

Influence of Agricultural Extension Education on Marketing of Poultry Products in Butere Sub County, Kakamega County, Kenya

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Abstract: *Poultry farming as an enterprise is important in this time and age of diminishing acreage in terms of landholding in sub-Saharan Africa. Marketing activities are essential in poultry farming, and they include collection, evaluation, and dissemination of marketing information and scheduling of production, thus agricultural extension education plays a major role in the marketing of poultry products. The purpose of the study was to establish the influence of agricultural extension education on the marketing of poultry products in Butere sub-county, Kakamega County, Kenya. The study was guided by the following research question; to establish the effect of agricultural extension education on the marketing of poultry products. The respondents were; poultry farmers, extension workers, Veterinary/Agricultural officer and transporters of poultry products as eggs, chicken and chicken meat in Butere Sub County. The study targeted Veterinary/Agricultural officers in each ward in Butere sub-county, FTC trainers, poultry farmers and transporters. A sample size of 149 farmers was selected to participate in the study. The main data collection instruments were a questionnaire, interview schedule and focus group discussion. The data collected was analyzed using descriptive and inferential statistics. Descriptive statistics were presented in pie-charts, percentage, tables and graphs format and also in inferential statistics. The results show that 97.69% of the farmers did not receive support from government .58.54% of the total farmers agreed to have benefited from agricultural extensions education. Although they agreed that it was effective, the extension officers would visit them in their farms the major problem was that the visits were rare.38.75 of the farmers agreed that information on marketing was effective . There was a significant association between agricultural extension education and marketing of poultry products. The information will help poultry farmers improve production efficiency. The result of the study will help to improve the performance of the extension officers and farmers. The farmers will be able to gain more knowledge and skills that will lead to an improved standard of living. The information will also be useful to government planners who require the knowledge and adaptive strategies for successful poultry farming planning.*

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I. Introduction

Livestock currently contributes between 25% and 30% for agriculture GDP of developing countries and that is expected to rise up to 50% over the next 20 years. Over 70% of the world's rural poor depends on livestock (mainly sheep, goats, pigs and poultry as an important component of their livelihood (FAO, 2010). The growth in global demand for meat and other livestock product is tremendously fuelled by population growth, economic growth, urbanization, changing diets and reduction in prices of livestock products (FAO, 2016).

According to Swanson (2016), the term agricultural extension has changed over time. It is no longer restricted to the emphasis on technological transfer reflected by training and Visit (T & V) system but has moved to a broader concept which includes developing the skills and management capacity of farming families. The extension helps to facilitate the access of farmers their organizations and market actor to knowledge and technology, and facilitate their interaction with a similar organization (Kumar, 2015). The changing role of agricultural extension delivery calls for an in-depth investigation of the extent to which it has embraced advisory service on the marketing of agricultural products. This study is therefore designed to investigate the influence of agricultural education extension on the marketing of poultry products.

Globally poultry keeping is making an important contribution to the livelihoods of the most vulnerable rural households in developing countries (Farrelly, 2014). Chickens, ducks, geese, guinea fowl all provide a source of income, improve nutrition and help meet family and social obligations. According to Kitanyi (2016) poultry raised on family farms also make a significant contribution, along with the commercial sector, to meeting the rapidly growing demand for poultry products in many developing countries. According to FAO, the

consumption of poultry products grew by 5.8 percent per year. However marketing of this poultry products is a problem especially in developing countries.

Most poultry is produced in rural areas and consumption is in urban areas, which require transportation and quality maintenance. There is no proper channel for transporting these products to the growing demand for high-quality food, which would improve the income level of farmers and increase their living standards. There are no effective strategies for marketing poultry products. Farmers have limited knowledge on the marketing of poultry products; this does not motivate them to produce or to invest in poultry production hence low production in Kenya. Therefore this study seeks to find out the influence of Agricultural extension education on the marketing of Poultry products in Butere Sub County, Kakamega, Kenya. The Overall Objective was to evaluate the Contribution of agricultural extension education to the marketing of poultry products in Butere Sub- County, Kakamega County Kenya. The Specific Objective was to: Determine the effect of the extension on the marketing of poultry products in Butere sub-county, Kakamega County, Kenya. The study was based on the following research question: What is the effect of agricultural education extension on the marketing of poultry products in Butere Sub- County, Kakamega County, Kenya?

Poultry Production: Global Perspective

The livestock system occupies about 30% of the planet's ice-free surface area (Mehaisen *et al*, 2015). The livestock sector is increasingly organized in markets with long chains (employing at least 1.3 billion). The livestock industry directly supports the livelihood for 600 million poor smallholder farmers in the developing world (Thornton *et al*, 2006).

Global livestock production has increased substantially since 1960. Beef production has more than doubled while over the same time, chicken meat production has increased by a factor of nearly 10, made in an increase of both animals and productivity (Asmare, 2014). Odunitan-Wayas, *et al*, (2015) noted that livestock production is very important and plays a major role in the livelihood of small scale farmers and large scale farmers. In livestock farming, poultry production is a sub-sector which is practiced worldwide. Livestock Sub sector is one of the fast growing subsector of Agriculture which requires more attention and investment of more resources to increase its productivity. Poultry protein has gained more market than other types of protein. When farmers are educated on the production and marketing of their livestock products, the information acquired help to increase productivity worldwide. However most developed states do not provide clear statistics on production noted in their countries. This matter has therefore made it difficult to tell the true picture of productivity in poultry farming.

Smallholder Poultry Production

In a traditional African context, where there are no investments in veterinary care or poultry housing and the chickens are left to scavenge on their own. Poultry mortality is high and there is seldom much output to be gained from poultry keeping in rural areas (Chowdhury, 2013). Birds are usually considered to belong to the entire household and serve as gifts, as a good meal on a special occasion, or as a safety net in case of unforeseen expenditure.

However, smallholders have limited means and market access with which to capture new market share and face increased competition (Addisu, *et al*, 2013). Smallholders in general and the poor in particular, face problems accessing credit, obtaining market information or new technologies, purchasing inputs and accessing product markets. Price fluctuations and asymmetric power relations in the market add to the list of constraints that smallholders face (Wiratsudakul, Paul, *et al*, 2014).

These processes potentially lead to the marginalization of smallholder poultry producers, but there may also be opportunities for smallholders to benefit from the surge in demand. Elimination of trade barriers exposes commercial and semi-commercial producers to competition from cheap imports and affects the local commercial smallholder sector. The elimination of trade barriers is also regarded as a considerable risk factor for poultry producers found considerable differences in the socio-economic characteristics of (informal) backyard broiler producers and (formal) contract farmers in the Philippines (Madsen, *et al*, 2013).

Contract farmers are characterized by higher socioeconomic status, political affiliation, greater educational attainment, and greater financial capabilities with access to both formal and informal credit. Backyard broiler producers, in contrast, are generally less privileged, have no political or business affiliation, and have little or no access to formal credit due to high-interest rates and their lack of collateral. The backyard broiler producers are believed to practice poultry rearing as a secondary or tertiary source of income (Hopewell, 2014).

Despite the highly concentrated and vertically integrated production structure of the commercial broiler sector, a large proportion of broilers are sold as live birds through the wet markets because of consumer preference for fresh meat. Contract farmers are significantly younger than non-contract farmers and had significantly better educational attainment, access to credit, houses, sanitation and off-farm incomes (Ye, Lin,

and Li, 2016). Additionally, non-contract farmers have more irrigated land and more livestock assets than contract farmers.

However, most small scale farmers do not have adequate capital and skills to improve their poultry farming. This matter has therefore made it difficult to tell if there exists growth in productivity in poultry farming.

Poultry Production in Kenya

In Kenya, the poultry industry is characterized by two main production systems; commercial hybrid production and indigenous poultry production (Justus, *et al*, 2013). Marketing of commercial hybrid is a bit organized, unlike indigenous poultry production. Smallholders in rural areas face severe constraint to taking advantage of market opportunities and must pay high costs to overcome market imperfection brought by poor institutional infrastructure (Sebho, 2016).

The poultry industry is a key contributor to the economy of local communities. Apart from generating income, it ensures food security as well as improving nutrition to over 90% of households owning a stock (Khobondo, *et al*, 2014). Smallholder poultry is practiced by most rural households throughout the developing world, its contribution to livelihoods appears to be of little value when observed by researchers and other outsiders. The market for poultry meat is growing faster than that for any other meat product, and is projected by the international food policy research institute (IFPRI) to maintain this position in the decade (Raach-Moujahed, *et al*, 2013).

Rising demand has been influenced by the increase in population growth. Smallholder has limited means and market access with which to capture new market share and face increased competition (Sebho, 2016). This is due to the problem of obtaining market information or new technologies. In order for a farmer to make any profit in the sector of poultry, he/she must have a better understanding of the markets and marketing strategies. Marketing in layman's language refers to finding out what customers want and supplying it at a profit.

In Kenya farmers face some challenges which include maintaining domestic market and increasing market share, this farmers cannot compete globally due to the low level of production (Sebho, 2016). However Kenya was ranked as a less developed state of which Agriculture though its backbone has faced major drawback. Poultry farming has been adopted by few citizens making it a less preferred in agriculture. This matter has therefore escalated to Butere Sub County prompting this research.

Agricultural Extension Services

Agricultural extension has been reoriented to meet with the changing situation of liberalization head-on. Farmers in remote areas are being encouraged to grow food crops first to ensure food security. However, such farmers are also encouraged to grow high- value crops and crops which do not need high fertilizer applications as a cash crop. Extension priorities are being developed in three major agro-ecological zones to support technologies which have great potential for farm incomes and household food security while maintaining the sustainability of the resource base (Sebho, 2016).

A piece of improved information and knowledge flow to, from and within the agricultural sector are a key component in improving small-scale agricultural production and linking increased production to remunerative markets, thus leading to improved rural livelihoods, improving quality and yield, food security and national economies (Garnett, *et al.*, 2016). The agricultural sector is the backbone of many economies in Africa. In Kenya, the economy depends heavily on agriculture, which accounts for more than 26 percent of gross domestic product, provides 60 percent of exports and employs 90 percent of the workforce (KNBS, 2017). Various studies have revealed that there is a positive relationship between the increased flow of knowledge and information and agricultural development.

However, most African countries have not devoted their efforts to the dissemination of knowledge and information, especially in rural areas, where 70-80 percent of the African population lives (Brooks, *et al*, 2013). Only a small amount of agricultural information is accessible to rural farmers, despite the large body of knowledge that exists in research institutions, universities, public offices and libraries. This situation is largely attributed to the weak linkages between research, extension, not for profit organizations, libraries, and farmers and thus these technologies have neither reached nor been adopted by their intended beneficiaries to improve their farming activities in developing countries including Kenya (Tire, 2006). The importance of agricultural extension in rural development is widely acknowledged, particularly in developing countries where the majority of the population lives.

Byarugaba (2014) noted that the existing types of markets include; Informal Markets: These are within the villages, possibly selling from farmer to farmer or to retailers. Often chickens are bartered for larger animals such as goats. Primary markets: Are generally formed by several villages within a parish (Sebho, 2016). Often, they are unfenced areas with few or no facilities (perimeter fence, loading ramp, holdings, and toilets). They are held on gazetted days of the week. Traders also purchase chicken from adjacent several primary markets, during

the course of a week and truck them to destinations within or outside Uganda. Secondary markets: They normally have a larger output than that of primary markets but also lack proper weighing, loading, and hygienic facilities. Traders often come with trucks to buy local chicken for immediate transportation to larger centers such as Kampala.

According to Dalipagic and Elepu (2014) urban markets are found in larger towns and cities. Often there are designated areas where mobile chicken stalls are erected. Local governments tax operators of such units. Consumers from such urban markets are hotels, restaurants and some affluent city dwellers. Prices in these markets range from Ush. 3500-to 7000/- in 2005 with an average price layer difference of Ush. 2000 (Elepu, 2016)

Factors that affect the marketing of local poultry include; seasonal availability of birds, transportation, retailer output, outbreaks of diseases, lack of information on prices and lack of streamlined marketing structures. Others may be socio-religious factors, which are due to plumage and sex. A major constraint to small-scale, family-based poultry production in Tanzania is viscerotropic /velogenic Newcastle disease (hereafter referred to as Newcastle disease), which is caused by a virus that is capable of causing up to 80 to 100% mortality in unprotected flocks (Rajashekara, 2015). The virus spreads rapidly by means of airborne droplets produced by the coughing or sneezing of infected birds. In Tanzania, the highest prevalence of Newcastle disease outbreaks occurs in the dry season, from June to October (Mubito, *et al.*, 2014).

Formal risk analysis has rarely been applied to individual farms in Kenya but would assist in determining the benefits of existing and proposed on-farm biosecurity measures and in highlighting gaps in our knowledge regarding the levels of hazards for farms. Training in disease diagnosis, epidemiology, environmental health, and disease prevention must be provided, not only for health personnel but for the farmers as well. Limited access to institutional services such as extension, training, credit and veterinary services affect poultry production in Kenya (Ochieng *et al.*, 2013). Agricultural extension education should be offered to farmers and his family in rural areas so as to increase the level of production. However Kenya has adopted agricultural extension services which is facing a challenge since extension officers provided are less compared to farming conducted. This matter has therefore made it difficult to tell the efforts the government is doing to avail extension officers due to their minimal number.

Agricultural Education Extension

According to Chokera, *et al.* (2014) agricultural marketing is a process which starts with the decision to produce a saleable farm commodity and it involves all the aspect of market structure or system both functional and institutional. Agricultural education extension refers to an extension as an out of school education and services for the member of the farm family and others directly or indirectly engaged in farm production to enable them to adopt improved practices in production management conservation and marketing (Kishor, 2014). The term extension is composed of two words derived from Latin roots ex-meaning out and tension meaning stretching. Extension education is stretching out to the people who are beyond the limits of education.

The education is effective when it results in the changes in all behavioral components as specified by (Hudson, 2015). Knowledge what an individual knows. Attitude, what he or she thinks Skills (both physical and mental) what he can do. Action what he or she actually does. This aspect is known by the acronym "KASA". Therefore extension involves the conscious use of communication to help people to form sound opinions and make a good decision (Waddington, *et al.*, 2014). The extension can also be defined as a professional communication intervention deployed by an institutional to induce changes in voluntary behavior with a presumed public or collective activity.

The birth of the modern extension service has been attributed to events that took place in Ireland in the middle of the 9th century (Ragasa, *et al.*, 2013). The central tasks of the extension are to help rural families help themselves by applying science whether physical or social to the daily routine of farming homemaking and community. The extension involves changing attitude knowledge and skills of people working with men women young people boys and girls to answer their needs and wants to help people to help themselves.

Agricultural education extension; this is education for the farm family and others directly or indirectly engage in production to enable them to adopt improved production and marketing. The information on new technology and marketing will make the farmer increase production and improve on marketing hence increasing the living standard of the community (Gerber, *et al.*, 2013). It is an informed education. Teachers or extension workers start with the practice first and therefore theoretically aspects are to be touched. There is no fixed curriculum of study. It is bi-direction learning where teacher also learn from farmers during the course of teaching the farmers. It is flexible allowing freedom to develop program locally. The extension helps use democratic methods in educating the farmers. The extension helps in the adoption of innovation. However in Kenya agricultural education done at county levels are done by politicians or in seminar forms which may have a less content coverage. This matter has therefore made it difficult to tell the true efforts made in poultry farming.

Agricultural Marketing

Gerber, *et al.* (2013) noted that agricultural marketing is a process which starts with the decision to produce a saleable farm commodity, and it involves all aspects of markets structure or system both functional and institutional-based on technical and economic considerations and includes pre and post-harvest operation assembling grading storage transportation and distribution. Marketing is very important .marketing as a process or technique of promoting, selling and distributing a product or service (Benfica, *et al.*, 2016).

Therefore marketing poultry products require processors to promote and distribute poultry products to be able to sell them to increase the market share in front of competitors and reach more consumers for the sustainability of the company. However, because of availability of several suppliers in the competitive market, processors must also know consumer needs to fulfill consumer interest and increase consumer purchase thereby adding value to poultry products is forms a major marketing method used to increase sales and therefore the market share (Gerber, *et al.*, 2013).

Marketing of poultry products is very important because it helps in the distribution of this product which is perishable and should be marketed within a period of a short time. It is very important for farmers to understand marketing concepts (Vadivelu, *et al.*, 2013). In marketing poultry products there is a chain of intermediaries involved. So it is very important to get enough information on marketing concepts.

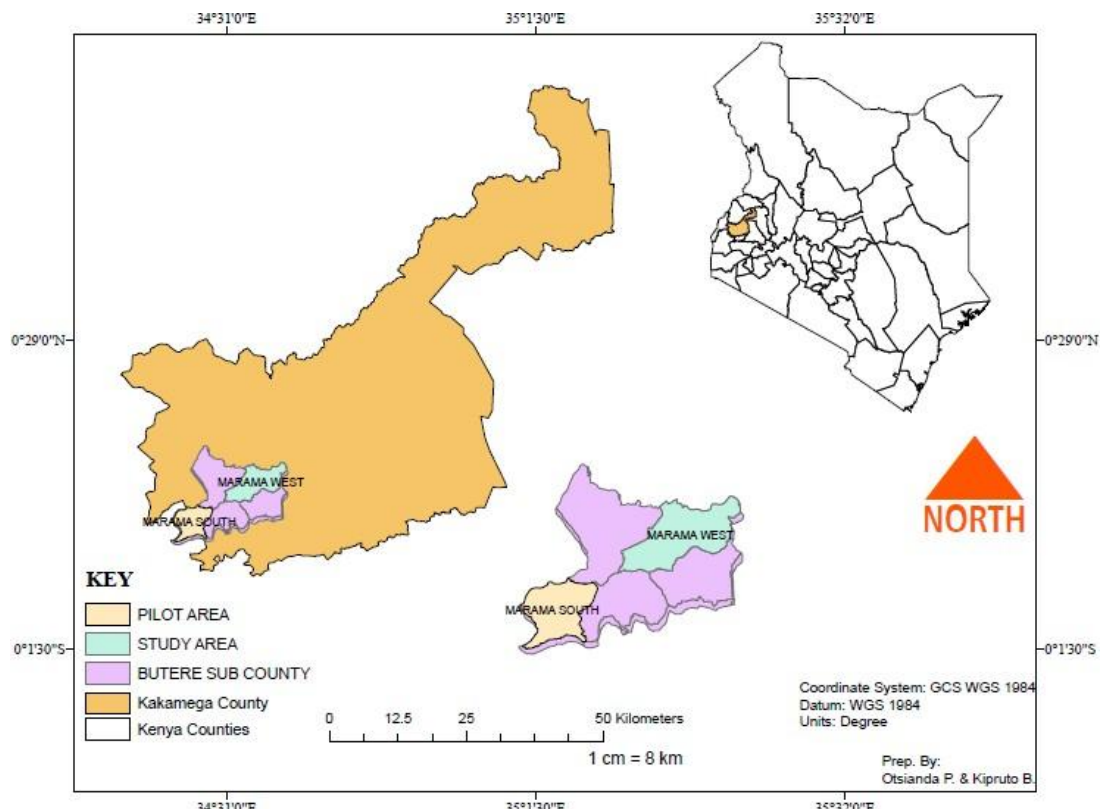
Changing demographic patterns makes marketing very important. People normally move from villages to town leaving only a few in the agricultural production region. In terms of marketing, there is a concept that is behind its success.

Agricultural marketing is essential for the uninterrupted supply of products from producers to consumers (Wilson, *et al.*, 2016). Farmers can achieve potential benefits if they access markets where they can sell their product directly to consumers. Most farmers cannot achieve economy of scale from their sales because they are unable to reach the markets at the right time and the right place. Most farmers in western Kenya are uneducated and illiterate they do not know about markets although in some case they know about the markets they cannot do anything due to lack of capital and other factors (Justus, *et al.*, 2013).

Research Methods and Materials

This study was carried out in Kakamega County , which is one of the 47 counties in the Republic of Kenya. It borders Vihiga County to the south, Siaya County to the West, Bungoma County to the North and Nandi County to the East. The county covers an area of 3050.3 Km² (Kakamega CDP, 2013). The altitude of the county is between 1,240 metres and 2,000 metres above sea level. According to the 2009 Kenya Population and Housing and Census (KPHC) report, the total population in the county is 1,660,651 consisting of 797,112 males and 863,539 females. According to the Population and Housing Census of 2009, the unemployed population in the county was 196,938. This implies that majority of the people in the labour force are not gainfully employed. People employed by sector were: 756,711 in the agriculture sector, 34,052 in self-employment, and 2,554 in wage employment, while 54 were in urban self-employment. Sectors which form a substantial number of self-employed persons include the Jua Kali, cottage industries and bodaboda. In agriculture, self-employed persons engaged mostly in land ploughing, weeding, bush clearing, planting, harvesting and post-harvest handling. Others are engaged in mining, forestry, brick making and building construction. The main crops grown in Kakamega County are sugarcane, maize, bean, cassava, finger millet and sorghum. Maize forms the staple food for the county. Cattle, is reared by 53.2% of the population while 22.2%, 11.2%, and 1.6% of the population rear sheep, goats and pigs respectively. Chicken rearing is pre-dominant with 92% of the households keeping them while 0.7% keep donkeys. Butere sub-county was selected for the study because of the pre-dominance in poultry rearing. Poultry products in the area are transported to Butere town and other towns in Nyanza and Western Kenya.

II. Map Of Study site



The study adopted correlational research design. Correlational research aims to ascertain if there are significant associations between agricultural extension education and marketing of poultry products. The study used 30% of the target population to select the sample size that was used in the study. Poultry farmers were selected using random sampling because of their large number. Veterinary /Agricultural officers, FTC officers and Focus group discussion were selected through purposive sampling. The research instruments used in collecting data were questionnaires, interview schedule, Focus group discussion and checklist. The data was analyzed using both qualitative and quantitative techniques. The correlation analysis technique was used to determine the relationship between the independent variables and the dependent variable. This technique was employed with the study of findings the influence of agricultural extension education on marketing of poultry products.

The Statistical Package for Social Sciences (SPSS version 18) was used to run descriptive statistics such as frequencies and percentages so as to present the quantified data in form of research questions. The qualitative data generated from open ended questions were categorized in themes in accordance with research objectives and reported in narrative form along with quantitative presentation.

III. Findings and Discussion

Poultry Support

This section sought to analyze the existing sources of support that the poultry farmers in Butere were entitled to. They included support from the government, NGOs and access to veterinary services. It also analyzed the availability and effectiveness of the extension services including farm access and visits by the agricultural extension officers to the poultry farmers.

The findings on whether the poultry farmers received support were as follows; 120 (97.6%) of the farmers did not receive support from the government but 3 (2.4%) only while 92 (74.8%) of them did not receive support from the NGOs but 31 (25.2%) only. On access to veterinary services 112 (91.06%) did not have access to veterinary services only 11 (8.94%) were able to access veterinary services. On benefits of agricultural extension, 72 (58.54%) of them agreed to have benefited from agricultural extensions education while 51 (41.46%) said to have not benefitted. In addition, on farm educators, 71 (57.72%) of the farmers stated that educators did not go to their farms while 52 (42.28%) said to have had educators visiting their farms. Finally, on effectiveness of agricultural extension education, 63 (51.22%) agreed that education is effective for poultry production while the rest disapproved that. 67 (54.47%) of the farmers did not completely respond on

how often the agricultural extension educators visited their farms, 30 (24.39%) of the farmers said that they got monthly visits from the extension officers, 21 (17.07%) of the farmers said they got yearly visits while the remaining 5 (4.07%) got weekly visits.

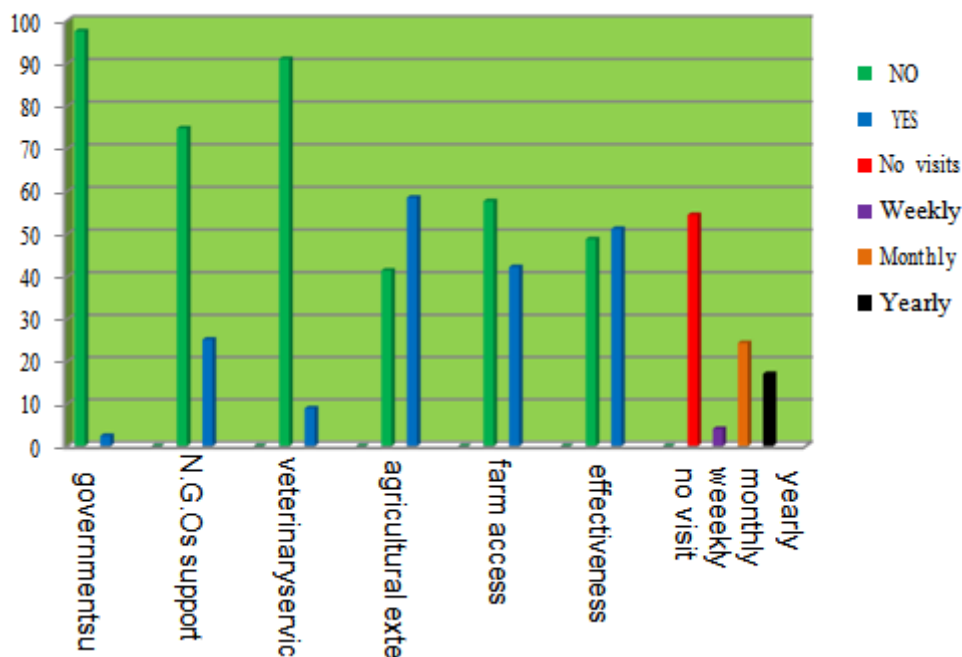


Figure 5.1: Poultry support services available to the poultry farmers in Butere sub- county, Kakamega County, Kenya

Source: Researcher (2018)

According to the findings the poultry farmers get support from government and N.G.Os. Government support is evident through agricultural extension education whereby extension officers are sent to help the poultry farmers improve their farming practices. Though according to this study only a few of the farmers seemed to have received such support. The farmers also have limited access to veterinary services in cases where their poultry needed treatment, vaccination or health boosters, though the veterinary services seemed not to be sufficient for the population as majority of the farmers reported to have no access to veterinary services. Although the poultry farmers agreed that agricultural extension education is effective and that they also benefited from agricultural extension education whereby extension officers would visit them in their farms, the major problem was that their visits were so rare. The study established that poultry support service in Butere Sub County contribute productivity in poultry farming. The significance level for the chi-square statistic greater than 0.05 (0.641)

Extension Services in Butere Sub County

Under this section the study sought to analyze the effectiveness of existing extension education, other extension services that were available to the farmers and the extension services they participated in.

Table 5.1: Extension Services in Butere Sub County

Extension education effectiveness	Mean	%Mean
informative on marketing	0.39	38.75
informative on poultry management	0.27	26.83
informative on disease management and prevention	0.30	29.54
other available extension services		
technical services	0.36	35.50
extension support	0.37	37.40
credit support	0.44	43.90
Training	0.37	37.13
Participation in Extension Services		
field days	0.36	36.04
Seminars	0.14	13.82
agricultural demonstrations	0.01	1.36

Source: Researcher (2018)

According to the findings on effectiveness on extension education, 0.39 (38.75%) of the farmers agreed that informative marketing is effective form of extension education. According to the farmers' response on other available extension services, 0.44 (43.90%) of the farmers agreed that credit support was available. 36 of the farmers agreed to have participated in the field in conjunction with the extension officers.

The study established that extension education services as well as participation extension services in Butere Sub County contribute productivity in poultry farming. The significance level for the chi-square statistic greater than 0.05 (0.667) .

The above extension services were applied to effect agricultural extension education but they had low means indicating that they were not very effective. Poultry extension education is important in today's industry because it helps provide poultry farmers with current information. They help the poultry farmers improve production efficiency besides providing them with information in many areas like on marketing, poultry management and information on disease management and prevention. The NGOs in this case seems to be providing credit support as an additional extension service by either supporting the farmers financially or by equipping them with necessary tools to aid their farming practices though this support is not sufficient. The participation of the farmers in extension activities is next to zero maybe because they are not even aware about them.

According to the interview responses by the 3 agricultural extension officers, government support in Butere was inadequate as compared to the population. Two extension officers said that despite the fact that they had been assigned to several farmers in the various wards they were unable to offer services efficiently since they were not financially compensated by the government to enable them to reach out to more farmers in the interiors. They also added that they only provided information on marketing and poultry disease prevention and management since they did not have enough resources to fully be of service to the farmers

From the focus group discussion with the FTC, they said that the poultry farmers got support from the government in terms of provision of extension officers. They also added that various NGOs extended their support through provisions of credit support to the farmers which were beneficial to the few farmers who received it. They all said that it would be advisable for the poultry farmers in Butere to form groups in which they could be easily accessed through. They said that they had been mobilizing poultry farmers to form groups which would be an added advantage as they would easily apply for financial aid from various financial institutions as a group and it would be easy for them as trainers to reach out to them for training sessions.

The findings that there is some form of poultry support by the government in form of agricultural extension and that they are necessary for provision of certain services such as tertiary services is in agreement with Omanga (2015) study which noted that there is a general consensus existing in that extension services, if properly designed and implemented, improve agricultural productivity.

Romani (2015) also supported this finding by noting that the term extension is here understood to mean extends to advisory and other services that help rural families to make the best possible use of the productive resources at their disposal. He noted that agricultural extension brings about changes in household food security, through education and communication in farmers attitude, knowledge and skills (Koyenikan, 2016).

The role of agricultural extension involves dissemination of information; building capacity of farmers through the use of a variety of communication methods and help farmers make informed decisions. Sinkaye (2015) equates help in extension to empowering all members of the farm household to ensure holistic development. Agricultural extension service is one of the agencies transforming subsistence farming into modern and commercial agriculture which promotes household food security.

Wainaina (2016) supported these findings by noting that agricultural extension services provide farmers with important information, such as patterns in crop prices, new seed varieties, crop management, and marketing. Exposure to such activities is intended to increase farmers' ability to optimize the use of their resources. At times even when technologies are available, smallholder farmers have no access to them. Awareness of existing technologies generates effective demand by providing a critical signal to input distribution systems. Thus, extension systems and input distribution systems are mutually reinforcing the contribution of extension to agricultural productivity growth depends on functioning input distribution systems, and vice versa. In addition, ideal extension system provides feedback from farmers to research centers.

The findings that extension services in Butere are ineffective are supported by Agbamu (2015) who noted that the extension services in most African countries are bedeviled by several problems making them ineffective. These include inadequacy and instability of funding, poor logistic support for field staff, use of poorly trained personnel at local level, ineffective agricultural research extension linkages, insufficient and inappropriate agricultural technologies for farmers, disproportionate Extension Agent: Farm Family ratio and lack of clientele participation in program development. Others are poor input supply, irregular evaluation of extension programmers and policy, institutional and programmer instabilities of National agricultural extension systems.

Kanyinga (2016) also supported the findings that extension services are ineffective in Kenya by noting

that in the last 10 years, as a result of economic challenges, government streamlined its expenditure which directly affected agricultural extension services in the country. It was then that the government introduced the national Agricultural Extension Service Policy which calls for the demand-driven extension service and involvement of other players in the agricultural extension services which is not as effective as in previous years. Due to the weakening of the public extension service, a number of extension agents like the community based organizations, private sector, NGOs and consultancy groups have tried to fill the gap. Despite the emergence of these groups to provide the services of extension, the household food security situation has continued to deteriorate. The role of this other private agents has been limited to credit provision to farmers.

The study findings on access to credit by poultry farmers by NGOs not being sufficient is supported by Adongo (2015) who notes that improving the availability of credit facilities to the small farmers of the agricultural sector is one of the incentives that have been proposed for stimulating its growth and the realization of its potential contribution to the economy. He notes that although the existing formal credit institutions have proved relatively successful in meeting the credit needs of this sector; their limited resources do not serve the sector's credit needs. This is because as smallholder activities expand in size, the amount of credit required becomes increasingly difficult for the existing sources to satisfy, yet they still remain too small for commercial farmers.

IV. Conclusion And Recommendation

In conclusion the study sought to establish the influence of agricultural extension education on the marketing of poultry products in Butere Sub County Kakamega County, Kenya. Hence it was found out that agricultural extension education plays an important role in the marketing of the poultry products, which increased the number of poultry kept and a favorable living.

On agricultural extension education, most farmers have benefitted but not fully since they are rarely visited by the extension officers for follow up since the officers are less compared to the population. Poultry farmers in Butere rarely participate in the extension activities because they are not even aware of their existence. Recommendations on poultry production improvement are as follows;

On Agricultural extension education, the county government should put more investment towards the provision of extension services together with both human and physical resources.

- i) The study only focused on the influence of agricultural extension education on the marketing of poultry products in Butere Sub County Kakamega County Kenya. The study suggests that further research should be done on the marketing of poultry products in order to increase the level of production, hence increasing the income level of the farmers.
- ii) Further research should be done on improving the value-added chain of poultry products on the market

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