, with Greif's (1998) more behavioral approach which places motivation to follow rules as the center of analysis; that is discussion of why some rules are followed and others are not. This case lends itself to enlightened discussion of embedding well-defined rules and consequences into a culture where incentives have been misaligned or solely private good seeking.

Complementing this more academic debate the facilitator might prefer a more pragmatic real-world sampling of motivation to adapt more formal and sophisticated means of food systems. Roger Thurow's (2012) description of his year in the farming communities of Western Kenya offers an insightful and emotional journey through a complete growing season of smallholder farm families. Lessons learned from what might motivate them to participate in a KijaniAgro relationship would lead to another interesting and fruitful discussion.

If the facilitator's intention is to engage his participants in a debate on the merits of the KijaniAgro model he/she might want to use the framework proposed by Foss and Klein (2012). They address the dilemmas of producer decision making under uncertainty with entrepreneurial options. The Foss and Klein approach connects the growing entrepreneurial literature with rich theories of organization, laying the groundwork for insights into development-oriented case studies and managerial decision making.



Adapting practices and technology from Israel to local conditions in Dodoma. Ladies place a cylinder to protect each young table grape vine until the roots are stronger, while the sophisticated netting in the background offers protection from birds, as part of establishing a 2 million seedling nursery.

And finally, if an instructor prefers to emphasize discussions of performance and ownership rights of different collective organization forms and the participating supply chains, reading Cook and Chaddad's (2004) piece generates a set of frameworks that assist in examining alternative organizational decisions.

References

- Cook, M.L and F. Chaddad. 2004. *Redesigning Cooperative Boundaries: The Emergence of New Models*, American Journal of Agricultural Economics. 86(5): 1249-53.
- Foss, N.J. and P.G. Klein. 2012. *Organizing Entrepreneurial Judgment*. Cambridge U.K. Cambridge University Press.
- Greif, A. 1998. *Historical and Comparative Institutional Analysis*, American Economic Review, 88(2): 80-84.
- North, D.C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge, U.K. Cambridge University Press.
- Thurow, R. 2012. *The Last Hunger Season*. New York. Public Affairs BBS.

Chapter 5

Adding Value Locally



CHAPTER 5

Chapter 5

Adding Value Locally





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Woolworths Farming for the Future

Lucy King[Ⓐ] and Suzan Thobela^ᵇ

[Ⓐ]Good Business Journey Specialist, Woolworths House, 93 Longmarket Street, Cape Town, South Africa, 8001

^ᵇWoolworths and WWF-SA Sustainability Partnership Coordinator, Woolworths House, 93 Longmarket Street, Cape Town, South Africa, 8001

Abstract

As part of Woolworths *Good Business Journey*, *Farming for the Future* was adopted as a holistic and scientific farming approach to produce quality food, improve soil quality, save water, and reduce dependence on synthetic fertilizers, herbicides and pesticides, whilst protecting natural resources and encouraging biodiversity to flourish, all without adding cost to the end product.

Today, 98% of Woolworths local primary produce suppliers have adopted these methods and assessments have shown remarkable results. The program is helping build a resilient supply chain within a water scarce country and helping farmers to adapt to climate change and extreme weather patterns. Key success factors include strong partnerships with suppliers and WWF-SA, annual farm assessments, and affordability of produce. There is opportunity to extend the program further within Woolworths own foods business as well as with the rest of the country and Africa.

Keywords: Farming for the Future, sustainable farming, environment, biodiversity

Corresponding author: Tel: + 27 21 407 3808
Email: L. King: LucyKing@woolworths.co.za



Introduction

Founded in 1931, Woolworths is one of South Africa's leading retailers of quality food, clothing and general merchandise, with some 448 stores in South Africa, other African countries and the Middle East. As Woolworths has grown, evolved and adapted to the changing world, it has always remained true to its core values of quality, style, service, integrity, value, innovation and sustainability—and has continually endeavored to make a difference in the lives of its customers.

In 2007 Woolworths formalized the company's commitment to sustainability with the launch of the Good Business Journey, a comprehensive plan to make a difference in the key areas: sustainable farming and fishing, energy, water, waste, transformation and social development.

Woolworths overarching sustainability strategy and objectives are set by the Sustainability Committee, a formal sub-committee of the Woolworths Holdings Board, which is chaired by a non-executive director and meets quarterly to oversee the progress in achieving all aspects of the Good Business Journey program. Sustainability is therefore one of the strategic focus areas for the business and is integrated into the strategic planning cycle. Each business unit is measured against Good Business Journey objectives twice per annum.

Recognized three times as "International Responsible Retailer of the Year" at the World Retail Awards, and named one of the 16 sustainability champions in the developing world by the World Economic Forum, Woolworths has proven to be integrating sustainability into the way they do business, whilst addressing key social and environmental issues facing the country and the world at large.



The Development of Farming for the Future

As part of Woolworths Good Business Journey, Farming for the Future was adopted in 2009 to address the many agricultural challenges that face South Africa—water quality and scarcity, years of ecosystem degradation, poor quality soils in many areas, food security, climate change, and rising input costs. Accepting that the farming methods used at the time were not sustainable, Woolworths realized they needed to adopt a different approach—one that produces quality food whilst protecting the environment, preserving natural resources, and providing a livelihood for the agricultural community, all without adding cost to the end product. As it is not

feasible to source and sell only organic produce, this would require a new approach to farming, one that uses best practices of all available scientific farming techniques for a specific soil, climate and crop combination.

In essence, Farming for the Future is a holistic farming approach that starts with building and maintaining the soil, because healthy soil is better able to retain water, reducing irrigation and water usage, and soil erosion and loss of top soil are reduced. Healthy soil also requires, fewer chemical interventions, so there is less chemical run-off into water systems, which helps maintain water quality. Using fewer chemicals and pesticides also contributes to maintaining and encouraging biodiversity on farms.

Farming for the Future was developed with the guidance of a technical advisory committee, comprising Woolworths technologists, buyers, top produce suppliers, and Enviroscientific, the scientific experts who assess suppliers' progress against the Farming for the Future standards. The committee helped determine the key areas of priority for farming and packaging/processing:

- **Soil management** (soil chemical composition, soil nutrient status, fertilization practices, soil carbon content, soil cover)
- **Irrigation water management** (calculation of irrigation requirement, measurement of soil moisture, water use efficiency, water chemical composition, water health)
- **Environmental legal requirements** (environmental management, water management, agricultural management, heritage management, property zoning)
- **Biodiversity management** (conservation of endangered species, alien invasive plant management, fire management, game and problem animal management and erosion management)
- **Waste and wastewater management** (general farm waste, agri-industry waste, hazardous waste, process waste water, sewerage waste)
- **Cooling and energy** (measurement of energy use, program to ensure continual improvement, refrigerant used)
- **Pest and plant management** (legal agro- chemical usage, integrated pest and disease management, integrated weed management)
- **Substrate and run-off management** (substrate type, calculation of fertilization requirements, practical implementation of fertilizer program, run-off water management, structure)

Farming for the Future was first adopted by the top 14 suppliers and then extended to other primary produce suppliers over time. Each supplier begins with a baseline audit and in line with Woolworths strategy of continuous improvement, the supplier pass mark for the assessment increases every year. On the first audit, the supplier needs to achieve 50%, second audit 55% and third audit 60%. Effectively, this means that even if a supplier scores the same as he did last year, or even slightly more in a specific aspect, he may still be below the pass mark for the current year.

Unlike the usual tick-box auditing approach, the annual assessment led by Enviroscientific includes on-farm training and the opportunity for suppliers to identify issues and develop solutions. This not only enables continued learning and improvement for suppliers, but also allows for the Farming for the Future model to

adapt and develop to challenges over time. Suppliers are further supported with two formal training sessions each year and access to information on new farming methods.

Farming for the Future has become one of the key Good Business Journey objectives against which the Foods Group performance is measured. Whilst the Farming for the Future Manager directs and oversees the program as a whole, the responsibility for ensuring its adoption and success is shared by management, food technologists, buyers and suppliers. The technology and buying teams communicate directly with their suppliers and are continually working with them to ensure continuous improvement on the farms.

Key Success Factors

Today, 98% of Woolworths local primary produce suppliers (excluding those who exclusively grow organic produce) have adopted Farming for the Future methods and are independently assessed on a regular basis. In 2011, Farming for the Future was extended to horticulture and wine. The program is currently being rolled out to Woolworths Ayrshire dairy suppliers.

The first three years' audits from Woolworths 15 largest fruit and vegetable growers, supplying some 37% of Woolworths fresh produce and using a total area of about 45 000 hectares, showed remarkable results. There was an average 20% reduction in the use of synthetic fertilizers; an average increase of 34% in compost use per kg produce produced; a 3% increase in soil carbon; and water was reduced by 720.9 million m³. Although the country had optimal rains, some of this reduction – which represents a 16% drop in water usage – was a result of optimizing irrigation, cultivating practices, introducing compost and upgrading old systems. Sustainable pest management techniques, such as integrated pest management, has resulted in a substantial initial decrease – in the region of 50% – in the usage of pesticides and herbicides, as well as an increase in biodiversity. There was also an 18% reduction in fossil fuel use; a 32% increase in recycling and a 13% decrease in solid waste material going to landfills. This steered to healthier soil and resulted to less chemical run-off into the freshwater systems.



Farming for the Future was awarded the sustainability business award at the Nedbank Capital Sustainable Business Awards in 2013, and customer research has shown that 54% of Woolworths customers understand Farming for the Future.

The success of Farming for the Future can be attributed to a number of factors. Firstly, the annual assessment is very important to its success, teaching farmers to monitor and measure, and identify where improvement is needed. For example, the audit process can help farmers identify simple water treatment principles such as using environmentally friendly cleaning agents and treating wastewater, which can in turn, lead them to becoming legally compliant and scoring higher in their assessment.

The success is also grounded in the strong partnership based relationship that the retailer has built with their food suppliers over the years, and as farmers have adopted the principles and seen the environmental, social and economic benefits, so they have further driven and supported Farming for the Future.

Woolworths partnership with leading conservation organization, the World Wide Fund for Nature South Africa (WWF-SA) has played an important role. WWF-SA has provided scientific expertise since the development of the program as well as guidance on adapting and up-scaling the program to other food categories.

Key to Farming for the Future's success is that the customer does not pay a premium. The costs of the assessments are absorbed by Woolworths who believe in the value that Farming for the Future provides - ensuring better quality produce, healthier soil and ecosystems upon which Woolworths are dependent to grow and sell food into the future, and differentiating Woolworths as a brand. Whilst there are initial costs for suppliers, their costs have decreased over time, proving that it is economically viable, and a good business opportunity for both suppliers and Woolworths.

Strategic Issues

Farming for the Future addresses a number of strategic issues for a retailer operating in South Africa. Firstly, the program responds to the environmental consequences of irresponsible farming practices used over the past decade. Whilst these methods strip minerals and nutrients from the soil, resulting in more and more fertilizers needed over time, higher input costs for farmers, and lower yields; Farming for the Future has provided a way to produce more, while being less dependent on inputs and preserving quality. In some cases, cutting down on inputs has also led to job creation. For example, after cutting down on herbicides, suppliers have needed to employ workers to help them remove weeds.

Farming for the Future helps build resilient businesses within a water scarce country. By scientifically measuring the water required for the plant and irrigating only if and when required, farmers are seeing a significant water saving. One of Woolworths carrot supplier's assessments show substantial water savings at the same time as increasing tons of carrots delivered to Woolworths. The conservative use of chemicals also reduces possible fresh water contamination.

Farming for the Future helps farmers and communities adapt to climate change and become more resilient to extreme weather patterns. Working closely with soil scientists, the program also helps increase soil carbon absorption abilities.

Through improving soil and ecosystem health, the program is helping to address the issue of food insecurity in the context of a growing population. Farming for the Future helps farmers ensure that they can grow enough food in the future.

Lastly, Farming for the Future enables Woolworths to offer their customers quality produce that has been grown sustainably, at an affordable price. This is strategically important in that it differentiates Woolworths as a brand at a time when consumers are looking for responsibly and ethically sourced products and greater transparency from retailers.



Looking Ahead

Due to the success of Farming for the Future to date, Woolworths is working closely with WWF-SA and Enviroscientific to better understand how to adapt the existing standards to Ayrshire dairy and cattle farms. Woolworths is also in the process of adapting the Farming for the Future standards and assessment process to reduce costs, and thereby be more accommodating and inclusive of secondary produce farmers. This will help further the inclusion and development of emerging small scale farmers through the program.

In conclusion, Farming for the Future is helping to transform the agricultural sector in South Africa by supporting suppliers to grow quality produce using fewer resources, whilst adapting and becoming more resilient to issues like soil depletion, water scarcity, climate change and rising input costs. With increased soil health and biodiversity flourishing on farms again, so Farming for the Future is helping to restore once broken ecosystems, and ensuring food security for generations to come. Farming for the Future is also providing a best case example of retail's role in driving change in the supply chain and providing customers with more responsible and sustainable choices.

Whilst Woolworths has plans in place to further extend Farming for the Future within their own foods business, the most significant opportunity and challenge will be to share this best practice case study with the rest of the country as well as other African countries who face the same agricultural challenges. A first step would be to extend the program to Woolworths Kenyan suppliers.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Inclusive Agribusiness Models for Africa: The Case of an Innovative Initiative by TechnoServe in Zimbabwe

Maxwell Mutema[Ⓐ] and Pamela Chiromo^ᵇ

[Ⓐ]Founding Director, Agro Initiative Zimbabwe, TechnoServe, 9 Rowland St., Harare, Zimbabwe

^ᵇDirector, Agro Initiative Zimbabwe, TechnoServe, 9 Rowland St., Harare, Zimbabwe

Abstract

Despite the fact that agriculture has immense potential to contribute towards the developmental agenda in rural Africa it is often neglected by governments as evidenced by unclear land and agricultural policies and under-investment. The Maputo Declaration in 2003 sanctioned that agriculture must become the economic engine driving development, and governments should consistently invest at least 10% of their total budget to this sector. However, not many African countries have achieved this target or have even gotten near it, as most countries have only obtained 5% of the target.

Based on TechnoServe Zimbabwe's work with *Better Agriculture Private Limited*, a private Zimbabwe agribusiness company, this case study provides a clear testimony of how the private sector, can play a pivotal role in changing the lives of those who in desperate need.

Keywords: private sector, value chain, Inclusive agribusiness, innovation, fighting poverty

[Ⓐ]Corresponding author: Tel: +263 712754598 or +44 7572052916
Email: M. Mutema: mmutema@tns.org
P. Chiromo: pchiromo@tns.org



Company Background

Better Agriculture Private Limited (BA), is one of the inaugural beneficiaries of an innovative initiative in Zimbabwe by TechnoServe dubbed Agro Initiative Zimbabwe (AIZ).

Established in 2009, Better Agriculture is a leading agricultural consultancy and technical services business with extensive knowledge of agricultural business in Southern and East Africa. It aims to address poverty-related challenges and environmental issues while simultaneously delivering commercial returns. Specifically, it provides access to stable markets. Access to free and transparent markets is vital to many farmers in the developing world and yet these markets are not easy to come by.

BA specializes in horticultural production and marketing in Zimbabwe and the region is backed by an experienced team with a diverse range of agricultural and agribusiness skills. It has an integrated marketing partner called The Better Trading Company, a dynamic company that connects businesses to leading retailers and markets with exceptional horticultural and agricultural entrepreneurs and producers in Southern and Eastern Africa. They have a unique partnership with Stockford Africa a marketing company based in the UK, which sources solid credible markets before committing to projects. This market advantage means that they can guarantee a farmer's revenue at a pre-agreed price, and that they have a viable enterprise. Important market linkages have been established with Nandos; the Chili Pepper Company; UK Multiples and Mara Fresh in Europe.

Better Agriculture is a 'for profit' company which sustains its business by building effective value chains, with marginal, transparent profits. Its long-term goal is to only engage in rural agricultural production where there is long-term, sustainable, and commercial potential. BA seeks to deliver the same opportunities for competitive access to markets, expertise and eventually, finance, to small holder farmers as it offers its larger commercial farmers. The ultimate goal is to also add value to the crops wherever possible and improve quality management and traceability.

In 2014, it registered 880 small scale chili growers in seven locations to mitigate supply risk. It exports 800 tons of fresh chili equivalent per annum which includes both chili mash and dry chili. BA is currently investigating the markets for growing other crops, such as cayenne, paprika and ginger.

Founding member and current Managing Director, Michael Bailey, has been a leading figure in agriculture for over 30 years pioneering the development of the horticultural industry in Zimbabwe, Kenya, Tanzania, Ethiopia and South Africa through leading a number of start-up projects. As such he has vast experience.

As Managing Director of Claremont Orchards (Pvt) Ltd. from 1981- 2000, Mike developed this project into one of the leading mixed agricultural estates in Zimbabwe. Activities included deciduous fruit production; nurseries; production of seed and ware potatoes; 30 hectares of export flowers; a trout farm; mobile saw milling of plantation pine; ostrich and livestock production; a business center and butchery.

One notable challenge, currently facing BA, is access to adequate financing. Additional funds would go a long way in achieving the much needed economies of scale for significant operational growth. The business is at a critical stage in scale up, where working capital is needed for inputs to engage additional small holder farmers. Aligned with an increase in farmer numbers are the costs of an extension service provision and logistics. Furthermore, BA requires internationally acceptable receiving depots and packing sheds constructed, combined

PRODUCT	ACTUAL 2010/11	ACTUAL 2011/12	ACTUAL 2012/13	BUDGET 2013/14
CHILLIES – Kgs Wet	46,470	156,700	426,000	800,000
PEAS- Kgs exported	281,830	350,130	430,000	600,000

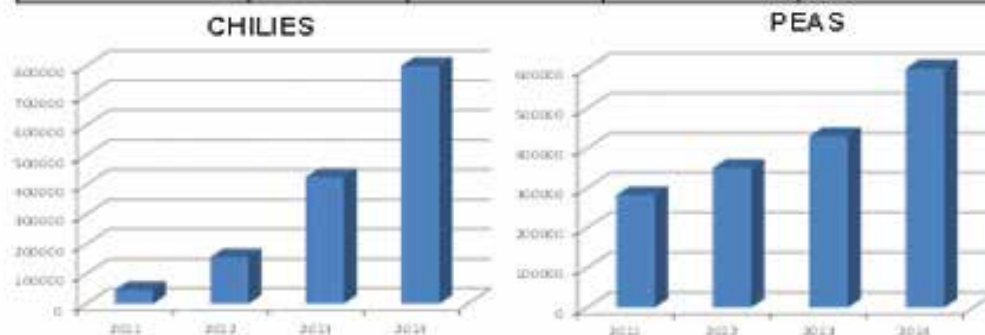


Figure 1. Project Production

with the procurement of suitable handling equipment. BA is presently exploring various options, but many scenarios require collateral on debt financing and even if one were in a position to provide the security, current interest rates at 20% are prohibitive for a sustainable business model.

The Role of Private Businesses in the Fight Against Poverty and Under- development in Rural Areas in Africa

Recently, there has been a heated debate concerning whether private businesses can be a part of the solution in addressing Africa's myriad of development challenges in the advent of what has been sensationally called "land grabs" or the "Second Scramble for Africa". In the same vein, questions are being asked: What are the best business and investment models that will produce win-win outcomes between the investors and the communities where the investments occur?

Why not private sector or private businesses? They have the capacity, resources and expertise to make a significant difference. Private sector businesses have the potential to be the future engine of progress and social change in rural Africa. They have the capability to tackle the enormous challenges that Africa currently faces.

It is predicted (or speculated) that within the next 20 years the private sector is going to be the key driver of economic development as international help organizations move away from mainstream development interventions to focus more on humanitarian work.

Fortunately, the rest of the world is now recognizing what TechnoServe founder, Ed Bullard, envisioned in 1968. Ed realized that only private sector businesses in the hands of creative, innovative, inspired, and motivated women and men, can sustain economic development and the wealth creation needed to alleviate poverty; hence TechnoServe's superbly crafted tagline: "*Business Solutions to Poverty*." He was a visionary with a passion to see the private sector playing a leading role in fighting one of humanity's greatest challenges—poverty. In this spirit, TechnoServe in Zimbabwe came up with an equally refreshing idea called *Agro Initiative*

Zimbabwe (AIZ). AIZ, is basically a pipeline to support private businesses whose ideas demonstrate strong, positive, financial, economic, social and environmental impacts for both the business and the community in which they operate.



Ed Bullard (1985) visits farmers who are working with TechnoServe in Drumvale, Kenya
Source. TechnoServe Website, 2013.

The Zimbabwe Economic Scenario

Agriculture is the mainstay of the Zimbabwean economy: though recently contributing only 20% of total GDP, it accounts for 66% of national employment¹, more in rural communities. Zimbabwe's past agro-industrial strength was based on large commercial farms and large modern processors, the latter supported by efficient finance, transport and distribution systems and a broad robust service economy. Economic collapse and land reform drastically altered this landscape.

Although recovery began in 2008, it proceeds slowly and key economic actors continue to struggle. This is particularly true in agro-processing, where generally large and outdated factories operate well below capacity. The status quo presents an opportunity for small and medium-scale production and processing units sourcing directly from, and selling to, local farmers, empowering smallholder farmers as main suppliers within agricultural value chains. Agro Initiative Zimbabwe (AIZ) - a business plan competition providing seed capital and technical assistance to small and medium sized businesses targeting small farmers – seeks to address many of these issues.

¹ Central Intelligence Agency, The World Fact book: Zimbabwe, 2013

About Agro Initiative Zimbabwe and its Involvement with BA

In early 2011, TechnoServe began implementing Agro Initiative Zimbabwe (AIZ). This competition provides promising agri-businesses with seed capital of up to \$50,000 to commercialize business ideas and then nurtures these businesses through a period of tailored, hands-on technical assistance. Through this assistance, businesses emerge strong enough to scale up ideas, refinance their businesses and the now proven models that can be replicated across the industry.






AIZ is designed to support new and existing small and medium agribusinesses in Zimbabwe that have exciting, ready-to-go ideas which remain hidden, or un-executed due to lack of capital or required business and technical knowledge. By mitigating the risk of testing new ideas, AIZ encourages companies to invest in innovative ideas that are inclusive of smallholder farmers as suppliers or consumers.

To date, AIZ has supported 12 businesses, transforming the lives of more than 7,700 smallholder farmers and rural families by increasing their household incomes and creating employment. Within three years, the 12 businesses are forecasted to realize incremental revenue of up to \$13.5 million, create new 242 jobs and provide 70,000 small-scale farmers with access to markets, information and technology.

AIZ supports Better Agriculture to implement a business model that integrates smallholder farmers in the Honde Valley and the Mutasa district of Manicaland, Zimbabwe into the international tabasco chili value-chain through the Chili Pepper Company. In so doing, the business demonstrates smallholder capacity to produce top quality horticulture, supplying up to 1000 tones per annum. The model provides input financing and extension training to smallholders, providing seedlings, fertilizers, chemicals and training as well as guaranteed off-take for all quality grades. The majority of households in the Mutasa area cultivate between 0.5 ha to 1.0 ha. Better Agriculture teaches farmers how to grow tabasco chili on 0.25 ha as an optimal land allocation, enabling families to better manage the manual requirements for growing and harvesting chilies on a small scale. Farmers are then able to use their remaining land for food crops and livestock, balancing household nutrition, food security and income. In the 2012/2013 season, Better Agriculture worked with 155 farmers yielding an average 452 kgs per 0.25 ha plot, which translates to each household earning an average of \$260 while the business revenue was \$60,900 from 70 tones produced by the smallholder farmers.

TechnoServe provided the seed capital to purchase agricultural inputs and motor bikes for Better Agriculture's extension workers. The company oversees the semi processing of the harvested chilies into paste that is sold in bulk and processed into hot sauce brands. TechnoServe's Business Advisors provided Better Agriculture with technical assistance, working with the business to refine the operating model and develop an expansion plan. Through the AIZ pilot, Better Agriculture successfully market-tested its chili out-grower model, enabling the business to replicate the model in four more sites, subsequently working with 621 small scale farmers.

Table 1. Better Agriculture's Value Chain

	Inputs	Production	Collecting & Processing	Distribution & Retailing
Better Agriculture	Provides input (fertilizer, seeds) and demo 	Provides ongoing training, site visits, consultations 	Weighs and provides receipts and collection points 	Processes raw chili pepper into paste 
Contract Farmers	Provides land and husbandry 	Grows chili pepper plants 	Harvests and packages chili peppers 	Transports to retailer; bottles and retails Tabasco hot sauce 

Testimony from a small scale farmer who benefitted through working with AIZ supported Better Agriculture

Gibson Bvute is a 55 year old small scale farmer in Honde Valley, retired from working on the tea estates. He is married with 5 children. Gibson mainly sustained his family through agriculture on his 0.5ha plot where he grows various crops such as green mealies, sugar cane, bananas and oranges. Gibson joined Better Agriculture's chilli out-grower scheme in 2010 and, despite the many crops that he grows, the Tabasco chili scheme has been his most consistent source of income.

Gibson is one of Better Agriculture best performing growers due to his commitment and investment in his plot after receiving any income. Part of his field is now gravity irrigated from proceeds he has saved. The 2011/2012 season saw Gibson harvesting 2,133 tonnes of tabasco chili from 0.3 ha. After paying off his input loan to Better Agriculture, Gibson was left with \$936.75. He has reinvested his profit in purchasing 7 x 100m rolls of polypipe so he can extend gravity irrigation. He has also indicated a willingness to increase his area planted to at least 0.4 ha in the coming season.

Gibson's wife mentioned how their family now takes their farming business seriously since they attended a training workshop on Farming As a Business facilitated by Better Agriculture. Things have changed greatly in the family and each year the Bvute household look forward to planting another plot of chilies.

Lessons and Concluding Remarks

This Better Agriculture case echoes the words of John Miller and Lucy Parker (2013), in their book titled *Everybody's Business: The Unlikely Story of How Big Businesses Can Fix the World*, that businesses: “can create the fabric of the local economy that people live and work in. Businesses can also have a symbiotic relationship with tens of thousands of smaller companies (or communities) for whom they provide a route to market and a source of opportunity.” This is what Better Agriculture has been able to do by providing a ready market and opportunity for people in the remote rural community of Mutasa District in Manicaland Province of Zimbabwe. Another quote from the same book by Dominic Barton, the Managing Director of McKinsey underscores the importance of companies to consider genuine win-win partnerships in the communities in which they operate, as not doing so demonstrates that the company has only one narrow responsibility: to increase its profit. This kind of narrowness, he laments, “is suicidal and self-defeating.” Further, “If you don’t, as a business leader, think about stakeholders, not just shareholders, think about the stakeholders-and that is not just employees and customers, but also the communities in which you are operating-if you don’t think of those stakeholders as core to what you do, you will not maximise your value. The two go well together: shareholder value and stakeholder value are synergistic, they are not trade-offs”, as demonstrated by Better Agriculture in this case study.

So as the debate on ideal business models for the transformation of the rural African economy rages on, the Better Agriculture “proto type” case study is worth reflecting on as a true option. This has the potential to be replicated in other countries and even beyond Africa. There is also a possibility for this to be adopted and adapted by other organizations as they also increasingly realize that supporting private sector businesses and entrepreneurs is the way to go.

Acknowledgement

The authors acknowledge and thank the owners of Better Agriculture for giving them permission to write on this case and allowing it’s publication in this Special Issue. Whilst the work is based on TechnoServe’s work in Zimbabwe, the views in this Case Study are entirely those of the authors and not TechnoServe.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Commercial Agricultural Production in Tanzania: Mountainside Farms Limited

John Y. Simpson[Ⓐ] and Qing Yang Cheong^ᵇ

^ᵃ *Vice President, Duxton Asset Management, Singapore*

^ᵇ *Analyst, Duxton Asset Management, Singapore*

Abstract

Mountainside Farms Limited (“MFL”) is one of the largest commercial cereal farming operations in Tanzania. Based on the slopes of Mount Kilimanjaro, MFL owns approximately 9,500 contiguous acres (3,845 ha) of which 6,350 acres is under cultivation between wheat and malting barley, with the remaining land used for sheep rearing, indigenous forest and infrastructure. MFL is a strategic supplier of malting barley to Tanzania Breweries Limited (“TBL”), part of the SABMiller plc group, supplying up to 30% of the brewer’s locally sourced Barley. Started in 2000 by Managing Director Luke Edwards, the key to the company’s success has been its scalable management platform – allowing significant production volume to be achieved in a region where average farm sizes are typically 1-3ha. This management platform is a combination of both commercial production systems (classically seen in developed agricultural markets such as Australia and the US) – allowing external institutional capital to be invested, and of local Tanzanian agricultural practices (a significant employment and training program is undertaken by the company), allowing MFL to operate successfully with local communities and stakeholders. The company is now looking at further investment opportunities to capitalize on the management platform they have built; options considered by the company’s board of directors include diversification on MFL’s land on Kilimanjaro by planting avocados to feed into a local pack-house that exports to supermarkets in Europe and starting an out-grower barley program in other areas of Tanzania also suited to Barley production.

Keywords: Tanzania, Africa, agribusiness, barley

[Ⓐ]Corresponding author: Tel: + 6594513068
Email: J. Simpson: john.simpson@duxtanam.com



Company Background

Located on the Western slopes of Kilimanjaro between the towns of Arusha and Moshi in Northern Tanzania, MFL's land holdings were originally part of eight farms established in the 1950's by ex-Royal Air Force pilots. Those farms were then nationalized during Tanzania's socialist period before being privatized in 1994. MFL was formed in 2000 as a joint venture farming company with its offtake partner Tanzania Breweries Limited ("TBL"), a subsidiary of brewing giant SABMiller, and the company's farmer-operator Luke Edwards, a long-term Tanzanian resident farmer.

The company's 9,500 acres (3,845 ha) on the slopes of Mount Kilimanjaro are held through a 99 year lease with approximately 50 years remaining on the current leases. Planted out over the past decade, the farm is now fully developed and operational, benefitting from excellent soils and rare climatic conditions for the region (altitude of 2,000m above sea level) as well as good infrastructure & machinery from significant shareholder investment over the years. Production is split between the two rain seasons; starting in November (short rains) and April (long rains) respectively, with the area planted split one-quarter and three-quarters between short rains and long rains. Today the company cultivates 5,210 acres of barley and 1,030 acres of wheat annually, as well as maintaining a flock of 976 ewes. MFL employs six full-time managers, as well as over 150 additional employees as farm hands, technicians and machine operators.

As the largest of only four commercial barley producers in Tanzania, MFL's malting barley is an input source for one of Tanzania's most important industries – TBL is amongst the largest public companies and employers in the country. Currently, Tanzania, and Africa as a whole, remain a net importer of malting barley. Whilst demand for beer is experiencing double digit growth as consumers switch from the informal beverage sector, the malting plants are unable to secure sufficient malt quality barley for their production and rely on imports. This provides a consistent growth-market for MFL's produce with domestic production unable to cope with demand. For this reason, MFL has historically achieved a significant premium on world market prices as logistics and supply chain management tend to be costly in Africa when importing grain – giving MFL a significant price advantage producing barley in close proximity to the TBL maltings.

Regionally, in what are highly fragmented agricultural production industries made up of small-scale producers, MFL is able to produce at scale due to the contiguous nature of its land, and the significant capital invested to develop management capacity and employ modern farming techniques. Having had institutional investors since the company's formation and, raising money from an external private equity group in 2008, MFL has developed robust internal controls and reporting procedures. The Company is SRI compliant and has undertaken several initiatives to generate positive externalities in its sphere beyond its vital role in boosting local skills and generating employment. MFL has provided funding and support to an EU supported water supply project to bring water from high up in the mountain through a gravity supply pipeline to several nearby villages and has also been working closely with the World Bank on recent research into responsible agricultural investment practices.

Private Equity Fundraising and Key Achievements

In 2008, the company raised capital from a specialist agribusiness-focused private equity fund in order to finance further expansion on the company's land holdings and access international knowledge and expertise in order to further enhance productivity. The global fund acquired a majority shareholding in MFL, having invested in MFL through the acquisition of both primary and secondary shares of the Company.

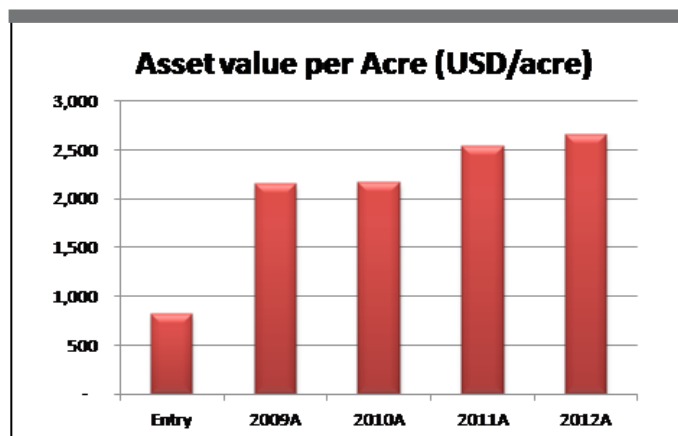
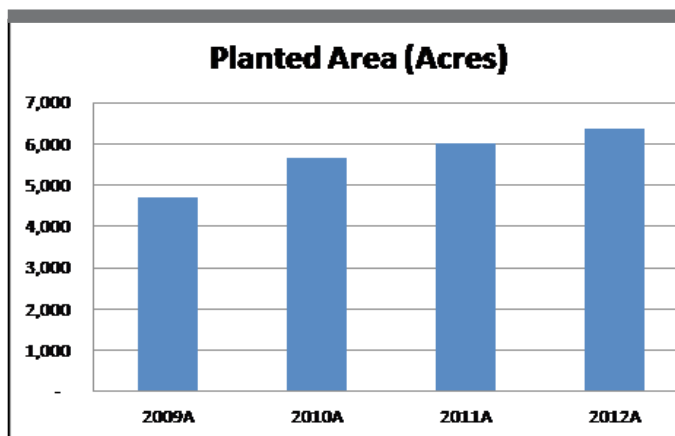
MFL's Key Achievements Over the Last Three Years

Since the private equity investment, management focused on maximizing both the asset value and income generating potential of MFL by investing in plant and machinery as well as land transformation of unused land to arable land and the removal of contours to further pursue operational efficiency. Capital expenditures have included machinery (\$700,000 USD), vehicles (\$ 100,000 USD), buildings and improvements (\$ 200,000 USD), and other expenditures of (\$ 2,000,000 USD) building management capacity and implementing systems. In addition management chose to convert operations to zero-till farming to bring the following benefits to the company:

- Conserve moisture. Low rainfall is the most significant constraint to increasing production and yields.
- Conserve soil. Volcanic soils on steep slopes are vulnerable to erosion.
- Decrease yield variability and improve reliability of production.
- Decrease up-front cost risk exposure – no heavy cultivations. ie. expenses, before start of the season
- Reduce carbon foot-print. Less diesel is used with zero-till and by not inverting the soil (cultivating) less soil carbon is released into the atmosphere. As the soils reach their “equilibrium” state less fertilizer will also be required.

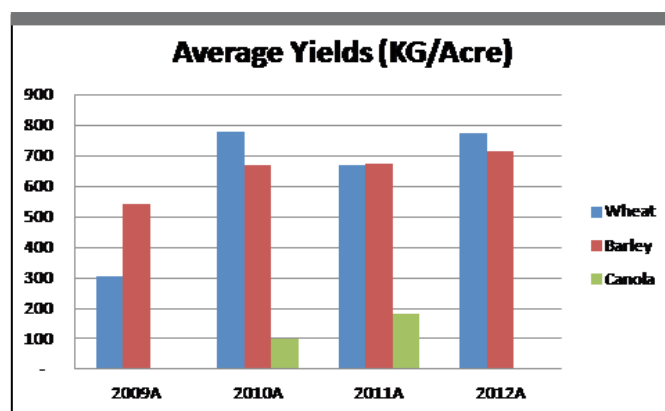
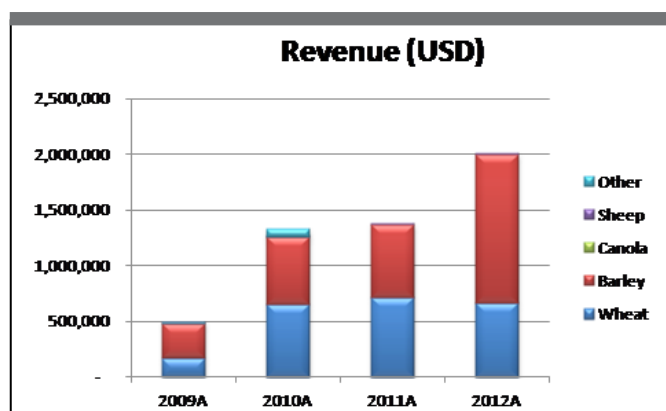
Measurement of some of the key improvements made to date are shown in the diagrams below:

Asset development. Converting bush land to arable land – planted area has been increased by over 30% since investments began in 2009, resulting in both revenue growth and significant capital gains. Management continues to enhance the existing asset with a planned arable land conversion program and improvement of existing farm infrastructure and facilities.



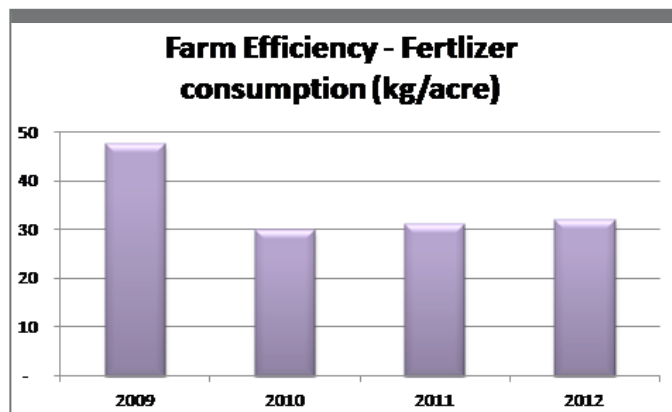
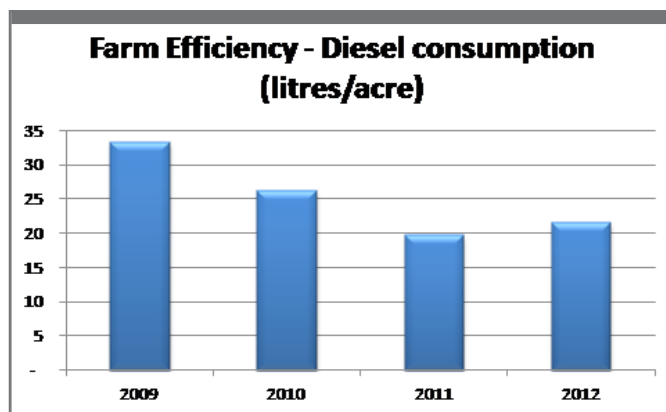
Note. Conversion to zero-till farming usually follows a J-curve pattern over a 5-10 year period whereby yields fall initially before improving.

Revenue Growth. Revenue increased almost 300% during 2009-2012 (Note: 2009 was an exceptional year as Tanzania experienced the worst drought in 40 years). This is mainly attributable to increased land under cultivation and yield improvement - conversion to zero till farming to increase soil moisture retention and reduce erosion.



Note. Conversion to zero-till farming usually follows a J-curve pattern over a 5-10 year period whereby yields fall initially before improving.

Increased Operational Efficiencies. Shown in the table below, fuel and fertilizer usage per acre has been reduced significantly between 2009 and 2010 after conversion to no-till farming, which allowed the reconfiguration of fields into larger blocks generating increased operational efficiencies.

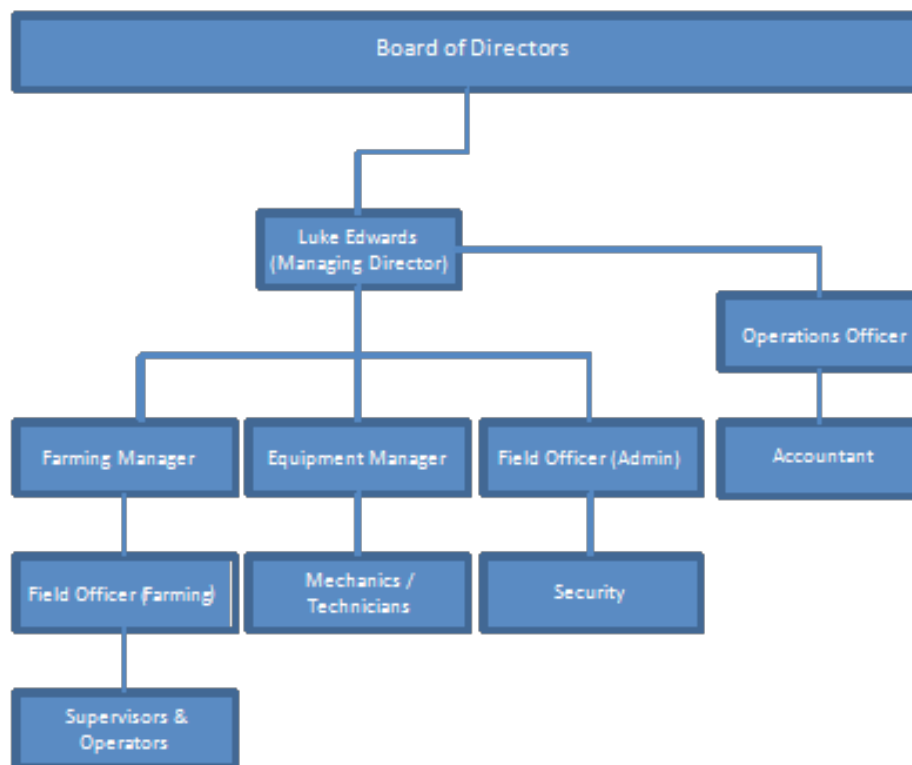


Current Management Structure

MFL's management has a proven track record in achieving targets with regards to budget management, adherence to planting schedules, improvement in operational and reporting controls, conversion to zero till farming and land conversion. Such management characteristics are rare in the agricultural production industry in Africa which has been capital-starved and where very little has been invested in training and the development of corporate structures.

Luke Edwards, the current Managing Director of MFL, has developed MFL since its inception over the past 14 years. He has deep experience managing and developing multiple farms in Tanzania since the early 90's and is a recognized leader in wheat/barley production in Tanzania. He currently owns an equity stake in MFL and lives with his family on the farm. In addition, he is supported by six managerial staff (three senior and three junior managers) with a clear segregation of responsibilities in covering administrative functions, farming operations and management of equipment and farm infrastructure.

The chart below shows the management structure of MFL:



Challenges

With almost no acreage under production, no-till farming is an unknown and rarely adopted concept in Tanzania as compared to countries such as Brazil where over 70% of production is no-till. Due to no-till farming methods requiring large-scale transformation of pre-existing operations, the change required a significant buy-in from the company's mostly Tanzanian and South African staff – for whom the practice was unknown and, in some cases, treated with skepticism. This was overcome with intensive training workshops demonstrating no-till systems in other Barley growing regions where climatic conditions were similar to those of MFL. The company's new agribusiness-focused shareholder was able to deploy its own agribusiness experts from Australia to help the company with the implementation, training and monitoring of the move to no-till.

Significant jurisdictional issues also present risks for MFL's development. As commercial agri-production operations are uncommon in Tanzania, there is both a lack of depth in the agricultural supply chain and challenges emanating from poor and, at times, misguided government policy. The weak supply chain results in a multitude of operational difficulties from obtaining bulk volumes of fertilizers and pesticides to finding spare parts for large machinery. Weak government policy presents challenges obtaining approval for new improved seed varieties and the registration of modern fertilizers and pesticides for import. In spite of agricultural production arguably being Tanzania's most important industry in terms of employment and growth potential, there is little government support for infrastructure improvement nor investment into research and development. Pioneering companies such as MFL need to lobby for improved policy and support from the government without a strong industry group. This situation has been improving as more investors look to enter the market and as the government realize the difference that such businesses are able to make to local communities and small-scale farmers who benefit from improved agronomic knowledge, access to better farming inputs as well as lucrative value-add markets.

Strategic Issues

The company's operations in Kilimanjaro are now fully developed and are looking to enter a new phase of growth through various expansion plans. Options discussed by the board include diversification of their home base on Kilimanjaro by planting avocados to feed into a local pack-house that exports to supermarkets in Europe, or moving further afield starting new out-grower barley programs in partnership with TBL in other parts of the region suited to Barley.

TBL being the major buyer of malting barley in Tanzania is currently faced with a shortfall of between 28,000 to 48,000 tons of malting barley per year. The deficit is currently imported but with increasing world market prices, the brewery targets to supply all its needs locally and even supply their breweries in the greater Eastern Africa region from Tanzania. In order to scale up cereals production to meet TBL's demand in Tanzania, management believe that the best way forward would be through a hub and spoke model involving smallholders to drive this production, as smallholders make up such a significant portion of agricultural production in Tanzania and can also allow scale to be achieved quickly.

The hub and spoke model for production will be based on setting up a nucleus farm surrounded by smallholders, with the nucleus farm acting as a central service and technical provider in order to drive production. An example of this would be harvesting services which could be provided to the smallholders to improve their farming efficiency, thereby allowing for increased acreages and higher yields. This would involve setting up hubs or "catalyst" farms in the right areas, with an average farm size of c. 800 ha. In the initial period, the hub and spoke catalyst farm and smallholder program would have to be funded until sufficient scale is obtained. Once the hub and spoke operations have stabilized, additional revenue capture can be made through the provision of logistics services such as acting as the central barley delivery point in the area and providing grain handling and storage facilities for TBL.

Besides scaling up of its cereals production, the board together with management are also evaluating various options to transform MFL's Kilimanjaro base into a diversified agribusiness with exposure to the animal protein market and high value crops. Specifically, the Company is evaluating the merits of entering the protein business to take advantage of the booming demand for meat driven by East Africa's emerging middle class and its booming tourist industry, as well as further irrigation potential for the planting of higher value crops such as avocados and hybrid seed maize. In addition to high value markets for the produce, there are also synergies to be captured with MFL's current cereals production as feed materials can be sourced for the protein business and rotations with higher value crops can potentially improve the farm's overall productivity.

Looking Ahead

With its strategic advantage lying in its stable management platform that has already been established, the key to MFL's future is dependent on its ability to capitalize on the various expansion opportunities that exist in the East African agriculture industry, and execute on them. This is especially true in a rapidly developing country such as Tanzania, where there exists a rising middle class with fast increasing consumption, but underdeveloped production and supply chains to meet the rising demand for agricultural products



International Food and Agribusiness Management Review
Volume 17 Special Issue B

Irvine's: Developing Business and Communities in Zimbabwe

Patrick Murphy^a and Sarah Gentry Aubry^{®b}

^a*Accounts Director, Irvine's, Inc., Zimbabwe, Africa*

^b*Communications Assistant, Alltech, 3031 Catnip Hill Rd. Nicholasville, Kentucky, USA*

Abstract

If Africa is changing, it is companies such as Irvine's that have spearheaded that change. Economic growth has led to increased income and the opportunity to feed people like never before. This case study illustrates the success story of a poultry business based in Zimbabwe. It is a business forged out of shortage and need, which reacted wisely and flexibly to adapt to various challenges throughout its 60+ year history to become the industry leader in its sector in Africa. Irvine's has long maintained its goal of improving animal husbandry practices and providing the genetics to the people they serve with the capability to produce healthy and affordable animal protein. Their determination to achieve their goals, combined with a strategic partnership with Cobb breeding company, has placed them in a unique position, with opportunities to educate and support small-scale African farmers. The story of Irvine's is one that could be repeated in agriculture across Africa, as the world wakes up to the fact that Africa is no longer a hub of famine and desperation that it once was and can focus instead on Africa's enormous potential and this continent's new status as a land of opportunity.

Keywords: Irvine's, Zimbabwe, Sub Saharan Africa, Cobb, poultry

[®]Corresponding author Tel: + 1. 859.887.8980
Email: saubry@alltech.com



Introduction

Irvine's began in the 1950s in response to a shortage of eggs in what was then Rhodesia. Today, the supplier services the entire Sub Saharan Africa region with a wide range of poultry products, from vaccines and anticoccidials to incubators and finished feeds. This company's main distinguishing characteristic is that they specialize in supplying goods to very small producers. Many of the farms they work with started out with 100 chicks and today have small abattoirs that process their own birds, plus birds from other small operations in their area. This characteristic not only provides the foundation of Irvine's profitability, but also gives poor communities the opportunity to start a commercially viable business and lift themselves out of poverty.

The company is the oldest Cobb distributor in the world, having recently celebrated 50 years with Cobb. Today, Irvine's employs over 2,000 people and is the largest integrated poultry company in Zimbabwe. There are three locations—one in South Africa, another in Mozambique, and the other in Botswana. Combined, they do business in 14 different countries in Sub Saharan Africa.

Company Background

In the 1950s, Bill and Kathleen Irvine, living in the country then called Rhodesia, bought chickens to produce eggs to sell in their local community. Within a few years, they had acquired a 600-egg incubator and paraffin brooder that was able to hold 500 chicks. By then, they were selling both the eggs and the day-old chicks.

The Irvine's continued to slowly build on their success. They experimented with breeding and cross-breeding Barred Rocks, Black Australorps, New Hampshires and White Leghorns. This resulted in chickens that laid more eggs. Then, in 1956, they bought a six hectare plot for the expanding day-old chick business. In 1958, they had an award-winning hen at the Federal Egg Laying Trials, which sparked more expansion. More land plots were purchased and more incubators and breeding houses were acquired, which brought them to a capacity of 22,000 eggs. In 1960, they imported Cornish Kings from the U.S. to cross-breed with local Barred Rocks, and got a meat-type chicken. This launched their first processing plant and the production of frozen chicken.

In 1962, Irvine's partnered with Cobb Breeding Company and imported the first 100 Cobb birds. Within a year, Irvine's began production of table eggs. In 1965, the business experienced a halt in growth, due to international sanctions and Rhodesia's Unilateral Declaration of Independence from Britain. The lack of ability to import and export goods drove the company to look for new ways to be more self-sufficient. Soon, they were growing their own maize and producing their own feed.

Throughout the 70s, Irvine's focused on local development, building housing for their staff and a school for the employees' children. They expanded their land ownership and constructed a new processing plant.

Then, in 1980, the new country of Zimbabwe was established and granted independence, sanctions were lifted, and Irvine's resumed importation of stock from Cobb. The decade that followed brought significant growth for all areas of the company. At this stage, the company was producing around 150,000 chicks per week and 300,000 eggs per day. By the mid-1990s, Irvine's began to look beyond its African borders. They upgraded to international standards for processing so that they could begin exporting in 1998, and then established branches of Irvine's in Botswana and Mozambique. The company struggled along with many other African countries

during hyperinflation from 2002 to 2008, losing nearly 70% of their capacity. This was relieved in 2009, when the U.S. dollar replaced the Zimbabwean dollar, and the company began to recover.

Today, the company employs over 2,000 people and produces 1 million Cobb broiler chicks per week—of which 300,000 are processed and 700,000 are sold to medium- and small-scale farmers company wide. They produce 1.5 million layer chicks per year for both company farms and for sale to independent producers, and produce 600,000 table eggs per week.

The company also produces Cobb Broiler and H&N Layer parent stock for export into Sub Saharan Africa and through its associated company, Cobb Africa, now serves more than twenty countries across the continent.

Guiding Principles of the Business

There are four main principles that have guided Irvine's through the 60+ years they've been in business.

The first one that began as the driving purpose of their company was to pursue ongoing efforts to improve animal husbandry. They did this in a number of ways. They utilized and embraced new technologies over time, and ensured that they consistently met standards and certifications for food safety. They also put quality assurance methodologies into practice and managed their own feed mill, which enabled them to control what went into their birds and eggs.

The second goal they set was to supply Africa with healthy and economical animal protein. Historically, people of Africa have consumed less protein than the rest of the world. And, even today, people living in Sub Saharan Africa consume 63 grams or less per day, according to the FAO statistics from 2010¹. Irvine's continues to work to increase this consumption amount by supplying day old chicks, table eggs, and dressed chicken to 14 different countries.

The third guiding principle that Irvine's has followed is to be an impetus for small-scale agricultural development in Sub Saharan Africa. Irvine's has developed this sector by providing quality day-old chicks and feed, as well as other inputs that farmers need such as vaccines, medication and disinfectants at affordable prices. This, combined with training and educating the small-scale farmers in best practices, has grown this aspect of the business significantly.

Producers in many Sub Saharan countries do not have easy access to suppliers or support, so Irvine's focuses on building relationships where they can offer both of these services. Through this technical support, Irvine's helps clients take their business to higher levels of production and profit, which, in turn, helps to meet growing demands from local fast food outlets, restaurants and supermarkets. It is their belief that helping to develop small scale farmers is vital to the success of all business sectors in Sub Saharan Africa.

Finally, Irvine's strives to provide both accommodations and a healthy lifestyle for its employees. They have on-site housing for employees and their families and two primary schools for their children. Irvine's has two junior schools which educate over 500 students, three company villages comprised of 600 staff houses which shelter around 2,500 people (workers and their families), and two clinics staffed by state registered nurses and supported by a doctor. The company also supports rural education in the poultry sector by building model farms at high schools around the country, which are used as training tools and provide the local school with a source of income.

Irvine's invests a significant amount into training of staff and have a dedicated training center where various courses from chemical handling to management skills are held.

Additionally, they have created an internship program in coordination with two local universities. Graduates are offered a one-year intern training program, during which they rotate through all the different areas of the business and, if successful, are offered a permanent position at the end of the program.

Challenges

Africa markets are still largely informal. This has multiple implications, but the informal markets have less price transparency, leading to inefficiencies in pricing that can hurt the grower, and fluctuations that make it more difficult to predict profits or losses. Equally concerning is the lack of traceability, challenges of food safety, and potential for diseases to spread, which wet markets can create.

While African economies are still growing, spending power is low. For this reason, the traditions and practices associated with more developed markets are being implemented slowly. Processed meat products are still a small fraction of the total market and growth is hampered by the lack of cold storage, supply chain and the variability of electric supply.

Although workers are readily available, skilled labor is essential for the raising of hens and broilers for meat and eggs, and competition for those skills is intensifying. Other industries are also growing, and jobs with management capacity and city living are particularly luring. Good husbandry of animals takes time to learn, and is best when combining on-farm learning with more formal classes.

Despite massive recent investments in road and railway improvements, Irvine's still struggles to transport their chicks and pullets to customers in Sub Saharan Africa. The care and attention required has led them to create a dedicated team of experts who focus full time on logistical solutions to ensure timely supply.

Looking to the Future

Irvine's continues to grow into Africa by strengthening its existing local partnerships in various countries and offering the best products available at competitive prices. The company's goal is to ensure that they and their customers are as efficient as possible and capable of competing in a global economy.

There is certainly an advantage to being first to market in Africa, and while Irvine's has operations in three countries, they also sell and support Cobb parent stock and hatching eggs into 14 countries throughout West, East and Southern Africa. Customers tend to be the largest producers in each country, and this gives a very deep understanding of these various countries and how best to support them. Their advice to new entrants into the market place is always to include the small scale sector and live bird markets into planning. This gives any business model the flexibility and robustness to survive and succeed.

Irvine's believes that the real competition to their customers in the African market is not another producer down the road, but rather the global poultry industry and the biggest, most efficient players, such as Brazil. For this reason, they consider it paramount to improve efficiencies in their own business as well as in their clients' businesses. To this end, they have added a team of international experts based out of the Irvine's Africa office in Johannesburg, who travel extensively into the region to offer technical support. This technical support includes: on farm visits, technical seminars and schools for both small and large scale producers, as well as hands on training within the Irvine businesses, where clients spend 2-3 weeks working with their staff. In addition to this, they encourage clients to regularly share their production data to allow Irvine's to make comments/suggestions about how to improve performance.

Chapter 6

Achieving Scale through Exports



CHAPTER 6

Chapter 6

Achieving Scale through Exports





International Food and Agribusiness Management Review
Volume 17 Special Issue B

The Export Trading Group: Unlocking Africa's Agricultural Potential

Disha Maheshkumar Patel

P. O. Box 10295, Dar es Salaam, Tanzania

Abstract

Export Trading Group (ETG), is an agricultural supply chain manager with operations along the value chain ranging from procurement of cereals, pulses and oilseeds; storage; processing; transportation, distribution and marketing. ETG is present in 41 countries globally and generated a turnover of \$1.8 billion USD in 2012.

ETG has built this business by linking small-holder African farmers to a diverse pool of global buyers and efficiently managing this value chain. Their success is also attributed to their ability to adapt themselves and operations to each new country, making the necessary infrastructure and logistics investments to support a commodity trading business and sound financial and risk management.

The impact ETG has had in the African agricultural sector is phenomenal. Not only have they created value for farmers by enabling them to earn consistent incomes from agriculture but more importantly, instilled in them, a renewed optimism about the viability of farming and agriculture as a business.

Keywords: Agribusiness, trading, small-holder, commodity, Africa

Corresponding author: Tel: + 255-787-225225

Email: D.M. Patel: disha.etg@gmail.com



Introduction

Agriculture is the key economic activity in a majority of African countries, employing a significant proportion of the population and contributing around 12% to the continent's GDP (McKinsey Global Institute). With the limited economic diversity in most countries, agriculture provides a livelihood for individuals by allowing them to grow food for consumption and the option of producing surplus for sale to generate income. It is important to analyze businesses which operate in this sector, particularly in Africa, as the economic and developmental impact they can have is substantial.

Export Trading Group (ETG) is one such example. ETG has built a successful agribusiness by efficiently linking small-holder African producers to a diverse pool of global buyers and becoming efficient managers of the agricultural value chain. In the process, they have created value for farmers by enabling them to earn consistent incomes from agriculture and instilled in them, a renewed optimism about the viability of farming and agriculture as a business.

The impact has been phenomenal both for farmers and for ETG. In ETG's countries of operation, such as Malawi and Mozambique, farmers have shifted from subsistence to commercial farming, to cultivation of higher value crops such as pulses, lentils and oilseeds and to continuously improve their productivity and profitability by investing in seed, fertilizer and engaging with extension services. African Farmers are now playing an active role in the global food supply. For ETG, what started off as a small trading company is now a multinational agribusiness operating in 41 countries globally and generating a turnover of \$1.8 billion USD (FYE 2012).



Company Background

ETG is an agricultural supply chain manager with operations along the value chain ranging from procurement of various cereals, pulses and oilseeds; storage; processing; transportation, distribution and marketing. ETG is present in 41 countries globally and in the financial year ending 2012, generated a turnover of \$1.8 billion USD. The company is owned by its founders and management and since most recently, 3 private equity groups; Standard Chartered, Carlyle and Pembani Remgro who in aggregate invested around \$284 million USD of growth equity between 2011 and 2012.

ETG has its origins in Kenya since 1967 and was initially focused on distributing and marketing products manufactured by multinational in Kenya such as Colgate-Palmolive and Del Monte to neighboring African countries. In doing so, the company developed strength in logistics. Moving goods from origin to destination was not so simple at the time given the limited and dilapidated road infrastructure, rudimentary communication and ongoing civil unrest.

The change of focus to agriculture came in the late 1980s. Competition in the distribution business was increasing and there was a need for ETG to look for new opportunities with higher margins where their strength in logistics could be leveraged. The opportunity was presented in competing for international food aid tenders. International organizations such as UNDP WFP, FAO, UNHCR, UNICEF were increasingly using their cash endowments to source food (mainly white maize and kidney beans which are a staple for East/Southern Africa) for relief efforts at the cheapest possible prices.

ETG competed for these tenders by sourcing produce locally from rural agriculture-producing areas. Warehouses were rented in these areas and acted as proxy markets. Staffed by employees, commodity was actively procured at the warehouse from farmers in varying quantities. The aggregated commodity was then cleaned, sorted and re-bagged, ready for delivery. When a contract was awarded, delivery would begin, but until then the commodity would remain in the remote warehouse to prevent unnecessary logistics. Local sourcing offered the advantage of being cheaper than imports, with lower transport costs and timely deliveries. This model was perfected and replicated in other African countries as the scope for food aid was regional and the ability to source locally would continue providing a competitive advantage in competing for tenders. Eventually, there was a rationale to invest in permanent warehousing infrastructure to support the procurement activities.



It is important to mention that the expansion of ETG also coincided with the deregulation of the agricultural sector in many countries. Earlier, government-managed farming cooperatives served as the traditional crop marketing mechanism for farmers. With their disintegration, farmers were responsible for themselves. This provided a gap in the market which ETG was able to fulfil.

Beyond food aid, there were opportunities for participation in government tenders as well as regional trade opportunities both centered on correcting disparities in production and consumption levels. As the reputation of ETG was established, they attracted opportunities for joint ventures with global partners who would contribute finance and access to global customers.

As staple food demand stabilized ETG started encouraging farmers to cultivate higher value crops. These crops are now being exported globally: pulses and lentils to India and the Middle East, and sesame seed to China, Japan and Turkey and cashew nuts to Europe, US, Asia and Middle East. To further increase the value of these commodities, ETG invested in agricultural processing facilities to enable export of high-value finished goods. ETG also processes soybeans into “soya chunks” and markets this final product in Malawi and Zambia as an affordable and alternative source of protein.

The work that ETG is doing in agriculture has been recognized and commended by Government. The company is held in high regard by many African Presidents for its role in empowering small-holder farmers as well as contributing to food stability and security.

Current Management Structure

ETG is managed by its Founder, Maheshkumar Raojibhai Patel, including directors and key senior managers who have been with ETG for over 15 years.

Each key individual was selected by Mr. Patel based on their ability and willingness to learn and grow with the company. Mr. Patel believes in on-the-job training: each individual recruited was groomed into their respective role through mentor-mentee style relationship with constant feedback. Further, most of the new recruits at managerial level had never been to the rural areas of Africa. So not only did they need to learn about agribusiness, but also learn the social skills to manage relationships with farmers, village community and government officials. They needed to be mentally strong to operate in difficult terrains. Hence new hires had to be molded and be adaptable to the new working environment.

There were three employees working with the founder when the company started. A start-up culture was naturally inculcated whereby each individual managed not only their respective responsibility area but other areas. Key individuals had a sense of ownership of the company in the absence of owning any equity and shared in the founders' vision of the growth of the business.

Today, ETG is restructured in a more corporate way to suit the needs of a growing business. The company has well-defined positions and key responsibility areas for all employees including a board with a balance of executive and non-executive directors. The company is also attracting top talent from traders formerly working with multinational companies and MBA students from the best schools. As ETG grows their human capital strength, a more formal training and management development program has been put in place to suit the needs of the business.

Key Success Factors

Growth Potential

ETG operates in a sector which is fairly similar across most of Africa: small-holder farming accounts for 90% of the way in which farming is done. The business model of procuring from small-holder farmers and trading was therefore scalable across the continent. Furthermore, the failure of government-owned cooperatives left a storage and marketing gap in the market which was filled by ETG. Moreover, the expansion and continuous procurement of unhedged commodity positions was not done on an ad hoc basis, rather, it was a function of experience built over the years. ETG found that there was always a market for the food they procured. Adverse weather conditions, civil unrest, were amongst the common reasons which would allow ETG to correct the disparity. Thus ETG continued to buy crop and store for future sale.

The continued success of ETG is attributed to evolving as a business to capture opportunities beyond just food aid. Today global food demand patterns are changing, creating opportunities for ETG to participate. The infrastructure of ETG allows them to continue buying diverse crops and market them globally.

Relations

Each country in Africa presents different challenges to the business environment. ETG takes the time to understand the culture by interacting with farmers, exploring the country to determine the available infrastructure and the political landscape. Accordingly, ETG has adapted its operations to each new country of operation.

Optimal Investments

ETGs success is also attributed to its ability to manage the agriculture value chain and make the necessary investments to manage the value chain optimally:

ETG owns or rents a network of warehouses in rural, agriculture-producing areas. Various types of commodity are produced and warehouse use is further optimized by selling fertilizer through the same warehouses to farmers. The rationale for investment in warehouse was that from the onset, the agriculture trade business was never intended for opportunistic trade. It had a vision and focus of being a link between farmers and consumers. The advantage was that there was no competition in the market. No other company had the vision of “going into the bush and building infrastructure”. What was common at the time was externalizing excess profits rather than reinvesting into the country.

- i. ETG continues to leverage on its strength in logistics by sourcing the right modes of transport and providers. For some routes, they have also invested in their own logistics capacity.
- ii. ETG is reputed for paying fair prices to farmer’s such that they are incentivized to produce annually and not just for subsistence. This is because ETG operates with the motto, “If farmers grow, we can grow too”. Today, farmers wait to sell to ETG because they know they can achieve higher prices. Earlier, middle-men and small traders underpaid farmers and captured most of the value. Farmers were kept poor and continue to drift further into poverty. ETG’s procurement model allowed them to by-pass middle-men and offer higher prices to farmer.
- iii. ETG has built its own network of global customers which allows them to move beyond food aid into supply of other commodities.
- iv. Finally, ETG has integrated vertically as the trading industry matured and attracted more competitors. Investments in agricultural processing units to produce supermarket value goods allows ETG to pay higher prices to farmers and secure commodity and capture more value. At the same time, they are creating jobs in industry.

Management of Finance

Any profits generated by the business were reinvested in growing the business or to provide finance for trading. ETG has always repaid bank loans diligently.

As their strength in sourcing commodity expanded, ETG entered into join ventures with multinationals. These ventures provided finance and access to end markets, whilst ETG focused on its ability to source locally. Eventually ETG was able to build a reputation and track record strong enough to sign trade-finance loans from commercial banks in Africa.

Looking Ahead

Looking ahead, ETG will continue to strengthen their business along all areas of the agriculture value chain. This includes strengthening procurement of commodity within existing countries of operation and expanding this model to new countries, covering new commodities and setting up a greater number of processing facilities. The eventual aim is to cover farm to fork – to buy, process and package a range of supermarket ready products. ETGs origination, processing and distribution capabilities will help them deliver on their growth strategy to a large extent. However, they will need to develop their marketing capabilities to build consumer brands.

Parallel to executing this strategy, ETG will be adapting their management and operating style to suit the needs of the growing business.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Tru-Cape Fruit Marketing, South Africa: Managing the Export Market Diversification Challenge

Wilma Viviers^a, Marié-Luce Kühn^b, Ermie Steenkamp^c, and Brian Berkman^d

*^aProfessor, TRADE Research Entity, North-West University, Potchefstroom Campus,
Private Bag X6001, Potchefstroom, South Africa 2520*

^bDirector, IBiS Business and Information Services, P.O. Box 12486, Die Boord, Stellenbosch, South Africa, 7613

*^cSenior lecturer, School of Economics, North-West University, Potchefstroom Campus,
Private Bag X6001, Potchefstroom, South Africa 2520*

^dPublic Relation Consultant, Tru-Cape Fruit Marketing, 36 James St, Somerset West, South Africa, 7130

Abstract

Tru-Cape Fruit Marketing (Tru-Cape), South Africa's leading apple and pear distributor, has an impressive track record since its inception in 2001, growing its turnover from \$50 million USD in its first year to \$135 million today. While it focuses on both domestic and international markets, Tru-Cape knew from the onset that the real growth potential lay in exports. Tru-Cape was formed through a merger of two companies already exporting to 20 countries. By 2013, exports had risen to 67 countries, demonstrating the company's on-going commitment to market diversification. It also reflects the tenacity of management to tackle the many challenges along the way. Tru-Cape has devised a set of strategies to enable it to hold its own, but a fast-changing global environment is forcing management to take a fresh look at the company's internationalization agenda.

Keywords: exports; diversification; internationalization; markets

^aCorresponding author: Tel: +27 18 2991445

Email: W. Viviers: wilma.viviers@nwu.ac.za

M-L. Kühn: mlm@ibis.co.za

E. Steenkamp: ermie.steenkamp@nwu.ac.za

B. Berkman: Bb@brianberkman.com



Company Background

Tru-Cape was established to market and distribute the fresh produce of leading growers of deciduous fruit, and today is the largest apple and pear supplier in South Africa's \$ 890 million fruit industry. Most of Tru-Cape's fruit is grown in the Western Cape (around Elgin, Grabouw and Ceres) and in the Southern Cape (in the Langkloof region). With its head office in Somerset West (about 40 km from Cape Town), Tru-Cape uses its extensive network to supply major food retailers in South Africa (such as Spar and Shoprite/Checkers) and its export markets (such as Tesco in the UK). In this regard, Tru-Cape owns or maintains strong partnerships with different participants in the value chain, including growers, packers and transporters. Growers are contractually bound to supply only to Tru-Cape, which enhances the reliability of supply.

Tru-Cape employs 33 people, and the farms and the two packhouses that Tru-Cape owns, provide employment to more than 7,000 people. Tru-Cape also supports its growers by providing scientific, technical and marketing advice. In the financial year November 2012 - October 2013, Tru-Cape sold 13.5 million cartons of fruit, equating to 1.5 billion apples and pears. In the same period the company delivered a 22% year-on-year value increase to growers. In 2013, Tru-Cape exported about 67% of its total volume, with the remaining 33% being consumed locally. Within the next five to ten years, the company envisages growing its production by at least 50%.

Tru-Cape exports to Africa, the Middle East, the Far East, Europe and North America. Yet, the extent of involvement in each of these regions varies. For example, 19% of the company's exports (in volume terms) go to other African countries, whereas the United States absorbs only 1% of the company's exports.

Current Management Structure

Charles J. Hughes, the Managing Director of Tru-Cape Fruit Marketing since the company was first established in 2001, retired at the end of 2013. Under Hughes' leadership, Tru-Cape achieved phenomenal growth and will undoubtedly continue to be influenced by his vision for the company. The new Managing Director is Roelf Pienaar (38), an outside appointee, who is a Chartered Accountant by profession and holds an MBA. He brings a great deal of supply chain management experience gained in the supermarket sector (including the Pick n Pay group) in both South Africa and abroad. Strategic decision-making rests with Tru-Cape's top management, which is supported by a Board of Directors.



Key Success Factors

As a key player in South Africa's agricultural sector, Tru-Cape faces various obstacles. Over the years, Tru-Cape has implemented a number of strategies that specifically address the GLIMPSE™¹ challenges that often confronts exporting companies.

¹GLIMPSE stands for Government, Losses, Infrastructure, Markets, Policies, Science/Innovation, Environment and Talent (Connolly, A.J. & Phillips-Connolly, K. 2012. Can Agribusiness Feed 3 Billion New People...and Save the Planet? A GLIMPSE™ into the Future. *International Food and Agribusiness Management Review* 15(B):139 – 152).

Tru-Cape is quality-focused and operates in strict compliance with international health and environment protocols, such as Global GAP. However, one of the key challenges facing the company is the limited assistance it receives from the South African government in its bid to access high-potential markets like China and Thailand. Despite strong demand for fruit in China, the Chinese authorities are still waiting for the South African government to supply information on pesticides that are being used in local apple orchards. A satisfactory response is a prerequisite for China giving the green light to apple exports from South Africa. Similarly, South Africa's apple exporters have been denied access to Thailand since 2008 because the South African government has failed to update the phyto-sanitary rules applicable to the sector, thus hindering the certification process. Notwithstanding these constraints, Tru-Cape has been proactive in researching the Chinese and Thai markets, and forming relationships with potential buyers and distributors.

Supply chain dynamics are another concern. For example, in the wake of the violent protests over wages and working conditions that were perpetrated by many Western Cape farm workers in 2013, local and export clients have expressed concern about security of supply. Some of Tru-Cape's overseas buyers have even begun investigating Chile, Argentina, Brazil and New Zealand as possible alternative sources of supply. Energy supply, including the high cost thereof, is a major challenge for producers in South Africa. However, Tru-Cape has embraced a green energy approach, as evidenced in its widespread use of solar power. The company also follows environmental best practices in its orchard management.

Tru-Cape has never recorded a loss. The company attributes this to its understanding of the deciduous fruit industry, and the fact that it pays close attention to the needs of its customers and business partners. Forming alliances with local companies has helped mitigate risk when entering a new market, but such a process can be protracted. For example, Tru-Cape took ten years to find a suitable importer/partner in India, after many rounds of market intelligence gathering, networking and due diligence. Tru-Cape is currently looking to strengthen its traditional partnership model to achieve more cost effective access into high-potential markets. The vision is to control as much of the value chain as possible and reduce the company's reliance on independent operators. This will involve greater investment in packaging specialists, and packing and logistics companies, and the implementation of a more seamless supply strategy. Tru-Cape has also invested nearly \$20 million in its packhouse and cold store facilities, thereby boosting the quality and efficiency of its operation, and is mechanizing some of its processes like fruit handling.

Tru-Cape is continuously exploring opportunities to diversify its export markets, especially when problems present themselves in some regions. For example, the EU market for its fruit exports (mainly pears) is shrinking in the protracted aftermath of the global economic crisis, while the emergence of Poland as a competitive supplier of fruit is eroding opportunities for Tru-Cape in Russia. From an export diversification perspective, Tru-Cape is setting its sights on Africa, the Middle East and the Far East, regions that have displayed resilient demand patterns despite difficult global conditions. Drawing cards in Africa are its fast-expanding markets, buoyed up by the rise of the African middle class, and China's ongoing investment in new road, port and other transport facilities in countries such as Nigeria, Angola, Kenya, Zambia and Tanzania, which is easing infrastructural hurdles. Against this background, Tru-Cape expects African demand to surge by 15% to 30% per year from 2013 to 2018-2020.

Tru-Cape regularly introduces innovative offerings in response to evolving consumer preferences. Like other industry players, Tru-Cape has brought out new, more disease-resilient fruit varieties that have a better color and a higher export-quality yield. For example, it has overseen the planting of new apple varieties like Fuji and Royal Gala, which are more suited to Asian markets. These new varieties also make farming more profitable,

offsetting the rising costs of labor, electricity and imported inputs (which are especially acute given the sustained weakness of the South African rand). Furthermore, Tru-Cape sets out to ensure that its equipment and business processes remain cutting edge, and that its brand is highly visible. It exhibits regularly at international trade fairs, stages in-store promotions, sponsors numerous events that promote healthy lifestyle, and uses social media such as Facebook and Twitter to communicate with its buying public.

Key talent at Tru-Cape is to a large extent retained through effective training and development programs. Such programs are aimed at building proficiency in technical, functional areas (e.g. financial control, and marketing and quality management), and developing leadership skills. In addition, the company's flat management structure, and clear job descriptions and communication, create accountability while also encouraging innovative problem-solving and a sense of community. Developing and retaining skills on the farms and in the packhouses, however, is more challenging because the average laborer is comparatively poorly paid and the skills required are basic. High staff turnover at this level is not uncommon in the industry.

Tru-Cape has long realized that everyone at the company has a specific role to play and needs clear guidelines on how they can deliver value to customers and shareholders alike. It also recognizes that staff members require the right work-life balance if they are to thrive. In view of this, an accommodative and respectful environment has been created in contrast to the stilted corporate culture found in many other companies.

Strategic Issues for Tru-Cape

The main strategic decision that Tru-Cape faces at present is how to plot the optimal course for its export market diversification drive. With growth in the industrialized markets likely to be subdued for the foreseeable future, the way forward for Tru-Cape is to expand its presence in high-growth regions with strong demand for fresh fruit.

Tru-Cape realizes that it needs to be as focused as possible in its market diversification efforts, which includes determining whether to sell more to its existing markets, or to new markets, or both. A very useful tool that addresses this issue is the Decision Support Model (DSM). Developed for South Africa by the TRADE research niche area at the North-West University in Potchefstroom, South Africa, the DSM identifies realistic export opportunities by screening potential markets on the basis of market size, short- and long-term market growth, market concentration (competition) and market accessibility (such as transport and clearance time and cost, ease of arranging shipments, and tariff and non-tariff barriers).²

The DSM results point to the fact that Tru-Cape could expand its market share for apples to India, Indonesia, Saudi Arabia and Bangladesh, while promising new markets include Rwanda, Egypt and Algeria. The DSM results also show that Malaysia remains a lucrative export opportunity for Tru-Cape's pear exports and new markets like Kazakhstan, Ethiopia, Bangladesh and Egypt could be tapped. According to the DSM, both China and Thailand feature as high potential markets for apples, but only China for pears.³

²For more information on the DSM: Cuyvers, L. and W. Viviers (eds) 2012. Export Promotion: A Decision Support Model Approach. Stellenbosch: Sun Media Metro. The authors can also be contacted at: wilma.viviers@nwu.ac.za.

³Owing to the declining importance of the EU market for fruit exports, the DSM results for the EU have not been reported here. South and North America have also not been considered as South America exports large quantities of deciduous fruit to the North American market.

Looking Ahead

Looking to the future, Tru-Cape needs to grow its business, both by entering into new partnership agreements and extending its international footprint. Several African, Far Eastern and Middle Eastern markets are appealing prospects for further expansion. However, competition is rising as these markets' appeal grows. China and Thailand are foregone conclusions as promising new opportunity areas but it is difficult to predict when the current market access hurdles will be cleared.

Despite the company's enviable track record, it still needs to be prudent in how it spends its time and money. Using the DSM results as a compass, Tru-Cape's management will need to decide what its short-, medium- and long-term business priorities are, and how its diversification objectives will affect its local supply capacity and domestic business operation.





International Food and Agribusiness Management Review
Volume 17 Special Issue B

Growth in a Globalized Industry: The Case of Hillside Green Growers & Exporters Ltd.

Edward Mabaya^a and Laura Cramer^b

*^aResearch Associate, Charles H. Dyson School of Applied Economics and Management, Cornell University, B75 Mann Library,
Ithaca, New York, 14853, USA*

^bFood Security Consultant, P. O. Box 2657, Nakuru 20100, Kenya

Abstract

In 1998, Nairobi-based Hillside Green Growers & Exporters Ltd. began with a single shipment of mangoes to Dubai. Today, Hillside has blossomed into a steady exporter with a broad product line of fresh fruits and vegetables sold to buyers in the Middle East and Europe. Attainment of key quality certifications and a recent partnership with an NGO supporting SMEs to provide contracted growers with agricultural inputs has allowed Hillside's CEO, Eunice Mwongera, to scale up and establish new, bigger contracts with customers in Europe. The Middle East market offers smaller volumes but year-round opportunities, while orders for European markets are larger but are concentrated during certain months. Much bigger players in the horticultural export industry already serve the European markets—the question is whether Hillside can contend at the same level among those competitors. Eunice also is giving thought to Kenya's own domestic market. With increasing urbanization, Nairobi could be a viable opportunity.

Keywords: horticulture, export, agribusiness, Kenya, out-growers

Corresponding author: Tel: + 1. 607.280.0264

Email: E. Mabaya: em37@cornell.edu

L. Cramer: lacramer_laurak@yahoo.com



Company Background

Hillside's company vision is "feeding the world with Africa's greens". It is dedicated to building long-term relationships with customers through quality service and customer support. Due to its high quality of products Hillside continues to grow despite the challenges of operating in a developing country and within an intensely competitive industry. Quality and consistency are emphasized through all steps of production, from farmers' fields to distribution throughout the globe. These two company characteristics are crucial in maintaining the loyalty of their customers. The commitment to their core values has led to a reliable clientele for Hillside, especially in the Middle Eastern market.

Hillside sources its products through three channels: contracting with smallholder farmer groups, buying from large scale growers, and growing on its own farms. Eighty percent of Hillside's produce is supplied by contract farmers, organized into groups, who enter into supply agreements with Hillside. Under the contracts, Hillside provides support to these out-growers in the form of seeds, chemicals, and supervision from Hillside's agronomists and field agricultural officers trained in horticultural production and integrated pest management. The groups are also trained in governance issues to avoid side-selling and maintain loyalty to Hillside. They currently work with eight groups containing a total of 500 farmers. An additional 10% of the supply comes from large scale growers, and Hillside produces another 10% on its own farms.

The Kenyan horticulture subsector that Hillside falls within is a fast-growing industry, achieving 7% annual growth. Dependency on rain-fed production, however, leads to high variability in production yields year to year. Limited access to farming inputs and technologies also contribute to low productivity levels. Smallholder farming is growing due to increased land demarcation as a result of the growing population. Smallholder farmers are located in rural areas where agriculture is the main livelihood. Supplying horticultural crops for export can earn a much higher income than traditional crops such as maize or beans. The inputs needed (such as high value seeds and pesticides) are a greater investment, but the returns are better and can allow farmers to pay children's school fees, medical expenses and other costs.

Kenya is a member of the Eastern African Community (EAC), which has trade relations with the European Union providing duty free and quota free access for EAC exports to the EU market. Duty free access gives Kenya a competitive advantage over non-EAC countries. Moreover, Kenya's role as a hub for many airlines facilitates transportation of perishable horticultural produce to the EU and other markets. Some of the most popular horticulture exports are French beans, snow peas, okra, Asian vegetables, avocados, mangoes and pineapples.

Market development is a challenge in Kenya's horticulture export industry due to poor infrastructure, weak contract enforcement, limited financial services and high costs of capital and political interference in input prices. In addition, fluctuations in the value of the Kenyan shilling against the Euro and the US dollar affect the profits earned by exporters such as Hillside.

Current Management Structure

Hillside has 25 permanent employees and utilizes 150-300 casual employees for sorting, grading, and packing. The number of casual employees needed depends on the size of the shipment being packed on any given day. As CEO, Eunice is responsible for finding new markets and buyers as well as for the overall management of the company. The General Manager is responsible for the day-to-day operations of Hillside, from the evaluation of

staff to ensuring that the products are of top quality and are shipped to clients in a timely manner. The Quality Control Manager oversees the receiving, grading, sorting and packaging of products. In addition, he trains all staff on quality grading of produce for the international markets. The Production Manager and Agronomists are responsible for overseeing all farmers contracted by Hillside as well as training them on new methods for hygienic growing, sorting and grading in line with international norms. All workers receive a competitive salary, health insurance and compensation for overtime. The casual employees used for sorting, grading and packing are often single mothers from Kibera, Nairobi's largest slum. The income earned by working at Hillside helps ensure food security for their households.

Key Success Factors

There are four key areas which have contributed to the steady growth of Hillside over the past 15 years. The first is Eunice's leadership and management skills. Her drive and commitment have helped forge the path that has led to the company's success. Despite the difficulties of operating in the Kenyan export market, she has succeeded in finding new buyers and expanding her product line. She attends trade fairs in Europe to network with buyers and others in the industry, and she invests in the capacity building of her staff to ensure a well-trained and loyal workforce. For example, all Hillside staff have attended food safety courses such as Global GAP and HAACP trainings and other short courses and seminars offered by various agencies. Additionally, two staff members upgraded their degrees with Hillside's help. The second key area contributing to Hillside's success are the strategic partnerships which the company has established. Eunice formed a relationship with Solidaridad, an international organization dedicated to linking smallholder farmers to export markets and creating sustainable supply chains. The support from Solidaridad helped Hillside contract new out-growers and scale-up from five tons to eight tons of exports per week.

Social capital and goodwill with growers is the third area contributing to Hillside's continued success. Hillside's technical officers provide coaching and training to smallholder farmers which includes information on land preparation methods, crop rotations, planting and spacing, preventing post-harvest losses and other key agricultural advice. In addition, farmers' groups are coached on improving governance and enhancing their business development skills. Providing support in the form of inputs and advice from trained agronomists helps the contract farmers achieve higher yields and earn better incomes, spurring rural growth and helping reduce poverty. The final strength that has helped Hillside maintain its success is keeping up with consumer industry standards and certification requirements. The company has introduced a traceability program, installed a cold storage facility, and attained numerous certifications that provide buyers with quality assurances.

Strategic Issues

Even though Hillside is capable of meeting the demands of its current Middle Eastern and European customers, there are some constraints which may prove difficult for it to scale up. The capacity of its existing pack-house is limited, and the company may not be able to rely on this pack-house if it wants to grow in the international and/or national markets. The location of the pack-house is another concern. Most of Hillside's direct competitors have packing facilities close to the airport. However, Hillside is located near Nairobi city center, which leads to transportation difficulties for the company. Furthermore, accessing enough capital to invest in a pack-house closer to the airport would be a challenge.

Hillside faces intense competition in the fresh fruit and vegetable markets both globally and within Kenya. Competitors are from Central American and African countries that export high value fresh fruits and vegetables

and other Kenyan exporting companies. There is pressure coming from increased production within the target markets, mainly Europe, due to methods being implemented that extend the growing season. For example, greenhouses and covered tunnels allow growers in colder climates to produce for a greater length of time, and this reduces reliance on imports from countries like Kenya.

Competitors within Kenya can be divided into three categories: large scale exporters, medium to small scale exporters, and seasonal exporters. Large exporters control a great deal of market share, have broader product lines, and procure produce mainly from their own farms. The quality of products is assured by certifications such as Global GAP. With the advantages—high quality of products and stable large volume of supply—most of these large companies have contracts with supermarket chains and large retailers in European and other countries. Large exporters leverage logistical strengths, such as pack-house locations next to the airport and airfreight space secured in mass quantity.

Medium and small exporters, including Hillside, are distinct from large exporters in their capacity to meet the quantities required for large contracts with big chain retailers. While some medium and small exporters source produce from their own farms, others rely on small-scale out-growers for 50-100% of their supplies. The quantity they can manage is not as extensive and stable as large exporters. As a result, medium and small exporters are at a disadvantage in obtaining contracts with large retailers in Europe and other countries who require both quantity and quality. Some medium and small exporters are certified by Global GAP while others are not: Hillside has an advantage by possessing Global GAP certification. In terms of logistics, the pack-houses of some of medium and small exporters are located next to the airport while some are not.

Seasonal exporters enter the horticulture export market when demand is very high during the winter months of Europe. Since they are not operating throughout year, they are not formalized and do not possess their own pack-houses and offices. These exporters sporadically enter the market, mostly during peak seasons of certain produce.



Hillside vegetables at the packhouse in Kenya ready for export to Europe

Within the domestic market, most Kenyans purchase their vegetables (e.g., tomatoes, onions, potatoes, leafy greens, etc.) from open air markets or road-side kiosks. However, supermarkets have gained popularity amongst Kenyans, and as Nairobi's population of expatriates has grown, the types of vegetables supplied by Hillside have started to appear for sale in Kenya. A number of supermarket chains are expanding across Kenya, increasing their produce offerings as shoppers adopt new tastes and buying habits. This trend provides an opportunity for Hillside to supply local buyers.

Looking Ahead

After 15 years of steady growth, Hillside is poised to make a jump toward expansion. Eunice has grown the company from a single order for mangoes in 1998 to a product line of over 20 items and a turnover of US\$700,000-900,000. Yet she knows the overall market potential is much higher and needs to decide how

to capture a larger piece of it. The Middle East market has steady year-round buyers and has served her well from the beginning. With Global GAP and other certifications in place, expanding into the European market is tempting. She could invest in forming relationships with more European buyers, but the seasonality of the opportunities may prove too difficult to manage. She is also considering the possibility of expanding into the local Kenyan market by forming relationships to supply one or more of the growing supermarket chains. She sees many growth opportunities in the local horticultural market with the increasing population and urbanization of the country. As Eunice watches the latest shipment on its journey from the field to the consumer, she ponders the journey she started with Hillside. Just as she made a bold decision to enter the horticulture export market 15 years ago, she now faces another tough decision—which is the best road toward increased growth for Hillside?

Acknowledgements

Research for this case study was supported by the Student Multidisciplinary Applied Research Team (SMART) program at Cornell University. The views expressed here are those of the authors not necessarily those of the organizations for which they work.



Eunice receives the *2013 African Agribusiness of the Year Award* from Market Matters Inc. From left to right: Ralph Christy, Krisztina Tihanyi, Eunice Mwongera and Edward Mabaya.



International Food and Agribusiness Management Review
Volume 17 Special Issue B

HomeVeg Tanzania Managing a New Strategy Amidst GLIMPSE Challenges

Theresia Dominic[Ⓐ], Ludwig Theuvsen^ᵇ, Mussa Mvungi^ᶜ, and Ray Ufunguo^ᵈ

^ᵃ*Research Associate, ^ᵇProfessor, Department of Agricultural Economics and Rural Development, Georg-August-Universitaet Goettingen, Heinrich-Düker-Weg 12, D-37073 Göttingen, Germany*

^ᶜ*Managing Director, HomeVeg Tanzania Ltd, P.O. Box 14256, Arusha, Tanzania*

^ᵈ*Finance Officer, Centre for Sustainable Development Initiative, P.O. Box 34210, Dar es Salaam, Tanzania*

Abstract

HomeVeg Tanzania Ltd. is a fresh fruits and vegetables export company in Arusha, Tanzania. Since its inception, five years ago, they've recruited 55 employees, working with 1,600 smallholder farmers. They successfully produce high quality products—up to seven tons per week that meet GLOBALG.A.P. and British Retail Consortium standards. Although sales are rising, production rates are affected by an increasing amount of reject due to product handling and strict export standards. Its next strategy is to add outlets in the domestic market. This case discusses its journey towards accomplishing the opportunity, despite obstacles under the acronym GLIMPSE.

Keywords: Farming for the Future, sustainable agriculture, farming, environment

[Ⓐ]Corresponding author: Tel: +49.551.3920204

Email: T. Dominic: theresia.dominic@agr.uni-goettingen.de



Introduction

HomeVeg exports vegetables from Tanzania to Europe. Since its inception in 2009, it has become the leading vegetable exporter in the country with a capacity of 7 tons per week. The company processes high value vegetables by working directly with groups of smallholder farmers with average size plot of 0.2 hectares. As the company grows, success is attributed to its close link with farmers. It has recruited 1,600 farmers who are fully trained to grow products that meet international export standards. Its core activities include capacity building, marketing and finance with a team of 55 employees (15 permanent and 40 temporary). As the success in delivering high value products increases, a challenge in dealing with unsold produce (rejects) increases as well. Several alternative solutions are given, however the optimum decision is yet to be achieved.

Company Background

Located in Arusha, HomeVeg is a private limited company co-founded by Mussa Mvungi and Machel Tarimo, two young Tanzanian graduates, with sufficient experience in horticulture and international trade. In five years they were able to grow the company by exporting high quality fine beans, peas, chilies and baby corn. From the beginning, they worked closely with a the Center for Sustainable Development Initiative (CSDI); to secure a grant to cover the costs of renting a pack house, cold truck, collection truck and training programs on vegetable processing and international trade. With a mission of promoting the production and marketing of fresh horticultural products, the company was able to supply the UK, Belgium, Germany and the Netherlands—and is searching for more buyers.

HomeVeg quickly gained momentum in 2011 when the number of farmers increased from 1,000 (in year 2009) to 1,200 (2011) and currently 1,600 (2013). The farmers are located in northern and eastern part of the country including collection centers in Arumeru, Simanjiro, Moshi and Lushoto districts in Arusha, Manyara, Kilimanjaro and Tanga regions respectively. HomeVeg's has a formal contract with the farmers and regularly supervises activities such as fertilization, spraying, crop husbandry, harvesting and pre-grading. The farmers are divided into eight groups who receive training in six major areas: safe use of pesticides; good agriculture practice (G.A.P.); farmers' accountability; cluster management training; and association management training.



Products flow from farms to international wholesale buyers, where HomeVeg collects produce at the farm gate and transports it to its packing house in Arusha, where the product is graded and packaged. The load is then processed for transport and sent to the buyers; Special fruit (Belgium), Fresh to Go (UK), Bud Holland and Nature's Pride. Agents involved in processing and handling the freight include TahaFresh Handling Ltd. (Tanzania) and Kuehne and Nagel Company (International). In the process of capturing the market in Europe, the company strategically facilitated the GLOBALG.A.P and the British Retail Consortium (BRC) certification for the farmers. In 2011, three out of eight groups were certified and the number has increased to seven in 2013.

Current Management Structure

Employees are divided into three teams and departments: capacity building and production; marketing; and finance/administration. The top management is comprised of the founding members. Mr. Mvungi is the Managing and Marketing Director. Mr. Tarimo is the Director of Finance and Mr. Mziray is the Director of Production. Middle level managers are comprised of unit managers, and lower level employees include secretaries, clerks, storekeepers and production supervisors. The company has a total of 15 permanent and 40 temporary employees.

Mvungi is responsible for establishing the export forecast based on market conditions. He directs the collection of produce, grading, packaging, exporting and market information search. Based upon the current sales capacity of 7 tons per week, he has to accomplish an objective of 20 tons per week of produce by the year 2015 and to increase annual profit from \$15,257 to \$127,593 USD by year 2016. Tarimo directs the financing, administrative and people management, while enforcing HomeVeg core values: Quality, Safety, Reliability and Transparency. Mziray is responsible for developing small scale farmers by providing regular training, contracting and supervision. Major objective is to recruit at least 3,500 farmers and up to 200 hectares of farms by year 2016.

Key Success Factors

Having regular contact with farmers, close control of the supply chain, expertise in quality management system, provision of regular training to farmers, are the HomeVeg key success factors. Also, relationship based on trust was the key between the company and key actors within the chain. For example, HomeVeg has honored past agreement with farmers and process their payments on timely basis because it is at its best interest to build trustworthy and long relationship with the farmers. Hence in future transactions, the farmers have put trust that they will not be exploited.

The demand for fresh produce has increased because over the last decade Europe has recorded a trade deficit in fresh and processed fruits and vegetables, totaling €9.8 billion in 2011 and imports have picked up quite considerably as well (MAP, 2012). In this case there has been a growth in land committed by farmers from 0.3 to 0.94 ha. of harvest per week after introducing a planting program in 2011. The program runs successfully because HomeVeg has invested input resources to the business arrangement and on the other hand the farmers are connected to export markets, get access to technical services and free training sessions.

Strategic Issues for HomeVeg

Fresh vegetable sector in Tanzania continues to grow with competitors like Serengeti fresh, Tanhort, Arusha bloom, etc. Therefore the challenge for HomeVeg is how to maintain their position as the leading exporter. As they work on seeking more buyers in Europe, they have announced plans to increase number of farmers in order to satisfy the market demand, install a better quality management system in the pack house for speed efficiency in processing, and negotiate with Government and development agencies in installing cold rooms near farm gates.



Furthermore, HomeVeg has not only built its own new pack house but also found a strategic location for transport that is spacious.

The management sees a potential on vegetable and fruit cultivation in Tanzania therefore they focus on providing regular training to comply with international standards. As a result, amount of farm produce collection has successfully increased in terms of weight and variety. In addition to that sales volume has escalated from 115.4 tons in year 2010 to 221.2 tons in year 2012 but the sales could have been higher if it wasn't for the high amount of rejects. The rejects are unsold produce, caused by natural differences in size, shape and color; and breakage during washing and transportation; but fit for consumption.

Alternative strategies are arranged to design a marketing entry strategy for a domestic market. However, if HomeVeg establishes a formal domestic market, some problems will arise such as; supplying substandard quality of produce which might jeopardize the HomeVeg's image, inability to forecast amount of unsold products and rejects, hence making impossible to enforce a contractual agreement with local buyers.

Furthermore, there is a pricing issue whereby, their price might be higher than their competitors in domestic markets. Until late November 2013, the directors are struggling with the pricing, promotion and product decisions for the domestic market. However, as they move forward in creating a strategic market entry to the domestic market, the firm encounters additional challenges in following areas: Government, losses and wastage, infrastructure, markets, politics and policies, science and innovation; and environment.

Government

Costs of landing, handling and aviation fuel are higher at Kilimanjaro International airport than other airports in East Africa, hence indirectly affects HomeVeg's trading charges. Considering that, Tanzania ranks 139 out of 189 countries in the criteria of 'ability to trade across borders' (World Bank, 2013), the Government should assess the source of this problem to resolve high charges and unnecessary port delays. A better solution might reduce freight operational charges and increase HomeVeg revenue by 9.5%.

Losses and Wastage

A post-harvest loss from the pack house is between 20 to 40 percent. Several efforts have been tried to manage losses along the food chain, but it all comes down to more funding requirements. There's an opportunity to install cold-room facility near farm areas where vegetables and other variety of produces can be stored soon after harvesting.

Infrastructure

It is unfortunate that roads, power supply, and air/sea ports are in poor condition due to the major economy transformation and expansion process in the country. HomeVeg has to find alternatives. For example, installing standby generators during periods of power outages and regular financing of auto spares for truck maintenance due to poor road conditions. After British airways pulled its services in 2013, HomeVeg is seeking direct flight services to the UK where their major buyers are located.



Markets

Changes in population structure, customer preferences, and income levels are few of the factors that increase the demand of vegetables all over the world; however the opportunity to grasp more market share, outweighs HomeVeg ability to supply. A program is already set to recruit more farmers, so the challenging part is making decisions on pricing, promotion, product and designing a marketing strategy for domestic market (as discussed earlier).

Politics and Policies

HomeVeg is working on negotiating export subsidies such as tax relief for exporters and getting a rebate on imported manufacturing machines. The outcome will increase competitiveness with other exporters globally.

Science and Innovation

Generally, teamwork between scientists, researchers, farmers and food processors is limited where one part accuses the other of not delivering results that are applicable to the Tanzanian environment. HomeVeg is confronted with lack of up-to-date information on seedling technology, fertilizer, better farming practices and agricultural marketing database. The latter is much needed for developing a plan for domestic market.

Environment

There is a crisis of water pollution while trying to comply with the standards. In this case they have included sensitization program to educate the public on safe discharge of waste. However as it becomes too costly to the company, public-private partnership intervention is encouraged.

Looking Ahead

Considering the challenges, it seems that recruiting more farmers and increasing export capacity alone will not solve supply gaps and post – harvest losses. The next step is to engage in public-private partnership programs, communicate policy shortfalls with real evidences and get the government to commit to support horticulture industry. The business by itself has a great opportunity to grow internationally as well as in the domestic markets due to increasing demand of fresh vegetables. Since the company values quality (as a key success factor), the biggest challenge is how to manage unsold product (rejects). The idea of disposing the remaining produce into the domestic market should not be the ultimate solution. Much has to be done in the area of quality control if the company wants to expand the market.

References

- Connolly, A. J., & Phillips-connolly, K. 2012. Can Agribusiness Feed 3 Billion New People...and Save the Planet? A GLIMPSE into the Future. *International Food and Agribusiness Management Review* 15(B):139–152.
- MAP 2012. 'Monitoring Agri-Trade Policy: The EU and Major World Players in Fruit and Vegetable Trade' European Commission, http://ec.europa.eu/agriculture/trade-analysis/map/index_en.htm
- World Bank. 2013. *From Privilege to Competition: Unlocking Private-Led Growth in the Middle East and North Africa*. Washington, DC: World Bank





International Food and Agribusiness Management Review

The Official Journal of the International Food and Agribusiness Management Association

www.ifama.org