



2010 SEED Winner Village Cereal Aggregation Centres

Kenya - Village Cereal Aggregation Centres (2010)

Overview

In this initiative, a local commercial entity has joined forces with the national government, the financial sector and cereal buyers to establish mobile post-harvest management centres in Kenyan villages – enabling farmers to deliver high-quality grain to the market value chain and encouraging more participation of youth in cereal production.

These centres, called “Village Cereal Aggregation Centres” (VCACs) comprise grain processing and bulking facilities equipped with mechanical threshers, collapsible dryer cases, moisture meters, aflatoxin-testing kits, cleaning and grading trays, bagging gear and weighing scales. The initiative also offers farmers comprehensive training in post-harvest management including aflatoxin and pest control methods, grain marketing and trading standards, and business and financial management.

Origins

VCAC was initiated by Kenya Promotion and Marketing Company Holdings (KPMC), a limited business registered in Kenya in 2007. KPMC is the Kenyan representative for GrainPro Inc, “a Green, Not Only for Profit Company” based in the US that markets a range of post-harvest technologies.

In 2010, the KPMC successfully piloted the concept of ‘Village Cereal Aggregation Center’ (VCAC) using a comprehensive approach to post harvest management and value chain development. With partial support from USAID’s Market Linkages Programme and additional support from the Government of Kenya, KPMC began rolling out of the VCAC concept country-wide. That year, it also won the SEED Award.

How it has grown/current status/future prospects

At the time of winning the SEED Award, KPMC set measurable targets to achieve in one year. Less than 2 years on, VCAC has met and exceeded most of these targets. For example:

- The targeted number of households benefited was 2,000. To date, it has already benefitted 7400 households.

The Problem

Millions of Kenyans are starving, yet 40% of crop harvests go to waste – the equivalent of 11.2 million bags of maize. The main contributors to grain loss are:

- Moisture
- Aflatoxin
- Pest infestations
- Oxidation

The Solution

VCAC virtually eliminates post-harvest losses with hermetic storage: airtight bags that combat moisture. Benefits include:

- Zero loss, no chemicals
- Seed germination qualities remain intact








Source of text: KPMC Holdings website

KPMC's Mission

To empower small-holder farming communities by availing technologies for post-harvest handling. We build the capacity of farmer for increased production, reduced losses and encourage them to work collectively in order to attract value chain partners and by so doing, increase their incomes.

Source: VCAC website

VCAC's Value chain intervention

Link in the Value Chain	Targeted stakeholders	Support Services
Production ↓	 Farmer	Supply of production inputs
Post-harvest handling ↓	 Farmer	Supply of drying equipment
Processing ↓	 Farmer group	Supply of threshing packing & loading facilities
Storage ↓	 Farmer group	Supply of storage facility; Financial services
Trading to market ↓	 Traders	Offering competitive products
Retailing ↓	 Retailer/wholesaler	Offering competitive products
Consuming	 Consumer	Provision of competitive products

Source: Adapted from Adelphi Consulting

- In terms of capacity building in post-harvest management, KPMC targeted 1,500 farmers and 40 master trainers from the Ministry of Agriculture extension staff. It has already trained the 40 master trainers and has built the capacity of more than 3,400 farmers.

- Food processing and storage: the target set is to aggregate 30,000 bags of maize for food security and trading. It has already cumulatively processed and stored 23,000 bags to date.

- VCAC implementation: It set out to establish twelve VCACs. So far, three have been established and six more will be implemented by the end of 2012.

KPMC has expanded its work to 3 regions in Kenya. According to Bilha Maina, Managing Director at KPMC holdings, the initiative has also made good progress toward creating market chains. For example, it has secured contracts to with the World Food Programme (WFP) and a subsidiary of a Local Brewing company - East Africa Malting Limited. According to Maina (2012), "these two organisations offer forward delivery contracts that enable KPMC to create a marketplace for the farmers to supply their produce at good market prices". KPMC has also expanded its partnerships with the financial sector to start offering agency banking services to small holder farmers, as well as micro credit. The enterprise is also making progress toward establishing a national stakeholder forum in order to monitor the initiative and support policy development.

Social, environmental and economic benefits and outcomes

With a focus on livelihood improvement through improved food security that is not harmful to the environment, VCACs are able to provide social, environmental and economic benefits.

a. Social outcomes: The initiative is creating new community-level co-operatives, which enhance the farmers' ability to engage in joint production, processing, storage and marketing activities. This will lead to increased incomes, food security and improved social welfare.

b. Environmental outcome: By encouraging improved production and proper land and water utilisation, the initiative encourages farmers to adopt environmental protection practices and reduce the use of harmful pesticides in food storage, such as phosphine and Methyl Bromide. GrainPro's pesticide-free hermetic storage units provide long or medium term organic storage, eliminating the need for chemical insecticides and fumigants and, hence, the associated risks to farmers, agricultural labourers, consumers, wildlife and the environment.

c. Economic outcome: Post-harvest losses in cereals are reduced by over 25%, thereby increasing profitability in cereal production activities. This helps farmers to gain better returns on their investment. Further, through the VCAC, farmers can fetch a 30% return on their investment. This generates at least five US dollars profit per bag of cereal. With an average production of 15 bags per acre and 3 acres under cereal production this means an income of US\$ 225.

There will also be a few opportunities for employment at the VCAC at a salary of US\$200 for those employed on regular basis (Maina, 2012).

Mapping VCAC's business model and stakeholders

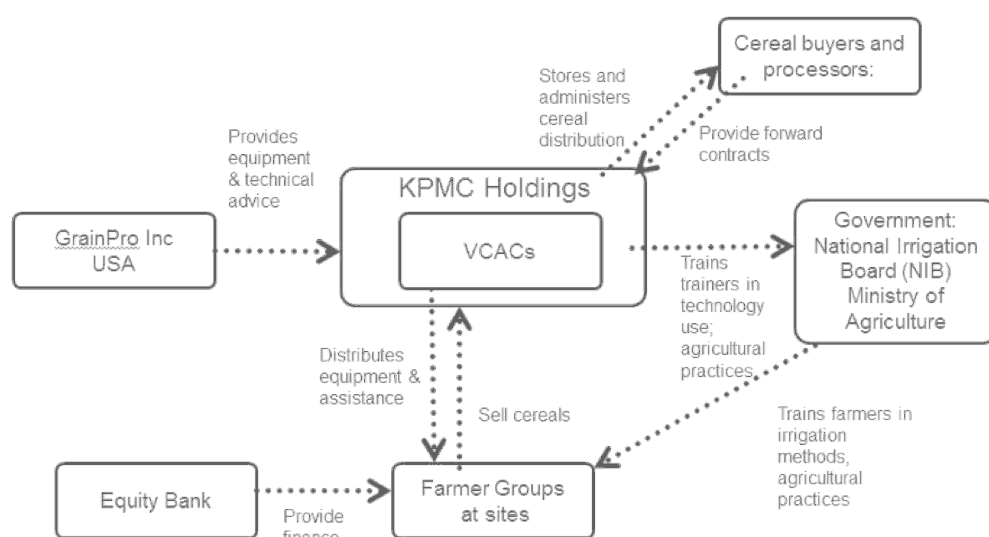
VCACs are run through a partnership model, bringing together farmers, cereal buyers and processors, traders, a technology company, financial organisations and government organisations. Funding and support to establish this initiative has been provided from US AID, SEED Initiative and FAO. Key partners and their functions are described in table 7 below:

Table 7. VCAC's stakeholders

Partner	Function
Kenya Promotions & Marketing Company (Holdings) Limited	Project leader. Technology supplier through GrainPro product representation. Establishes the VCACs.
Government Partners:	
Kenyan Ministry of Agriculture	Supports the establishment of the VCACs on a public private sector basis and promotes the establishment within key cereal production areas
Kenya National Irrigation board	Supports small-scale farmers to engage in irrigation farming.
Financial Sector Partners	
Co-operative Bank, Equity Bank, Mubi-Kash Network	Provide agency banking services to small holder farmers
Clients	
Cereal buyers	Purchase and process grain
WFP	Purchase and process grain
Local brewery	Purchase and process grain
Agmark	Bulk Cereal transportation solutions and agricultural commodities
Beneficiaries	
Small holder farmers	Produce grain, and sell it to KPMC Holdings

The stakeholder map below briefly outlines the interactions of these stakeholder groups.

VCAC Stakeholder map (source: adapted from Adelphi, 2011)



Success factors

This partnership initiative, although still fairly new - less than 2 years old - has already enjoyed substantial success in meeting its targets. Two key factors can be identified as enablers of this success:

- a. **A difference in the services offered:** According to Maina (2012), “we are not ordinary traders and speculators. KPMC works in true partnership with farming communities in order to build their capacity and make trading decisions. This fosters trust in the VCAC model”. This trust extends itself beyond the farmers: “The fact that KPMC comes in as a 3rd party collateral manager means that banks and processors can trust us and hold us accountable”. VCACs bring the expertise that is needed to transform farmer groups (or aggregated farming communities) into successful traders. In the words of Maina, “Farmers are good at producing; we come in to offer them the services they need to attain good prices, in a transparent way”.
- b. **Support and guidance from international organisations:** This initiative has been supported by key organisations focusing on supporting specific, interrelated elements of the project. These include:
 - **The SEED Initiative** – Aimed at supporting innovative small-scale and locally driven start-up enterprises around the world that integrate social and environmental benefits into their business models: through winning the SEED Award, the partnership was given the needed impulsion to start up, by indicating that the project concept note was worth exploring further. It also provided important recognition needed to capture the attention of other international organisations. The funds from SEED helped to: start up the agency banking model, undertake training for staff and build the capacity of 40 ministry of agriculture staff, and covered some of the initial costs for meeting with the PPP members to get the project accepted. Its support services helped to strengthen its triple bottom line approach. According to Maina (2012), “SEED services helped us to think more critically about our social impact, our environmental contribution and how to keep the business going sustainably not only for profit. (...) We are constantly reviewing the goals we set out for ourselves under the SEED grant to see if we have kept to our mission and what has changed and why, this helps to keep us on track with all our triple bottom line goals”.
 - **FAO** incorporated KPMC as key partners in reviewing food wastage. The organisation has undertaken a joint study on community grain marketing and disseminated the results. “This has helped us understand more how our value proposition should take shape to be of benefit to communities. This study has put us ahead of the pack and we are recognised as being serious about community grain marketing challenges and how to find workable solutions” (Maina, 2012).
 - **USAID** – KPMC received funding from USAID’s Market Linkages Programme (\$181K). This funding was very important, giving the initiative capital boost and increasing our value proposition and sustainability.

Challenges and how they have been met

- **Fluctuations in market prices:** Changing market prices can have great impact on farmers’ profits. VCACs work by storing cereals and selling when the market prices are favourable. However, storing cereals first requires buying from farmers and having the available credit to do so (see related problem below). To move away from this hurdle, forward contracts (with buyers such as the WFP and a local brewing company) help the initiative aggregate commodities at a predetermined price. In turn, it sells for a higher price than the average market rate for the commodity aggregated.
- **Access to credit:** This is a significant challenge because the VCACs are required to have collateral in order to borrow. According to Maina, “We need credit to pay farmers an initial deposit that will allow them to hold on to their grain a little while longer to have the market prices go up. Without initial funds to pay, we cannot help them to fully speculate in the market”. The way KPMC has dealt with this challenge is to encourage farmers to accept joint ownership of the commodity that is aggregated so that KPMC also waits to be paid when the farmers eventually sell their produce.
- **Availability of adequate liquidity in some markets:** Being able to buy and sell cereal products easily in some markets in Kenya is a key issue that remains unresolved. Cash-based purchases and sales means that VCACs need to make cash available and

manage cash exchanges in their outlets, requiring an additional investment and expertise. The initiative has been working toward alleviating this situation by interfacing with as many M-Pesa¹ agency outlets as possible.

Current needs/types of support the enterprise requires now

- Mobilise value chain partners to provide financing, insurance, agro-inputs and markets.
- Generate evidence to support public policy development.
- Undertake field research to support the adoption of hermetic storage.
- Undertake field research to establish farmer capacity to produce for specific value chains and how to successfully contract them.

Lessons Learned from the VCAC Case Study

The VCAC case illustrates how an agricultural commodities trader with a triple bottom line objective can be successful through establishing market linkages for farmers. Its success in turn results in improved livelihoods for farmer groups and reduces the amount of chemicals in the environment. The VCAC model was established through the trader being able to articulate their initial ideas with international organisations, including technology distributors and donors, which helped it to get the momentum going, including pilot a demonstration project, training trainers and helping to create strategic partnerships. This case is exemplary of the benefits of having a good marketing plan and creating the right initial strategic alliances. However, much work remains to be done. Continued success will depend upon the degree to which more key partners can be secured to ensure establishing further market linkages.

References

Adelphi (2011) VCAC Support plan. Internal document of the SEED Initiative.

Graham, F. (2010) M-Pesa: Kenya's mobile wallet revolution. BBC World News. November 22, 2010. Available: <http://www.bbc.co.uk/news/business-11793290>

Maina, B. (2012) Interview given for the current case study. March, 2012.

Websites consulted

- Agricultural Market Development Trust AGMARK
- KPMC holdings - <http://kpmcholdings.com/>
- Grain Pro - <http://www.grainpro.com/>
- World Food Organisation -

Interviews

- Bilha Maina, Managing Director at KPMC holdings
- Mirko Zürker, Adelphi (provided SEED support services)

¹ M-Pesa is a mobile phone money transfer service that allows those without a bank account to transfer funds through sending a text message. Users send and pick up cash at participating outlets (Graham, 2010).