

Kenya Agricultural Productivity and Agribusiness Capacity Building Programs and Agribusiness Development

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Abstract

To affirm the significance of Agribusiness, the Government of Kenya (GOK) formulated two strategies: The Agriculture Sector Development Strategy (ASDS) and the National Agribusiness Strategy (NARS). The ASDS is a ten-year strategy whose overall goal is to transform Kenya's agricultural sector into an innovative, commercially oriented, competitive and modern industry that will contribute to poverty reduction, improved food security and equity in rural and urban Kenya. NARS proposed systems and structures required to bring about a dynamic and competitive agribusiness sector in Kenya. The strategy recognizes the importance of the agribusiness sector and the key role it could play in realizing Kenya's vision 2030. The aim is to deliver wealth creation, job creation and food security within national borders, even in a context of rapidly changing climate and environmental degradation. To motivate the agribusiness sector as highlighted in the ASDS, the Kenya Agricultural Productivity and Agribusiness Project (KAPAP) through the 12 years Adaptable Program Loan (APL) with support from the World Bank, designed capacity building programs. The aim was to empower farmers; improve agricultural extension systems; establish an efficient agricultural research system; encourage growth of agribusiness, and improvement of environmental management. This paper explored the effectiveness of KAPAP's capacity building programmes and their effect on agribusiness and food security. The paper collected primary data from public and private extension officers and farmers who benefited from KAPAP's programs and who were previously trained in Entrepreneurship and Business Planning through collaboration between KAPAP and the Technical University of Kenya (TUK). The paper records a positive impact of KAPAP capacity building programs on agribusiness development as evidenced in significant increase in per cent sales, profitability, value addition in dairy, groundnut, potato, and honey value chains. There was also increased interest in agribusiness and cumulative improvement in food security. Regions that reported significant improvement in productivity and farming mechanisms were the same ones that reported higher levels of skills transfer. The paper recommends gender mainstreaming, succession planning and introduction of agribusiness training in TVET institutions.

Keywords: *Agricultural strategies; agribusiness, capacity building, farmers*

Introduction

Governments, donors and development practitioners now recognize that agriculture is central to economic growth and food security – particularly in countries where a significant share of the population depends on the sector. In Kenya, the agricultural sector remains the mainstay of the Kenyan economy and directly contributes 24 percent of gross domestic product (GDP) (Mutimba, 2008). Since 67% of the population and 80 percent of the poor live in rural areas, in rural area agricultural activities are carried out for food security (World Bank, 2009). The Agricultural Policy Review (APR) conducted by the World Bank (2009) affirms that agriculture remains a vital development tool in Kenya and is more than twice as effective in reducing poverty as compared to industry-led growth. The APR points out that the key to better performance in agriculture is rapid increases in small-holder productivity (Davis, Ekboir & Spielman, 2008). This requires not only increases in physical production volumes and values by applying appropriate technologies but also better linkages of farmers to consumer markets (Ouma, De Groote & Owuor, 2006). To address output and efficiency issues, land policy and land use, the need to support farmer organizations, diversification into higher-return activities and value addition were identified as key areas that require stakeholder focus.

KAPAP was the second phase of the World Bank Adaptable Program Loan support to the agricultural sector through the Kenya Agricultural Productivity Programme (KAPP). KAPAP was implemented over a five year (2010-2014) period. The major aim of KAPAP was to consolidate and up-scale the gains achieved under the first phase of the project while supporting emerging opportunities and meeting challenges in the Agricultural Sector, in line with Vision 2030, the First Medium Term Plan of the Vision 2030 (MTP), and the Agricultural Sector Development Strategy (ASDS). The Project's strategic focus during the period in question (2010-2014) was to enhance: (a) agricultural productivity (through support to agricultural research, extension and empowerment of farmers and other stakeholders); (b) diversification and value addition in agriculture, livestock and fisheries; and (c) promote public private partnerships (PPPs) in service delivery and increase incomes of smallholder farmers through agribusiness development. Throughout the project, the Government aimed at addressing medium to long term supply response related issues linked to agricultural technology/research, implementation of reforms in extension service delivery, and farm inputs. Lessons learned from the first phase indicated that in order to have a greater impact from the productivity growth, farmers had to be supported to link better to both input and output markets and through agribusiness development.

To achieve its development objective, KAPAP compressed its agenda to the sector into four components: Policy/Institutional and Project Implementation; Agricultural Research Systems; Agricultural Extension and Farmer and other Stakeholder Empowerment; and, Agribusiness and Market Development. The third component aimed to extend support to pluralistic and participative agricultural extension, and empowerment of farmers and other stakeholders, including service providers towards increased smallholder productivity and the transformation of subsistence farming to commercial agriculture. This would then

give impetus to the Government to implement the National Agricultural Sector Extension Policy, which was developed during KAPP Phase one. Component 4 sought to empower public and private stakeholders along commodity chains to plan, design and set up sustainable agribusinesses through the delivery of agribusiness services aimed at value-addition and the linking of producers to input and output markets.

In order to build capacity of participating smallholder farmers, farmer's organizations, and service providers across different agribusinesses value chains, KAPAP mandated the Technical University of Kenya to train service providers across 22 counties in Entrepreneurship and business planning. The aim of the training was twofold: to enable KAPAP to foster effective collaboration among a broad range of individuals and organizations in order to contribute to the national agricultural knowledge and innovative system; to enable service providers acquire entrepreneurial skills that would permeate a business acumen among participating farmers; thereby triggering agribusiness development and higher yields.

Kenya Vision 2030 identifies agriculture as a key sector through which annual economic growth rates of 10 percent can be achieved. Under the Vision, smallholder agriculture will be transformed from subsistence activities, marked by low productivity and value addition, to 'an innovative, commercially-oriented, internationally competitive and modern agricultural sector' (GOK, 2012). One of the key drivers for this transformation is agribusiness, which is defined as including all businesses involved in agricultural production, including farming and contract farming, seed supply, agrichemicals, farm machinery, wholesale and distribution, processing, marketing and retail sales (Flaspohler, Duffy, Wandersman, Stillman & Maras, 2008). Food production plays an important part in maintaining the country's food security, while the industrial and horticultural crops subsectors are important foreign exchange earners. Research shows that the country's agricultural potential is still unrealized and its growth targets are not being met. Opportunities to add value to agricultural produce are largely unexploited (Davis, Ekboir & Spielman, 2008).

It is against this background that TUK conducted an impact assessment exercise to evaluate the effect of KAPAP's capacity building programs on agribusiness development and food security among participating farmer groups.

The paper is organized around five objectives, presented sequentially, as follows:

1. Explore the nature of capacity building extended to smallholder farmers by KAPAP.
2. Evaluate the effect of KAPAP training on farmer skills enhancement
3. Establish impact of KAPAP training on farmer productivity
4. Recommend strategies for developing agribusiness-training initiatives with the aim of improving on productivity and food security.

Literature Review

Benefits of Capacity Building on Agribusiness: Empirical Foundations

At the basic and development level, capacity building denotes ability by those in leadership to ensure sufficiency of human needs: food, health care, clean drinking water and opportunities in society (World Bank, 2009). Societies also need infrastructure that includes roads, electricity and law. At profound levels, capacity building consists of skills, motivations, knowledge and attitudes necessary to implement programs (Flaspohler, Duffy, Wandersman, Stillman & Maras, 2008). The aim is to transfer competencies to improve effectiveness and quality of services provided within participating groups (Davis, Ekboir & Spielman, 2008).

There is a growing awareness among agricultural extension researchers and policy makers that development of feasible agro-industries and support of rural business should be addressed in an integral way to bring about outcomes in agricultural environments. Agricultural setbacks are attributed to inappropriate land use by small scale farmers and lack of infrastructure (OECD-FAO, 2010). One way of building innovative and commercially viable, competitive agribusinesses is to empower institutions that directly support agricultural activities, among them: public and private service providers (Mutimba, 2008). To fill this gap, the government of Kenya developed new policies, initiatives and institutions to build the capacity of agricultural players in order to transform “smallholder agriculture from subsistence to internationally recognized modern sector”. This would increase the country’s annual growth rate by 10 percent (Ouma, De Groote & Owuor, 2006; GOK, 2012).

The Kenya government’s notion is supported by FAO (2003), and Davis, Ekboir and Spielman, (2008). The three investigations demonstrate that success in any business undertaking requires technical and management skills to orient the general entrepreneur’s demand for inputs, the production process and the product/service portfolio towards the realities of the market. Davis and Addom (2010), emphasize that capacity building, specifically training, affords small farmers not only a better understanding of their opportunities, but also how these opportunities might be managed – especially if such training focuses on market analysis, distribution and business management. It would help farmers in identifying the appropriate technologies, and increase their participation in agricultural innovation (World Bank, 2009).

Chipeta, Christoplos & Katz (2008) posit that a lack of business skills and market awareness was a major barrier to achieving market success among rural producers. They therefore recommended that extension or advisory services targeted at rural farming populations should include marketing and business advice and understanding of agricultural value chains, in addition to technical knowledge. Stevenson and St-Onge (2005) found that entrepreneurship training was important in allowing producers in growth industries (including agriculture) to access more of the value chain associated with their product. For female farmers, training in enterprise skills was particularly valuable as they expanded into new areas. Women demanded a range of enterprise skills including

bookkeeping, entrepreneurship and business management skills. Acquired skills led to a number of improvements in existing business practices. Reviewed literature on the topic indicates that much of the work has been conducted by international organizations specifically in less developed economies such as Zimbabwe, Uganda and Ethiopia. Disparities in climatic as well as economic conditions require country specific assessments.

Methodology

The evaluation was undertaken in four centers, previously trained by and supported by KAPAP between 2010 and 2014. The aim of this paper was to establish the impact of capacity building programmes as described in component three and four of KAPAP's strategic focus on agribusiness development and food security. Agribusiness was measured in terms of linkage to markets, strategic value addition; and profitability comparatively. Food security was measured in terms of surplus productivity. The study adopted both quantitative and qualitative approaches to establish the number of capacity building programs extended to farmers by KAPAP and their impact on agribusiness. The evaluation collected both primary and secondary data from the beneficiaries of the KAPAP project who included farmers and service providers. Primary data from farmers was collected through focus group discussions and field visits whereas data from service providers was obtained using questionnaires and interviews. Financial statements, business plans, and productivity charts were reviewed to establish variations in key variables before and after training. The sample population comprised of 113 farmer beneficiaries who had benefitted from KAPAP capacity building support and 32 service providers trained by TUK. Sampling was based on earlier baseline surveys conducted by KAPAP. These surveys adopted a fusion of a multi-stage and purposeful sampling technique. The multi-stage aided in arriving at four regional centers: Mombasa, Kisumu, Nyeri and Nakuru. Data analysis was aided by the SPSS software and content analysis, and presented using tables and charts.

To establish the effect of training on agribusiness development, the study first determined the business planning knowledge farmers had before training and compared this to their skills level after training. Service providers had been trained in entrepreneurship and business planning and KAPAP expected them to transfer these skills unto farmers.

Findings

Nature of Capacity Building Programmes by KAPAP

The first objective of this evaluation was to explore the nature of capacity building efforts extended to farmers by KAPAP. Table 1 below illustrates capacity building programs extended to farmers by KAPAP within the period under review.

Table 1: Capacity Building Programs Extended To Farmers by KAPAP

Capacity Building Variables	Form	Aim
Infrastructure	ICT	To improve communication and information sharing, and transportation
	Feeder roads	
Equipment	Milk cooling plant (s)	To process milk products in hygienic conditions and increase yield
	Fishing nets	
Technology adoption	Banana ripening technology	To increase fish production To enhance uniform ripening of Bananas
Training	Entrepreneurship and business planning	To help farmers identify market opportunities, segment markets appropriately, and write bankable business plans

Table 2: Impact of Infrastructure and Technology Support on Agricultural Activities

Capacity Variable	Building	Effect on agribusiness Activities	Frequency N=113	Percentage (%)
ICT		Helps to reach customers easily	96	74
		Advertise products online	82	63
		Improved marketing	110	85
Feeder roads		Increased output	82	63
		Improved access to markets	96	74
Technology (equipment, fishing nets, banana driers)		Increased yield and returns	110	85
		Improved quality of products	113	100

Effect of KAPAP Training on Farmer Skills Enhancement

Table 3: Components Farmers Understood in Business Planning before Training

Business Plan Section	Frequency N=113	Percentage (%)
Executive Summary	16	14
Business description	13	16
Marketing plan	33	29
Organization plan	46	41
Production plan	31	27
Financial plan	-	-

Table 3 shows the areas in business planning farmers understood before training.

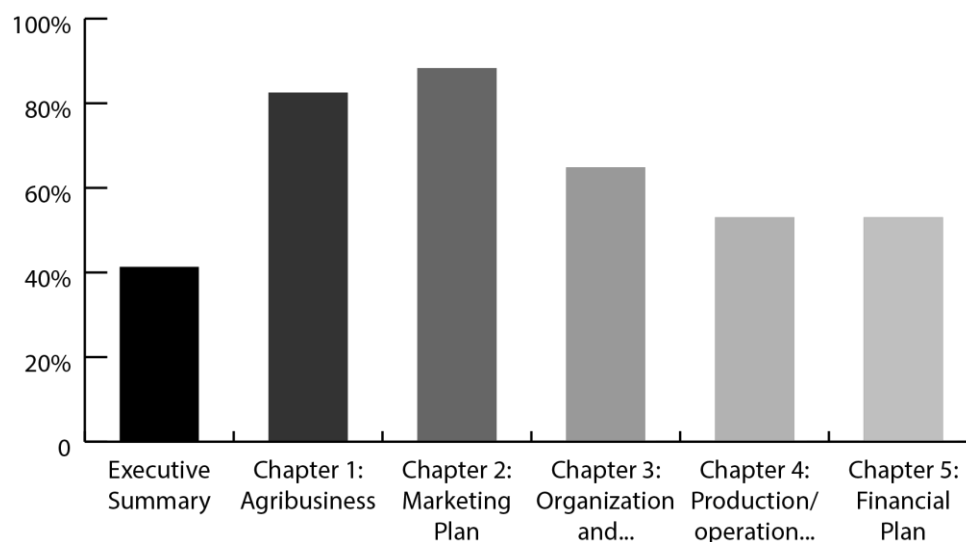


Figure 1: Business Plan Components Farmers understood better after Training

Skills Enhancement

From findings shown in figure 1, 113 farmers were asked the sections of the business

plans they were comfortable with before and after training. The results indicate 41% of farmers could write an executive summary, an increase in % from 14% to 41%. 82% could write the Business description section and understood agribusiness development, up from 16%. 88% were now comfortable segmenting markets and appropriating their product lines to each market segment, up from the previous 29%. 64% could prepare a management plan compared to the 41% before training. 52% were now able to identify suitable agricultural equipment and forecast capacity after training, up from 27%. Before training, none of the

farmers understood budgeting skills, appropriate sources of funding and cash flow projections. After training, 52% could prepare simple financial plans and understood working capital and resource planning. A majority however still maintained that the section was too technical and required expertise in financial management.

Impact of KAPAP Training on Farmer Productivity

Table 4: Impact of KAPAP Training on Farmer Productivity

County	Sales Increase
Mombasa	38%
Nakuru	45%
Kakamega	45%
Nyeri	45%
Kisumu	35%

This paper also sought to establish the overall impact of KAPAP capacity building programs on productivity in terms of sales, value addition and profitability. From the finding on table 4, on sales, Mombasa recorded a 38% increase, Nakuru 45%, Kakamega 45%, Nyeri 45% and Kisumu 35%. On product development (value addition) Kisumu reported a 50% increase in groundnuts development; Nakuru 50% in dairy and honey value chains, Kakamega 45% in Dairy value chain and Nyeri

15% in Banana and mango value chains. For the bottom line, Mombasa reported 28% increase in farmers' returns particularly in meat products and 40% in poultry farming. Kakamega reported an increase of 45% in both Dairy value chain, and poultry. Nakuru reported 35% and 40% increased return in potato and dairy products respectively. The increase in the bottom line was attributed to value addition. Service providers provided a cumulative 68% improvement in food security for the period under review. This was attributed to increased farm acreage and improved storage facilities. The figures were given by service providers through secondary means and interviews.

Summary Synthesis

Capacity building in the agricultural sector is complex given the numerous value chains and needs differences. Besides, women form a vital element in agricultural and rural development activities. Research shows that for effective results, there is need for trainers to use gender specific approaches. Besides, agriculture is a unique activity whose cycle is lengthy and seasonal and depends on unpredictable climatic conditions. This complicates evaluation exercises. However, given the role the sector plays in poverty reduction among the rural poor, the country's GDP and food security, capacity building is a pre-requisite to improved productivity and innovation. Reviewed literature reveals a correlation between skills transfer and agribusiness development and food security. This has led to efforts by various training institutions to increase education and training initiatives in agriculture. For instance, Southern Universities frequently run agribusiness workshops with a vision of "innovating strategy and management for

the future success of Agribusiness". The aim is to commercialize farming to increase rural incomes.

KAPAP's intervention was to support sustainable (e.g., conservation farming) and profitable productivity growth ('push') in small scale farming systems by stimulating farmers to experiment with alternative technology options responding to their needs. The in-built farmers' empowerment, participation and demand-driven and feedback mechanism were put in place to ensure that the technology/knowledge and support services supply chains respond to farmers' choices and preferences. Training was to enhance entrepreneurial flair, opportunity discovery and market understanding to further stimulate productivity and smallholder incomes through value-addition and enhancement of producers' linkages between input and output markets.

The results of this report records a positive impact of KAPAP capacity building programmes on productivity, incomes and food security as follows: Table 1 shows increased productivity among dairy value chains in Kakamega, Nakuru and Nyeri. The increase was a direct result of the facilities and skills transfer by service providers. Dairy cooperatives in these regions were able to use availed technologies to reduce waste and improve on the quality of processed milk. Fish producers reported reduced mortality rates in fingerlings, increased harvest and weight. Potato farmers in Nyandarua reported increased farm acreage leading to surplus yield. Kakamega reported increased fish and poultry production due to adopted technology and superior farming methods. Siaya, Embu, Kakamega, and Nakuru reported high value addition in groundnut, mango, and milk processing respectively. Mombasa also reported improved production, in the farming of red chillies (kachawawa), free range poultry and dairy goat rearing. All farmers except fish farmers reported significant increase in earnings within the period under study.

Conclusions

This paper concludes that capacity building programmes offered by KAPAP had a considerable effect on agribusiness development in regions studied. Project success indicators were: Percent increase in average yields of selected agricultural products, farming systems in the Project area, Percent increase in earnings of sampled farmers in the Project area, Percent increase value addition, and per cent increase of farmer participation and empowerment in agribusiness skills and knowledge. Ability by farmers to write business plans within six months of training by the Technical University of Kenya is commendable given the level of education and age of farmers reviewed. This study reveals a significant achievement of KAPAP project objectives based on the premise that capacity building, the independent variable in this report, involves improving people's knowledge, skills and attitudes as well as institutional mechanisms, tools and procedures.

Capacity Building results are based on the improvement of individual skills (knowledge application) and enhanced efficiency of structures and organizations, which translate into sustainable practice changes. The results support conclusions by Chipeta et al., (2008); Davis et al., (2007) and GOK (2012) that business and

managerial skills afford farmers an understanding of available opportunities and how to manage such opportunities. Infrastructure in terms of communication facilities and good roads enhances commercialization of agricultural produce.

Recommendations

This study recommends the following:

Gender Mainstreaming: Women specific training programmes that utilize mentorship activities involving successful young women and men as highlighted by World Bank should be emphasized.

Gender-specific training would allow training to be tailored to women's schedules, and ensure that training is directed at them, recognizing their role as farmers. The Danida evaluation found that, although their programmes were effective in targeting and involving women, the programmes' relevance was compromised by their use of standardized technological packages, and training that began with their extension messages rather than specific problems faced by the women. This is important because according to FAO, Agriculture is underperforming in many developing countries for a number of reasons. Among these is the fact that women lack the resources and opportunities they need to make the most productive use of their time. Women are farmers, workers and entrepreneurs, but almost everywhere they face more severe constraints than men in accessing productive resources, markets and services.

Succession Planning: youth involvement in agriculture could have a multiplier effect: enhance food security and succession planning. TVET institutions could use the German model of training to offer practical agricultural training.

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