



AGRICULTURAL INTERVENTIONS AND AGRIBUSINESS DEVELOPMENT AMONG FARMERS IN KIMENYEDDE SUBCOUNTY, MUKONO

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ABSTRACT

The study investigated the relationship between Agricultural interventions and Agribusiness development among farmers in Kimenyedde Sub County. The study used descriptive research design, with both qualitative and quantitative research approaches. The researcher purposively targeted two parishes that were more involved in farm activities in Kimenyedde Sub-County, which were Namaliga and Kiwafu. According to secondary data the two selected parishes had 479 farmers and a sample size of 212 and the researcher managed to interview all. A self-administered questionnaire was the main tool for data collection. Data was computed using Statistical package for Social Sciences (SPSS). Pearson Correlation Coefficient was employed in data analysis to establish the significant relationship between Agricultural interventions and Agribusiness development among farmers in Kimenyedde Sub County. Statistics revealed that Agricultural interventions was related to Agribusiness development among farmers of Kimenyedde.

INTRODUCTION

Agribusiness was realized in the 20th century after Neolithic revolution with the use of irrigation, crop rotation, application of fertilizers (Gammage, 2005 and Gammage, 2011) with the major breakthrough after synthesizing ammonium nitrate to boost crop yields (Carroll, 2010). Around this time citizens of countries in the developed world began flocking to their cities, leaving a shrinking population of farmers struggling to meet the demand for food since urban migrating of people gave market opportunity. Agricultural interventions were focused at a series of researches the most famous being the Green Revolution in USA of 1940s and the late 1970s that developed agribusiness production worldwide (Hazell & Peter 2009).

In agriculture, agribusiness is the business of agricultural production (Wilkinson 2009). It includes agrichemicals, breeding, mass production, distribution, farm machinery, processing, and seed supply, as well as marketing and others.



According to Ng, Desmond & Siebert (2009), agricultural economists would refer agribusiness to profitable agriculture realizing a shift from subsistence to commercial farm practice and management, Brazil emerging as the global supply source for a range of strategic agribusiness commodities followed by Bolivia, Paraguay, and Uruguay and Argentina (Wilkinson, 2009).

For the future of Africa, agribusiness development remains one of the most important activities (Wilkinson, 2009; Hugo, 2006) for more research investment and development especially currently when agribusiness earnings are shrinking tremendously. A new World Bank report “Growing Africa: Unlocking the Potential of Agribusiness,” explains that Africa’s farmers and agribusinesses could create a trillion-dollar food market by 2030 if agribusiness interventions can expand farmers’ access to more capital, electricity, better technology and irrigated land to grow high-value nutritious foods. Governments should work with agribusinesses, to link farmers with consumers in an increasingly urbanized Africa acknowledging that “The time has come for making African agriculture and agribusiness a catalyst for ending poverty,”(World Bank, 2014; Diop, 2014).

The economic structure of Uganda like other East African economies is dominated by the agricultural sector. It is the main foreign exchange earner contributing 22.7, 31.1 and 45.3 to total GDP in Kenya, Uganda and Tanzania respectively in year 2007 (World Bank, 2008). Farmers remain more vulnerable to poverty, yet 600 billion have been invested in various agriculture and agribusiness developments (Uganda Census of Agriculture, 2008/2009) leaving wonders about the relevance of other interventions like Prosperity for All (PFA), with cardinal principle to identify and support economic enterprises that will enable households to earn daily, periodic and long-term incomes with a target of UGX 20 million per household per year and improved implementation of state programs.

As of 2010, the ministry of agriculture animal industry and fisheries (MAAIF) began developing a National Agricultural Policy (NAP) guided by six principles learned from implementing the Poverty Eradication Action Plan (PEAP), the PMA, and the Local Government Act basically to pursue a private sector led and market-oriented economy (agribusiness or entrepreneurship farmer). In doing this the government was tasked to work on constraints that hinder the private sector to invest more in agribusiness with the vision to transform the farmers from subsistence to commercial agriculture by integrating small holder farmers into the Agricultural Value Chain.

NAADS used a combination of downstream and upstream approaches namely: Provision of agricultural advisory service technology demonstration & Multiplication, and Farmer institution development (FID); Development of business skills of Higher Level Farmer Organisations (HLFOs), supporting private/public partnerships geared towards commercialisation, value addition and Market linkage using Agribusiness Development Services and Commercialisation Challenge Fund (CCF) (NAADS Implementation Manual, 2001). Working with the Districts and Sub counties to carry out enterprise selection & developing farm enterprises as businesses such that agribusiness farmers can access credit facilities.



Also under agribusiness development services, the NAADS secretariat ensures provision of market information to farmers. The secretariat engages partnerships with qualified providers for instant market information services. The focus was to understand the capacity gap among farmers that may derail agricultural development and takeoff; hence set strategies to build capacity for competitive agribusiness. It is however doubted whether after decades of trial on agricultural interventions that agribusiness has gained momentum in Kimenyedde Sub County.

The share of agribusiness in GDP has declined from 64.1% in 1985 to 41.0% in 2001, 23.43% in 2010 and 22.9 % in 2011 (MAAIF, 2010; UBOS, 2012 and World Bank, 2014). The sector has received increments in funding up-to Shs 585.3 billion in the 2013/2014 financial year (Briefing budget 2013/2014) from 378.9 billion in financial year 2012/2013 (Fowode_Uganda, 2013) to boost farmer's income.

Kimenyedde sub county in Nakifuma county access Government agricultural interventions that include: advisory services, improved technology, improved farm supplies plus research with the aim of agribusiness development (increase in farmer income to 20m per annum, develop market oriented farmer, and entrepreneurial skills development among farmers). There has been annual funding as follows: 2008/2009 97.6m, 2009/2010 funding were 103.4m, 2010/2011 were 122.9m, 2011/2012 were 87.5m, 2012/2013 were 87.9m, and 2013/2014 received 88.9m. The sub-county NAADS officer (Kimenyedde Sub-county Annual Review reports, (2008/2009-2012/2013), consistently confirm that the objectives from agricultural interventions, agribusiness inclusive, have not been attained (Uganda Debt Network Report, 2012). According to the same report the average farmer income was put at UGX 4m per annum and other targets also not met. The cause of the slowness in not achieving the target is not yet known. It is against this background that the researcher wanted to investigate the significant influence of agricultural interventions on agribusiness development in Kimenyedde Sub County, County, Mukono District, Uganda.

The independent variables of this study were government's interventions: quality of farm supply, advisory services to farmers, research and development while the dependent variables were agribusiness development: farmer income, market opportunity, and entrepreneurial skills development as illustrated in figure

MATERIALS AND METHODS

The study used descriptive designs. Out of the targeted population of 479, the researcher took a sample size of 212 farmers. This was done using the Morgan and Krejcie (1970) Table for determining sample size. To make a total of 212 respondents, the researcher used simple random sampling. Ten (10) key informants (parish leaders and farmer leaders), five informants per parish were selected purposively to provide a picture of community perception about agricultural intervention and agribusiness development in the area. The administered questionnaire was used comprising of closed ended questions designed according to the objective of the study. This was used as an instrument to collect data with ease over a short period of time (Amin, 2005).

*Table 1: Definition of scale for measurement*

Scale	Response	Mean range	Interpretation
5	Strongly Agree	4.20 - 4.99	Very High
4	Agree	3.40 - 4.19	High
3	Uncertain	2.60 - 3.39	Average
2	Disagree	1.80 - 2.59	Low
1	Strongly Disagree	1.00 - 1.79	Very Low

Data collection was cleaned and coded and data entry was done and analyzed by the use of SPSS software. The study were analyzed using descriptive statistics where means, standard deviation, frequency and percentages, and Pearson correlation in establishing the relationship between agricultural intervention and agribusiness development among farmers in Kimenyedde sub county, Mukono District, Uganda.

RESULTS AND DISCUSSION

The results for the level of agricultural interventions; quality of farm supply, advisory services to farmers, research and development were sought by the use of descriptive statistics particularly by the use on Mean and standard deviation as shown in Table 2.

Table 2: The Level of agricultural interventions

Items	Mean	Std. Deviation	Interpretation
Quality of farm supply			
Improved seeds			
We get improved seeds from NAADS officials.	3.09	1.55	
Seeds are received in time to plant	2.59	1.25	
Since we started getting improved seed there is increased harvests.	3.31	1.15	
Improved seeds are better than local seeds for planting.	3.79	1.09	
I will continue buying improved seed on my own.	3.71	1.24	
Aggregate Mean and SD	3.29	1.26	Moderate
Improved animal breeding			
People were given improved breeds.	2.47	1.39	
Village people benefit from improved animal breed with less stress.	2.69	1.16	
New breeds have changed life of indigenous society.	2.83	1.07	
I know how to care after exotic breeds.	3.08	1.40	
Artificial insemination of animal can be accessed.	2.64	1.30	
Aggregate Mean and SD	2.74	1.26	Moderate

**Farm implements**

Farmers are supplied with agricultural machinery	2.21	1.33	
Farmers process their foods locally	2.48	1.25	
More financial benefit when I use machines.	3.39	1.15	
There is a positive difference in farming when farm implement are used.	3.59	1.10	
I see a need to have variety of farm tools.	4.06	1.11	
Aggregate Mean and SD	3.15	1.19	Moderate

Advisory services to farmers**Workshops**

I have ever attended seminars for agribusiness	3.17	1.55	
I have been trained on how to acquire various skills in agribusiness development	3.26	1.52	
We have chance to visit other farmers to learn more.	2.89	1.53	
I got reading materials on agribusiness.	2.19	1.30	
There is a demonstration garden in my area.	2.62	1.42	
Aggregate Mean and SD	2.83	1.47	Moderate

Research and Development**Establishment of research Institutions**

There are agricultural research centers in the area.	2.36	1.23	
Research centers are in touch with the farmers.	2.77	1.08	
Some people are members to the agricultural institution in the area.	3.13	1.09	
Local Agricultural organizations give improved crops to farmers.	3.27	1.15	
There is an established linkage with research centers.	2.95	1.12	
Aggregate Mean and SD	2.89	1.13	Moderate

Consultation with farmers

I have seen farmers being introduced to new methods of farming	3.06	1.39	
Government supplies exactly the products farmers need.	2.56	1.34	
Farmers are consulted at project design stage of Government programs.	2.61	1.28	
Some officials often ask me about my progress towards agribusiness	2.68	1.38	
We have given feedback of on our challenges	3.04	1.36	
Aggregate Mean and SD	2.79	1.35	Moderate
Grand mean and SD	2.95	1.28	Moderate

N=212 Source: Primary Data

Legend: Very high (4.20-4.99), High (3.40-4.19), Moderate (2.60-3.39), Low (1.80 - 2.59), Very Very Low (1.00 - 1.79)

Table 2 indicate that the level of agricultural interventions was moderate (**grand mean = 2.95, std = 1.28**) and high standard variation from the mean according to the scale used in the study. This implies that agricultural interventions among farmers of Kimenyedde Sub County moderately prompted agribusiness development.

**Level of Agribusiness Development**

The results for the level of agribusiness development; farmer income, market opportunity, and entrepreneurial skills development were sought by the use of descriptive statistics particularly by the use on Mean and standard deviation as shown in Table 3.

Table 3: The Level of Agribusiness Development among Farmers

Items	Mean	Std. Deviation	Interpretation
Farmers Income			
I earn less compared to the work on the farm.	3.30	1.36	
Government initiatives have raised the incomes of the farmers.	3.15	1.22	
There are some savings from sold goods.	3.20	1.28	
I can easily meet my expenditure than before.	3.38	1.30	
I have savings for further investment in agribusiness.	3.21	1.34	
Aggregate Mean and SD	3.25	1.30	Moderate
Marketing opportunities			
I produce my food for the market	3.48	1.43	
Farmers easily get market for goods.	3.50	1.33	
We have farmer groups and associations that find market.	2.43	1.39	
We sell goods as a group.	1.99	1.20	
Our goods are packed before they are ready for sale.	2.01	1.16	
Aggregate Mean and SD	2.68	1.30	Moderate
Farmer's entrepreneurship skills			
I have found more efficient and profitable ways to do farming.	2.98	1.38	
I have attended knowledge sharing platforms amongst farmers.	2.72	1.39	
I have taken risk to produce at a time when few other farmers can compete.	2.68	1.34	
I have built a value chain for more income.	2.75	1.36	
I alter supply depending on demand during the season.	3.01	1.37	
Aggregate Mean and SD	2.83	1.37	Moderate
Commercialized agriculture			
I seek financial advice and support to invest in agriculture	2.70	1.46	
Commercial farming is a family business.	3.52	1.34	
There has been financial benefit in my agriculture business.	3.77	1.16	
Family members like agribusiness.	3.71	1.19	
We employ other people on the farm outside the family.	3.15	1.61	
Aggregate Mean and SD	3.37	1.35	Moderate
Grand mean and SD	3.26	1.32	Moderate

N=212 Source: Primary Data



Legend: Very high (4.20-4.99), High (3.40-4.19), Moderate (2.60-3.39), Low (1.80 - 2.59), Very Very Low (1.00 - 1.79)

In summary findings from Kimenyedde Sub County, Mukono District indicated that the level of agribusiness development was moderate (**grand mean = 3.26, std = 1.32**) with a high (**1.32**) standard variation from the mean in regard to the scale used in the study investigation. This implies that there is still work to be done by partners like government and other organization to work closely with farmers in order to realize agribusiness development among farmers of Kimenyedde Sub County, Mukono District.

RELATIONSHIP BETWEEN AGRICULTURAL INTERVENTIONS AND AGRIBUSINESS DEVELOPMENT

To establish the relationship between agricultural interventions and Agribusiness development among farmers in Kimenyedde subcounty, Mukono District. The findings were sought by the use of Pearson Correlation product moment as presented in the Table 3.

Table 4: The Relationship between agricultural interventions and Agribusiness development

Description	
Pearson Correlation(r)	0.584**
P-Value	0.000
Coefficient of Determination (r ²)	0.34

N = 212

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 4, there is a strong significant relationship as agricultural interventions lead to agribusiness development among farmers in Kimenyedde Sub county (**r = 0.584, p = 0.000**). This implies that agricultural interventions have a strong influence on agribusiness development among farmers in Kimenyedde Sub County. Research findings using the Coefficient of Determination present that agricultural interventions contribute **34%** to agribusiness development among farmers in Kimenyedde. The findings are in agreement with responses from the key informants that most of interventions are good to promote agribusiness although there are often errors at the planning stage where farmers are not consulted and during the implementation stage the local people who well know the farmers are ignored. The findings in Kimenyedde are supported by ACTESA, (2013) & Royer, (2009) who wrote that when local farmer are helped through various agricultural interventions they can earn more than mere sale on harvested crops to a commercial level. According to Wilkinson (2009), for the future of Africa, agribusiness development remains one of the most important activities for more research investment and development especially currently when agribusiness earnings are shrinking tremendously (Hugo, 2006).

To establish the contribution of agricultural interventions on agribusiness development a regression analysis was done. The findings are revealed in Table 4.

*Table 5: The Relationship between Agricultural Interventions and Agribusiness Development*

Predictors	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	26.497	3.535		0.000
Improved seeds	0.010	0.243	0.003	0.966
Animal breeds	0.975	0.210	0.293	0.000
Farm implements	0.164	0.229	0.044	0.475
Workshops	1.043	0.180	0.368	0.000
Establishment of research Institutions	0.712	0.215	0.206	0.001
Consultation with farmers	0.081	0.218	0.025	0.710

$N = 212$ Significance at 0.05 level of significance $R^2 = 0.412$ Adjusted $R^2 = 0.395$

As indicated in Table 5, study findings based on Standardized Coefficients (beta) present that, improved seeds contributes least at $b = 0.003$ which is (0.3%) to agribusiness development. This means that improved seeds have a weak and not significant for agribusiness development. Therefore giving improved seeds to farmers should not be the immediate center of attention for agricultural interventions but other aspects that curtail agribusiness development. Research findings in appendix

Findings on the relationship between agricultural interventions and Agribusiness development among farmers in Kimenyedde sub-county, Nakifuma County, Mukono District revealed that there is a strong significant relationship ($r = 0.584$, $p = 0.000$) between agricultural interventions and Agribusiness development among farmers in Kimenyedde Sub County.

CONCLUSIONS

In reference to the findings, it was concluded there is a strong significant relationship between agricultural interventions and agribusiness development among farmers in Kimenyedde Sub County, Nakifuma County, Mukono District, and so the null hypothesis was rejected.

RECOMMENDATIONS

These recommendations arose from the key findings of the study.

- It was realized that workshops have high significant contribution to agribusiness development. The government should put more money to train farmers in better farming approaches and demonstration farms for farmers to learn easily since the majority of the farmers were found to have low levels of education with less adaptation ability.
- There is need to train local people who understand the farmers' ability and the dynamics of the area than employing people from far areas who less understand farmers.



- There was easy access to market although offering low and unstable prices. The government should try and set prices for agricultural commodities. This will bring back the youth to agriculture who are currently taking refuge in *booda-boodas* riding in urban areas.

There is need to review the policy on Government interventions in regard to developing agribusiness and moving towards commercial farming. This review should address issues of consultation with community based farmer leaders during project designs, issues regarding funding as the research observed that allocations towards commercialization and actual input into farming is low compared to program managing expenditures.

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