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RESEARCH ARTICLE

Role of Capacity Building in Promoting Agribusiness: Study of Banana Farming in Ugunja District

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Abstract

Agriculture is the backbone of rural livelihood for rural communities. Most of the farmers practice mono-cropping and depend on maize as a livelihood crop. The purpose of the study was to explore the efficiency and effectiveness of capacity building of farmers in transforming subsistence farming to Agribusiness. The study was guided by the Transactive and Networking theories. The specific objectives which guided the research were; to determine capacity building methods used by extension officers to assist farmers promote agribusiness in rural Kenya and to establish the extent to which capacity building has affected the income levels generated through productivity of agribusiness. This study's target population was 550 subsistence farmers out of which a total of 165 respondents from 6 sub locations were sampled using simple random technique for this study in South Ugenya Location, Ugunja district. A total of 10 key respondents were sampled using purposive sampling from the Ministry of Agriculture Ugunja office, Community Based Organizations and Non Governmental Organizations. The research used finite universe as the sample design. The data was collected using quantitative and qualitative methods. Research design was descriptive survey while the research instruments were questionnaires, interviews observation and focus group discussions. The reliability of the instruments was tested through piloting of the instruments while validity was confirmed by the lecturers in the School of Business and Economic studies. The conceptual framework was used to provide a guide for the study. Data analysis used descriptive statistics, correlation of coefficient and t-test. The main finding of this study was that capacity building methods are very significant in promoting agribusiness. It recommended identification and mentoring of progressive Farmers, Appropriate Capacity Building Methods to be used, Training farmers on Marketing and Promoting banana farming as a crop of specialization.

Introduction

Many rural communities who practice subsistence farming have benefitted from support of Non Governmental organizations (NGOs). Self help groups and Ministry of Livestock and Agriculture have tried to assist farmers through capacity building. The colonial government left trained agricultural extension officers and deployed them to assist the local farmers through capacity building. Post colonial government has since continued to train and deploy more extension officers to carry on this noble service, however agricultural productivity has remained low and poverty has increased among local communities (Stur, Gray & Bastin, 2008).

In Kenya, agriculture is one of the key sectors to deliver the 10 per cent annual economic growth rate envisaged under the economic pillar of the Kenya Vision 2030, Republic of Kenya,(ROK), 2008). It further emphasizes that to achieve this growth, transforming smallholder agriculture from subsistence to an innovative, commercially oriented and modern agricultural sector is critical. The

strategies to make smallholders access markets include catalyzing the formation of producer and processor groups for acquiring information, inputs and accessing markets; and market promotion and development, (ROK, 2004a). Small scale farmers can be assisted to form producer marketing groups (PMGs) or common interest groups (CIGs) to benefit from such funds to expand production (ROK, 2010). This study determined the rural extension approaches used to transfer knowledge, skills and technology to farmers as a way of building their capacities.

A study conducted in Laos by Millar in 2005, on scaling out impacts, revealed that farmers need advice on proper animal husbandry, breed selection, pest control, housing and marketing their livestock in addition to embracing agricultural activities. The study showed that the pastoral communities could be assisted to improve on the quality and quantity of their livestock through capacity building. The impact of capacity building on income generation from agriculture related livelihoods needs to be very clear. The focus of this study was to find out the impact of capacity building on income generation through livelihood activities.

In Nigeria, the government established capacity building by setting up the Ministry of Parastatal Agency to create conducive environment to stimulate increased private sector investment in agriculture. This could increase growth in agricultural development and agricultural production through promotion of necessary support and capacity building. This would lead to improving the lifestyles of most of the rural dwellers by empowering them economically. This approach can promote public-private partnership to complement each other and ultimately strengthen capacity for agribusiness (FGON, 2010). This study has assisted to determine the roles of both public and private sector in capacity building in relation to rural extension.

According to Ministry of Agriculture Livestock and rural Development (MoALRD), the top seven fruits in Kenya in terms of area and total production are bananas, citrus fruits, mangoes, avocados, passion fruits, pineapples and pawpaws. Total output of bananas declined from 1992 and this was attributed to widespread diseases such as *sigatoka*, *panama wilts* and pests such as banana weevils and nematodes in the late 1980s and early 1990s (Kahangi, 1996). During the same period, tissue culture banana biotechnology research was in progress and a breakthrough was experienced in the early 1990's. This led to the increase in production from 1995. Bananas and *Sukuma wiki* are actively promoted; in most areas at least one-third of all rural households sell these crops. Improvements in production and marketing of these two crops would have the broadest impacts on income levels and poverty rates (Muendo & Tschirley, 2004). A study by Qaim (1999) on assessing the impact of banana biotechnology in Kenya demonstrated that the average per acre incomes for small, medium, and large-scale farms could rise by 156, 145, and 106 % respectively. This was in complete contrast to the traditional belief that small-scale farmers cannot benefit from modern biotechnological applications

It is necessary to find out how best to enhance the efficiency of the organizations which strive to support these local farmers. This study aimed at establishing strategic role of the NGO based capacity building in establishing vibrant local farmers' productivity. The study examined the capacity building of communities supported by NGOs in collaboration with self help groups that would result into productive farming. The banana project initiated in Ugunja District involved collaboration of Plan Kenya, Plan International, USAID and Rangala Family Development Programme to build capacity of farmers in Ugunja District to embrace banana farming. This was because citizens had concentrated on planting traditional crops like cassava, sorghum and maize that were not economically viable. Members of Rangala farmers' group were given hybrid banana species. Bananas were selected because they require little labour and the produce are higher than maize (Adhiambo, Adieri & Bhanjee 2009). The group which had about 400 members that benefitted directly from the program have since involved the beneficiaries in educating more farmers to embrace planting these bananas. In addition, members have been trained by extension officers on banana husbandry. This study was necessary to establish if capacity building is the correct strategy for promoting bananas to reach commercial value.

Production begins within 14 months from planting and may last up to ten years bringing reliable family income (ROK, 1994). Research is needed to determine the strategic options to improve the welfare benefit share of participating groups like. provision of credit, co-operative marketing, information dissemination and the best cost-effective ways of implementing such options (Wambugu, Njuguna &Wanyangu, 2005). This study determined the strategic options by the government and stakeholders to improve the capacity of farmers in the most efficient and effective ways.

METHODOLOGY

The study was carried out in Ugunja District. The district is located on latitude 0.182" and longitude

34.2956". Ugunja is one of the six districts in Siaya county. It is 70 kms away from Kisumu town along Kisumu-Busia highway. It covers an area of 201km^2 with 80% arable land. It receives bimodal type of rainfall and is suitable for most industrial crops including cotton and sugarcane while maize, cassava, bananas, sorghum, and beans are the major sources of food crops. Ugunja District was chosen by the researcher because of the banana growing projects introduced and funded by various organizations in the district. Ugunja is located within a business highway that links Kenya with Uganda, Rwanda and Congo. Uganda sells large quantities of bananas, pineapples and maize to residents of Ugunja District yet the district has a potential of producing the same food crops. According to the District Agriculture Officer (ROK, 2009) Ugunja district, there is only one extension officer for the five locations. This farmer ratio of one extension officer to one thousand farmers confined data collection from MOA respondents to District and Divisional levels. This raised interest on the methods used for rural extension given the limited number of personnel. Most of the population concentration found in the town centre, Ugunja which is a major business centre.

The target populations were farmers in the district that have benefitted from the banana farming project and practicing banana farming. The total target population was 550 farmers as respondents from six sub locations.

Purposive sampling was used to select Ugunja district to represent a larger section of the district and Kenya as a country. Simple random sampling was used for the banana beneficiaries as the respondents in the sub locations and purposive sampling was used for the key informants. A representative sample of 30% was taken of the target population (Mugenda & Mugenda, 1999). The sample size was 209 farmers of which 165 were respondents and 10 key respondents because of their expertise in capacity building.

A pilot study was conducted to experiment on reliability of the instruments and the necessary amendments made. This was to ensure clarity in interpretation and assisted to improve the instrument during actual data collection. The validity of the instruments was confirmed by the respective supervisors and lecturers from the school of Business and Economic studies.

Data was collected using questionnaires and focus group discussions for respondents, scheduled interviews for the key respondents and observation guide by the researcher. The collected data was edited coded and classified using descriptive and numerical attributes. The coded data was then analyzed through SPSS software using descriptive statistics, percentiles, cross tabulation to find out the relationship between various variables, correlation of coefficient to determine consistency in responses and t-test to determine the significance of correlation between variables. Analyzed data was presented in form of tables and reports.

RESULTS AND DISCUSSIONS

In this chapter, data collected was analyzed to establish the capacity building methods used and to determine the impact of capacity building methods on income derived from banana selling.

Capacity Building methods used by Extension officers to Assist Farmers Promote Agribusiness in Rural Kenya.

This objective answered the research question, what are the capacity building methods used by extension officers in Kenya?

In order to establish the capacity building methods applied, three items touching on capacity building were selected as shown by Table 1. A large number of respondents 119 (76.2%) strongly agreed or simply agreed that subsistence farming for over a period of ten years had provided them with enough experience to be able to grow high yielding hybrid bananas. More than half 99(63.4%) of the respondents strongly agreed or agreed that farmers in the study area normally request for extension services from the government agricultural extension officers in the area. Only 23 (14.7%) of the respondents either strongly disagreed or simply disagreed with that statement. The rest 34(21.7%) of the respondents were not sure.

.A huge proportion 146 (93.9%) of respondents agreed that farmers in the area had benefited from seminars, workshops, participatory field visits, farmer field schools and agricultural shows as techniques of capacity building. Through cross tabulations, Table 5 shows that farmers with primary and secondary level of education 64(40.9%) and 62(40%) respectively agreed that they had benefitted from the capacity methods listed above. This shows both educated and non educated individuals practice farming as a livelihood.

The researcher observed that farmer field schools had been established and served as learning centres for the banana farmers. Several farmers had allocated portions of their farms for bananas and other sections left for maize production. These were farmers with more than 200 banana stools.

Key informant (KI) interviews information revealed that the capacity building methods employed by various organizations were; trainings, workshops, demonstrations, field days, farmers field schools, field tours/ exchange visits, partnership and working

together with (Ministry of Agriculture) MOA supporting the extreme poor with skills, seeds and farm inputs, distribution of banana suckers, coaching and mentoring among many others. Most popular capacity building methods were farmer to farmer, farmer field schools, demonstration sites and exchange visits. Baseline study finding of a capacity building project, in Iringa, Tanzania, recommended that the department of agriculture should promote farmer to farmer volunteers to support other farmers (Katende, 2011). A key informant revealed that farmers only attended workshops to benefit from allowances commonly provided by NGOs. Greater commercialization of agricultural systems and increasing trade liberalization dictate a need for greater capacity on the part of the agriculture workforce in the 21st century (Rivera & Gary, 2008). This suggests that to keep pace with the changing local and international agriculture environment there was need to ensure appropriate capacity building methods with desirable outcomes were used.

Table 1: Capacity Building Methods Used By Respondents

Statement	Strongly Agree		Agree		Not sure		Disagree		Strongly Disagree		Mean score
	N	%	N	%	N	%	N	%	N	%	
1. Subsistence farming for more than 10 years has provided farmers in this area with enough experience to be able to grow high yielding hybrid bananas	32	20.5	87	55.7	10	6.1	20	13.0	7	4.4	3.75
2. To get extension services, farmers in this area usually inform the Government agriculture extension officers.	10	6.1	89	57.4	34	21.7	16	10.4	7	4.4	3.51
3. The following are the methods of capacity building that farmers in this area have benefited from: Seminars, Workshops, Participatory, Field visits, Farmer field schools, Agricultural shows.	80	51.3	66	42.6	3	1.7	7	4.4	0	0	4.40

Source: Field survey 2013

Table 2: Cross Tabulation of the Role of Capacity Building and Gender of Respondents

CAPACITY BUILDING PLAYS A MAJOR ROLE IN PROMOTING AGRIBUSINESS												
Gender	Strongly agree		Agree		Not sure		Disagree		Strongly disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Female	27	46.5	45	58.9	8	42.9	3	100	0	0	83	53
Male	31	53.5	31	41.1	11	57.1	0	0	0	0	73	47
Total	58	100	76	100	19	100	3	100	0	0	156	100

A cross tabulation analysis of capacity building and gender on Table 2 indicated that 58.9% of females agreed they had benefitted from various capacity building methods used compared to 41.1 % of males who also agreed. Women perform between 60 and 80 percent of the agricultural work in rural areas (ROK, 2006). Their participation in capacity building activities is also higher than that of men. Smallholder farmers especially women have little access to farm inputs. If they were assisted through capacity building and provision of farm inputs, their low capacity can be alleviated which can lead to rural development (Mwangi & Agunga & Garforth et al 2003). This shows the need to target women more with capacity building with specific content as this will enable them understand the importance in as far

as income generation is concerned. Crops officer expressed that *"community culture is a barrier to expansion of banana acreage as men dominate decisions on use of land. They believe women should not even plant bananas.*

The large numbers of women participating in capacity building activities shows their interest and recognition of their important role as such better services need to be provided for them.

A further analysis was done to establish the consistency of respondents on the 3 statements on capacity building methods. The analysis revealed that respondents on subsistence farming statement had a mean response of 3.75 and a standard error deviation of 1.063 giving a coefficient of variation of 28.35%. This was followed by responses on statement number 2 with a mean rating of 3.51 with a standard deviation of 0.926 and a coefficient variation of 27.43% Table 3 Respondents on statement number 3 had a mean rating of 4.40 and a standard deviation of 0.743 with a coefficient of variation of 16.88% ,Table 4.4.

From this analysis, responses on statement number 3 were the most consistent. This clearly means that farmers are sure of the capacity building methods they have benefitted from. It also tells us that subsistence farming and the need for farmers to inform agriculture extension officers whenever they require services have little significance on commercialization of banana farming. This implies the need for policy changes under the Ministry of Agriculture on the way of improving capacity and eventual conversion of subsistence farming into medium scale farming.

Table 3 : Consistency of Respondents on Capacity Building Methods statements

Statements	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree	∑f	x	S	CV %
1.Subsisitence farming for more than 10 years has provided farmers in this area with enough experience to be able to grow high yielding hybrid bananas	32	20	10	87	32	156	3.75	1.063	28.35
2.To get extension services, farmers in this area usually inform the Government agriculture extension officers	7	16	34	89	10	156	3.51	0.9263	27.43
3.The following are the methods of capacity building that farmers in this area have benefitted from: Seminars, workshops, participatory, field visits, farmer field schools, Agricultural shows	0	7	3	66	80	156	4.40	0.743	16.88

Source: Field survey 2013

The researcher observed that more than half 99 (63.4%) of farmers in the study area normally request for extension services from the government agricultural extension officers. Farmers in the area had benefited from seminars, workshops, participatory field visits, Farmer Field Schools (FFSs) and agricultural shows as techniques of capacity building with majority with primary and secondary levels of education having strongly agreed. The capacity building methods used by extension officers to assist farmers promote agribusiness in the area included; trainings, workshops, field schools, exchange visits, field day demonstrations and the provisions of seeds and farm inputs. The participation of farmers was mainly through farmer to farmer interactions, FFSs, demonstration sites and exchange visits. Majority of the farmers had allocated reasonable portions of their farms to banana farming. Participation of women in capacity building activities was higher than that of men.

The study identified various challenges experienced by the government, NGOs/CBOs and other private sector players in the provision of capacity building in the study area. These included inadequate funds and facilities to facilitate capacity building, most community farmers and by extension community members were used to hand-outs thus expected allowances for any sitting and there was shortage of extension officers in most stations and the few available were based at district and location levels. This not only caused inadequate extension support from government extension officers to farmers but also led to low adoption of new skills and technologies due to high illiteracy levels among farmers.

Impact of Capacity Building on Income levels Generated through Productivity of Agribusiness Derived from Farming.

The second objective of the study answered the research question, how does capacity building impact on income generated through productivity of agribusiness? The responses have been tabulated on Table 4.

Majority 134 (86.1%) of the farmers agreed that capacity building plays a major role in promoting agribusiness as indicated in Table 4. Only 3(1.7%) were in disagreement with the statement while a small number 19(12.2%) were not sure. This shows that the respondents were aware of the benefits of capacity building on livelihood when properly effected.

When asked whether farmers with secondary education and above were more likely to embrace agribusiness, 89(57.4%) of the respondents agreed while 35 respondents (22.6%) were undecided. Only 31(20%) were in disagreement with the proposition. Out of the total 156 respondents, 130 (83.5%) said that farmers in the area were growing bananas primarily for income generation. The remaining 16.5% of the respondents either disagreed or were undecided. The study observed that farmers in the area had realized an increase in income since they began engaging in banana farming. This was reported by132 or 84.4% of the total respondents interviewed. The number was seen to be significant compared to the 17(10.4%) respondents who were of the opposing opinion. The following sentiments from the Key Informant Interview schedules confirm that indeed capacity building was economically beneficial to farmers involved in agribusiness:

Imani Community Education Development and Empowerment Programme (ICEDEP): "*Capacity building has helped farmers to be self-reliant particularly through group saving and sharing of markets for their products. Parents during meetings say the best business enterprise they would engage in is banana farming enterprise".*

Crops Officer: "*Agribusiness is picking up among the farmers more focused on farming as business. Many farmers have engaged in banana farming to generate income. Some banana farmer groups have gone for permits from MOA for banana production. A few have started home processing of banana, mangoes and passion fruits.*

This was further confirmed by the focus group members who said they were able to make mats, ropes and wall hangings using banana barks and using leaves to provide shade. *'Our challenge is how to market our products.'*

During one of the focus group discussions, the farmers further shared on the amount of income they generated from banana sales. *'This okhasia type of banana has the capacity to produce banana fruits three times, which we sell at 250 kshs and 16 suckers for every stool which we sell suckers to those interested at between 50 -100kshs'* .

Delivery of tissue culture banana plantlets in Africa requires the development of a network of intermediary nurseries (Wambugu & Karembu & Njuguna &Wanyangu, 2001).

During the study the members also said that the number of banana stools varied in their farms *'we have those with only 10 banana stools while the highest had about 400 banana stools.*

From observation, portions of land allocated for bananas ranged between quarter and half of the total land. A few allocated entire farms to bananas and grew other crops in different farms.

Many farmers are earning more income as a result of increased access to extension services, even though many households still produce little (ROK, 2004b). This shows that accessible and available extension services are pertinent if farmers are to benefit from banana farming as an enterprise.

Table 4: Impact of Capacity Building on income derived from Agribusiness

Statement	Strongly Agree		Agree		Not Sure		Disagree		Strongly Disagree		Mean score
	N	%	N	%	N	%	N	%	N	%	
1. Capacity building plays a major role in promoting agribusiness	58	37.4	76	48.7	19	12.2	3	1.7	0	0	4.21
2. Farmers with secondary education and above are likely to embrace agribusiness.	35	22.6	54	34.8	35	22.6	24	15.7	7	4.4	3.53
3. Farmers in this area have realized increased income since they began engaging in banana farming.	56	35.7	76	48.7	8	5.2	14	8.7	3	1.7	4.10
4. Farmers in this area are growing bananas for income generation	56	35.7	74	47.8	7	4.4	14	8.7	5	3.5	4.04

Source: Field Survey 2013

Table 5 Cross Tabulation of the Role of Capacity Building in Promoting Agribusiness and Respondents' Education Level

Level of Education	Strongly agree		Agree		Not sure		Disagree		Strongly disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
College	5	9.3	10	12.5	0	0	0	0	0	0	15	9.6
None	7	11.6	7	8.9	1	7.1	0	0	0	0	15	9.6
Primary	23	39.5	27	35.7	11	57.1	3	100	0	0	64	40.9
Secondary	23	39.5	33	42.9	7	35.7	0	0	0	0	62	40
Total	58	100	76	100	19	100	3	100	0	0	156	100

A cross tabulation of the role of capacity building in promoting agribusiness and respondents' education level in Table 5 showed that education levels may not be a determinant for a farmer to practice agribusiness. The farmers engaging in banana faming for income are of varied education levels including those with no formal education.

A further analysis was done regarding impact of capacity building methods on income generated, Table 6 to find out the consistency of responses. The analysis revealed that responses on statement 1 had a mean rating of 4.21 and a coefficient of variation of 17.38 %. In statement 2 responses had a mean rating of 3.53 and a coefficient of variation of 32.01% while statement 3, responses had a mean rating of 4.10 and a coefficient of variation of 23.71 %. The mean rating of responses in statement 4 was 4.04 with a coefficient of variation of 25.45%.

This analysis implies that responses on statement 1 which states that capacity building methods play a major role in promoting agribusiness were the most consistent at 17.38 % coefficient of variation. This was followed by statements 3 and 4 at coefficient of variation of 23.71% and 21.45% respectively.

The most inconsistent responses were registered on statement 2 therefore this implies that the level of education may not necessarily influence level of income by banana farmers.

Table 6: Impact of Capacity Building Methods on Income Generated

Statements	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree	∑f	$\bar{X}$	S	CV %
1.Capacity building plays a major role in promoting agribusiness	0	3	19	76	58	156	4.21	0.732	17.38
2.Farmers with secondary education and above are likely to embrace agribusiness	7	24	35	54	35	156	3.53	1.13	32.01
3.farmers in this area have realized increased income since they began engaging in banana farming	3	14	8	76	56	156	4.10	0.472	23.71
4.Farmers in this area are growing bananas for income generation	5	14	7	74	56	156	4.04	1.028	25.45

Source: Field Survey 2013

Table 7: Coefficient of Correlation Analysis

Capacity building methods (X)	Banana income (Y)	Xr	Yr	d^2
0	5	5	5	0
7	14	3	3	0
5	7	4	4	0
66	74	2	1	1
80	56	1	2	1

Correlation Analysis

A coefficient of correlation analysis Table 7 was performed between statement 3 in Table 1 on capacity building methods and statement 4 in Table 6 on growing bananas for income generation.

The analysis revealed that there is a strong positive correlation between statement 3 on capacity building methods and statement 4 on growing bananas for income generation of 0.9 with a standard error of correlation of 0.0849.

A t-test ratio of correlation was performed to establish the significance of capacity building methods of training on income generation.

The calculated t value was 3.5763 and the critical value at $\sigma = 0.05(5\%)$

3df was established to be 3.182. This implies that capacity building methods of training significantly influence the level of income generated from banana farming. This analysis is inferred from Table 6.

In other words $3.5753 > t\sigma = 0.05 = 3.182$

Government regulators and service providers must be up-to-date on modern technologies and global best practice. Without highly knowledgeable producers, trained research, and extension workers, and competent administrators, program managers, and support staff, agricultural systems are unlikely to remain competitive and sustainable, even if all other production factors—land, water, production inputs, finance, and so on are available (Rivera & Alex & Gary,2008). This suggests that intermediary organizations should ensure their staff have the capacity to be able to support farmers with the relevant and appropriate knowledge, skills and technology. This is what will build their capacity to

be able to strategically manage banana farming for income generation.

The study observed the following; capacity building plays a major role in promoting agribusiness and farmers were aware of this factor. Farmers in Ugunja district were growing hybrid bananas primarily for income generation because of the costs incurred on suckers, compost manure and labour involved. Farmers in the study area had realized an increase in income since they began engaging in banana farming. 132 or 84.4% of the respondents attested to this fact. From a total of 100 banana stools, a farmer would generate approximately kshs 125,000 yearly from selling both banana fruits and suckers. Key respondents shared the fact that one acre of land can accommodate 346 banana stools, from this, a farmer is able to generate approximately kshs 480,000 yearly. Ugunja has land area of 201 km^2, arable land is160 km^2 while land under cultivation is 110 approximately kshs24, 480,000 from bananas yearly. This provides an opportunity that can be exploited by farmers for more financial benefits. Ugunja banana farmers production and marketing society has been established, and it represents all farmer field schools and will be focal in marketing bananas as expressed by Ugunja Community Resource Centre (UCRC).

CONCLUSIONS

Capacity Building Methods Used By Extension Officers To Assist Farmers Promote Agribusiness in Rural Kenya.

Farmers had benefited from seminars, workshops, participatory field visits, farmer field schools and agricultural shows as techniques of capacity building. Capacity building has improved farmers' knowledge, skills and created linkages between farmers and with organizations. As a result of capacity building, farmers have begun allocating portions of their farms for hybrid banana growing. A variety of capacity building methods were used based on levels of education. Farmers with primary and secondary education were likely to attend seminars and workshops because of their ability to understand. Those with no education were likely to participate and learn better through observations and interacting with other farmers, through farmer field schools, exchange visits and demonstration sites. Accessibility to these capacity building methods provided a quick and cheaper way of learning as no transport costs were incurred. It is the farmers who usually request for services from the extension officers who are few in number at the same time are not effectively facilitated by the government to attend to farmers' needs.

Impact of Capacity Building On Income levels Generated through Productivity of Agribusiness derived from Farming.

Capacity building plays a major role in promoting agribusiness as farmers growing bananas were doing it primarily for income. This was as a result of the knowledge gained on the financial benefits of bananas. Furthermore these bananas are hybrid type and farmers have to incur a cost to be able to produce them. Farmers' groups are pursuing additional income-generating enterprises such as the production and sell of banana suckers to other farmers and generating income to buy other necessary farm inputs. As a result of the benefits experienced so far, farmers have allocated portions of their farms for growing bananas. Farmers have begun realizing income from selling of banana products at individual level but were still not effectively utilizing the producer marketing groups for marketing of bananas. Small scale processing at farm level on other crops was already visible in the area. Capacity building is important to change farmers' attitude and equip them with better farming skills to be able to generate income, this is regardless of their level of education. The participation of women in banana farming is high and they lack skills to improve quality of production and effective marketing skills. The idle arable land provides an opportunity for expanding banana acreage and generating a large amount of income.

RECOMMENDATIONS

Identification and Mentoring of Progressive Farmers.

Progressive farmers should be identified and supported through more contemporary capacity building methods as the methods used in training significantly influence income generation. Pilot projects should target them as early innovators. This will not only motivate other farmers but stimulate competition among them that will enhance progress towards agribusiness.

Appropriate Capacity Building Methods

Farmer to farmer, demonstration plots, farmer field schools and exchange visits are the most appropriate capacity building methods that promote transfer and sharing of skills and knowledge regardless of education level.

Training Farmers on Marketing

To improve the efficiency of the marketing system, there is a need for increased investment in marketing infrastructure, both physical and institutional and this includes trade and other procurement through contract arrangements, including contract farming and capacity building, including human resource development in agribusiness. Only progressive

farmers with many banana stools could be trained on marketing and supported to form strong marketing associations to enable them source for markets for their produce including banana fruits and suckers. As 'Early adopters' they could also be trained on value addition to prepare them for export trade.

Banana as a Crop of specialization

Banana should be developed as a crop of specialization as it's potential benefit has been proved through this study. It is also important to calculate the cost benefit analysis of various livelihoods with farmers as this will enable them make strategic decisions on livelihoods.

Suggestion for Further Research

The study presents the following suggestions:

i. Carry out a study to establish the impact of land succession on sustainability of income generating farming.
ii. A study on role of Information Technology in the promotion of agribusiness in rural areas of Kenya with a focus on use of mobile phones.
iii. This study was conducted in Ugunja district; there is a need to replicate the study in more rural areas so as to provide data generalized across a broader spectrum

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