

Utilization of Agricultural Information by Poultry Farmers in Enhancing Productivity: The Case of Menengai West, Nakuru County, Kenya

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ABSTRACT

Agriculture in Kenya has been one of the backbones of economic development in the country. Poultry farmers play a bigger role in contributing to this development. Poultry farmers utilize information for various reasons including; poultry disease management, protection, shelter, production, feeding and nutrition, hatching, marketing, breeds and breeding, and competition with crops. In Menengai West Location, Rongai Sub County, Nakuru, underutilization of agricultural information is seen as the possible cause of low productivity in poultry farming. The aim of this research was to evaluate the utilization of agricultural information by poultry farmers with a view of establishing challenges faced and proposing ways of improving production. The specific objectives of the study were; to find out the uses of agricultural information by poultry farmers; to identify factors influencing the use of certain agricultural information; to find out the awareness level of existing agricultural information by poultry farmers; to determine the effectiveness of agricultural information on poultry production and to establish the challenges faced by farmers in utilizing agricultural information. The study will benefit poultry farmers in Menengai West by enhancing utilization of agricultural information hence increasing productivity. The target population was 517 poultry farmers and the sample size for this research was 217 poultry farmers derived from the Saunder's table of sampling. Two extension officers were also targeted. A pilot study was conducted in Njoro Sub County. The study was based on Eugene's information society theory of 1979. Questionnaires and structured interviews were used for data collection. Television, radio and mobile phones were the commonly used sources of agricultural information in provision of poultry information. Inadequate agricultural extension officers and inadequate funds were major challenges faced by poultry farmers in utilization of agricultural information. The study concludes that there are gaps that exist in utilization of agricultural information. The researcher therefore recommended that the county government should employ more extension officers within Menengai West in order to reach out to poultry farmers, Agricultural resource centers should be set up by Nakuru County Government in rural areas to enable farmers in the location access agricultural information easily and within reach, establish partnership with agricultural institutions and county government to disseminate agricultural information and access veterinary services and the government need to improve mobile network connectivity in the area.

Key Words: *Agricultural Information, Extension Officer, Information, Information Needs, Poultry farming*

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1.0 Introduction

1.1 Background of the study

Agriculture in Kenya contributes a larger percentage of the Country's economy approximately 1.7 percent of the Agricultural Gross Domestic Product where (25 percent of the national GDP) is attributed to the poultry business. The industry is a significant source of food, cash, and jobs (Wachira & Nyingi, 2015). With the high increasing demand for poultry products in the country there is need to ensure that poultry farmers utilize agriculture information for the purpose of enhancing productivity. Poultry farmers are part of a group that is often neglected in terms of information provision yet they actually need agricultural information for their daily needs. Msoffe et al., (2018) emphasized that poultry producers need a variety of information to enhance their farming and contribute to the national economy. Utilization of agricultural data by poultry producers increases agricultural output; however farmers are lacking information on best practices which help improve on their yields.

Imolehin and Wada (2000) notes that, there is declining productivity because of low access to and utilization of agricultural knowledge and information. These challenges could be solved by provision of up to date information by agricultural information providers such as libraries and resource centres, extension services among others. On the other hand there is need to enhance productivity through utilization of agricultural information, Obidike (2011) also asserts that to improve agricultural productivity, It is necessary to promote farmers' access to and effective usage of agricultural information by identifying and resolving issues affecting access to and utilization of agricultural information.

Poultry farmers play an important role in the country's economy by providing food security, besides that farming has improved livelihoods of farmers where they earn their own income, Wanyama, Mathenge & Mbaka (2015) notes that if agricultural information is properly utilized, It may considerably contribute to the growth of the economy as a whole by increasing productivity and revenues. To enhance their agricultural practices and contribute to the national economy, poultry producers require a range of information. According to (Msoffe et al., 2018), access to and use of agricultural information is essential for higher production; hence, boosting the use of studied sources of information is anticipated to assist poultry producers in making educated decisions regarding management techniques. This will ultimately result in higher poultry output.

To boost agricultural output, it is necessary to satisfy the diverse informational requirements of farmers. Rural farmers require information on agricultural inputs, transportation systems, market prices, environmentally sound production techniques and practices, new agricultural technologies, the decision-making process, food processing and preservation, trade laws, and food production trends, according to Munyua (2000). Sanga (2018) affirms that poultry information include; poultry diseases, selection, breeding, nutrition, housing, laying nests, and markets for their products. Farmers therefore use this information to improve on their yield

and sell their products. This information can be disseminated to rural farmers through different channels, Agricultural information is intended to reach rural farmers through extension staff, television, community libraries, agricultural pamphlets, radio, film shows, and state government agricultural organizations (Adio, 2016).

Farmers require a vast array of information on, among other things, suitable seeds, crop and animal illnesses, input and output costs, weather-related data, market data, and pre- and post-harvest management technology (Wanyama, Mathenge & Mbaka 2015). Omotayo (2005) found that in Nigeria, organizations that offer agricultural extension services continue to rely excessively on extension officers, with the officer ratio estimated to be 1:3000. In Kenya the situation is not different; according to Kibet (2011) the ratio of extension agents to farmers is 1:1500 which is not adequate to provide farmers with Agricultural information. This also implies that some of the farmers might not even know the existence of extension services since they have never seen extension agents in their areas due to their limited number. In Nakuru County, 24% of farmers rear livestock and poultry contributes a larger percentage to the economy of the County (NCIDP, 2013). This study sought to find out how these farmers utilized agricultural information to enhance productivity in Menengai West Location.

1.2 Statement of the Problem

Agricultural information can be accessed from various sources such as Agricultural Society of Kenya (ASK) shows, public libraries, internet, mobile applications, newspapers, radio and television among others. Despite availability of these sources, there is still low usage of agricultural information among poultry farmers due to various factors hindering access especially in rural areas. Underutilization of agricultural information is therefore seen as the possible cause of low productivity in poultry farming. The possible reasons for underutilization could be lack of awareness of existing agricultural information sources, lack of finances to facilitate access to agricultural information, low ratio of agricultural extension officers to farmers and unavailability or outdated information sources.

These poultry farmers are also struggling with lack of information on best practices to improve agricultural productivity where the ratio of extension agents to farmers is 1:3000 (Kibet, 2011). This ratio is an indication that most farmers do not get relevant and up-to-date information on modern farming methods. Menengai West Location in Nakuru County has high potential in terms of poultry production however farmers still experience low production due to underutilization of agricultural information. It is on this basis therefore that this study evaluated the utilization of agricultural information to enhance productivity in poultry farming.

1.3 Purpose of the Study

The purpose of this study was to evaluate the utilization of agricultural information by poultry farmers to enhance productivity in Menengai West.

The specific objectives of the research were:

- i. To find out the uses of agricultural information by poultry farmers
- ii. To identify factors influencing the use of certain agricultural information
- iii. To find out the awareness level of existing agricultural information by poultry farmers
- iv. To determine the effectiveness of agricultural information sources

v. To establish the challenges faced by farmers in utilizing agricultural information

2.0 Literature Review

2.1 Theoretical Review

This research relied on Eugene Garfield's information society concept from 1979. Eugene Garfield distinguished, in 1979, between a "information aware" society in which people see information as an intrinsic part of their everyday lives and a "information literate" society in which people are able to effectively manage information. According to Garfield, the information society is the outcome of the union of these two notions, which he prophesied would occur sometime around 2001 (Garfield 1979a). Garfield's point is that an information society takes the function of information as it presents itself for granted and controls government and daily life. This imaginative concept is applicable to the current work: exploring the information society involves examining the daily uses and consequences of information in the general population as well as subgroups. (Raban, Gordon, & Geifman, 2011).

This idea is relevant because poultry producers are a member of the information society that demands access to and use of information to increase their output. The information society hypothesis is applicable to this research since it explored poultry farmers' usage of poultry farming information in order to increase production. The notion demonstrates the value of properly used information to farmers. It also acknowledges the significance of information providers in society as the individuals who develop, compile, and distribute information for use. (Thuo, 2018)

2.2 Conceptual Framework

Conceptual framework shows how the dependent, intervening variables and independent variables interrelated to each other. In this study, the independent variable is the utilization of agricultural information, the dependent variable is increase in farmer's produce and the intervening variable is the cost involved in accessing agricultural information as shown by Figure 1.

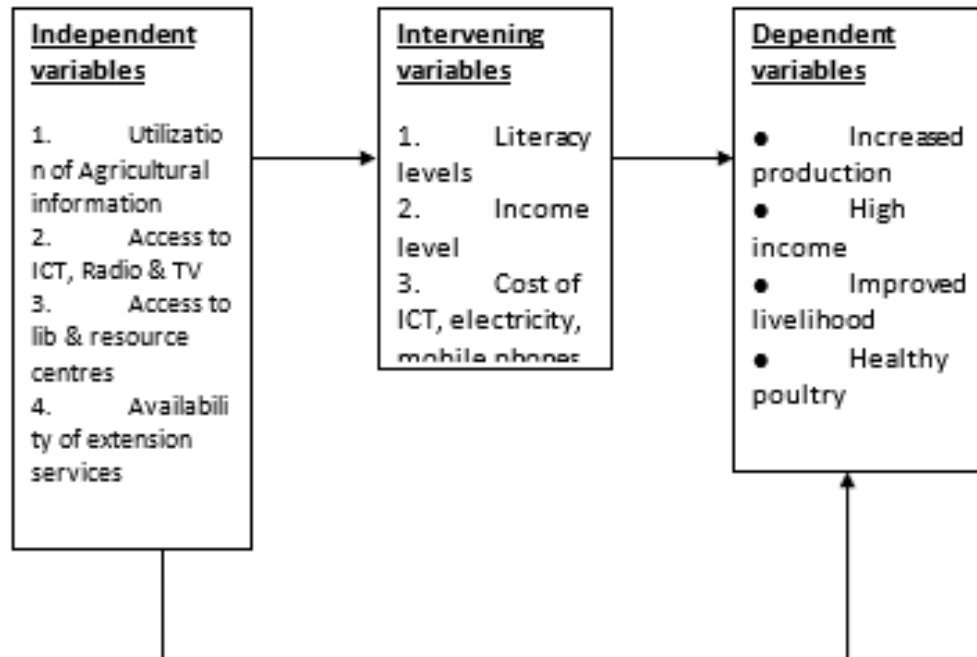


Figure 1 Conceptual Framework

Source; Researcher, (2021)

3.0 Research Methodology

Since the researcher collected data to answer questions on the state of individuals in the study, the kind of research design employed in this study was descriptive. The study was conducted in Menengai West Location, Rongai Sub County, Nakuru County. The study area was chosen because of high potential of poultry production and its proximity to Nakuru town which gives poultry farmers a ready market. The target population for this study was poultry farmers in Menengai West Location comprising of those rearing commercial and domestic poultry including 515 poultry farmers and two extension officers. The study used snowball sampling method. Snowball sampling method begins with a few people who meet the criteria for inclusion into the sample and then gradually increases the sample size as new contacts are mentioned by the people you started out with.

Saunders' table of Sample size was used to determine the sample size of 217 poultry farmers. The research collected data through questionnaires and interviews. To address the objective of the study, data collected was analysed through descriptive statistics where frequencies, percentages and totals were used. SPSS was used to enhance data analysis where qualitative data from the open ended questions on both the questionnaires and the interview schedule were analysed qualitatively using themes derived from the objectives such as utilization of information sources, awareness of existing sources and challenges faced in utilization of the sources.

4.0 Study Findings

4.1 Uses of agricultural information by poultry farmers

The study sought to find out the uses of agricultural information by poultry farmers in Menengai West Location. Majority of poultry farmers use agricultural information to improve on their production, however the uses vary from one farmer to another depending on their needs. Disease control and availability of market were the major uses of agricultural information by poultry farmers while breeding, nutrition, hatching and housing were on average use. The results are shown by Figure 2.

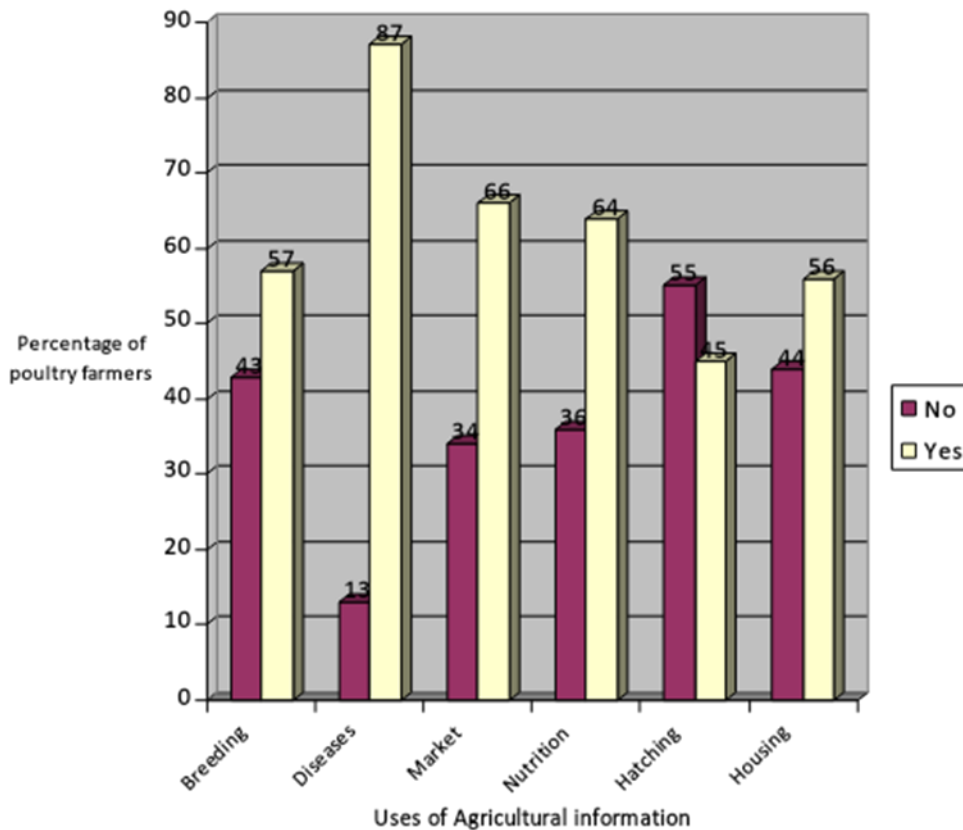


Figure 2 Uses of agricultural information by poultry farmers

4.2 Factors influencing the use of certain agricultural information

The researcher sought to find out the factors that influence the use of certain agricultural information sources in Menengai West Location. The findings as shown by Figure 3 indicated that majority of farmers looked at availability of agricultural information sources, ease of use of the information source and availability of mobile network as factors that influence use of agricultural information. The extension officers most preferred source for updating themselves was the internet where they indicated that it was the quickest way of getting information.

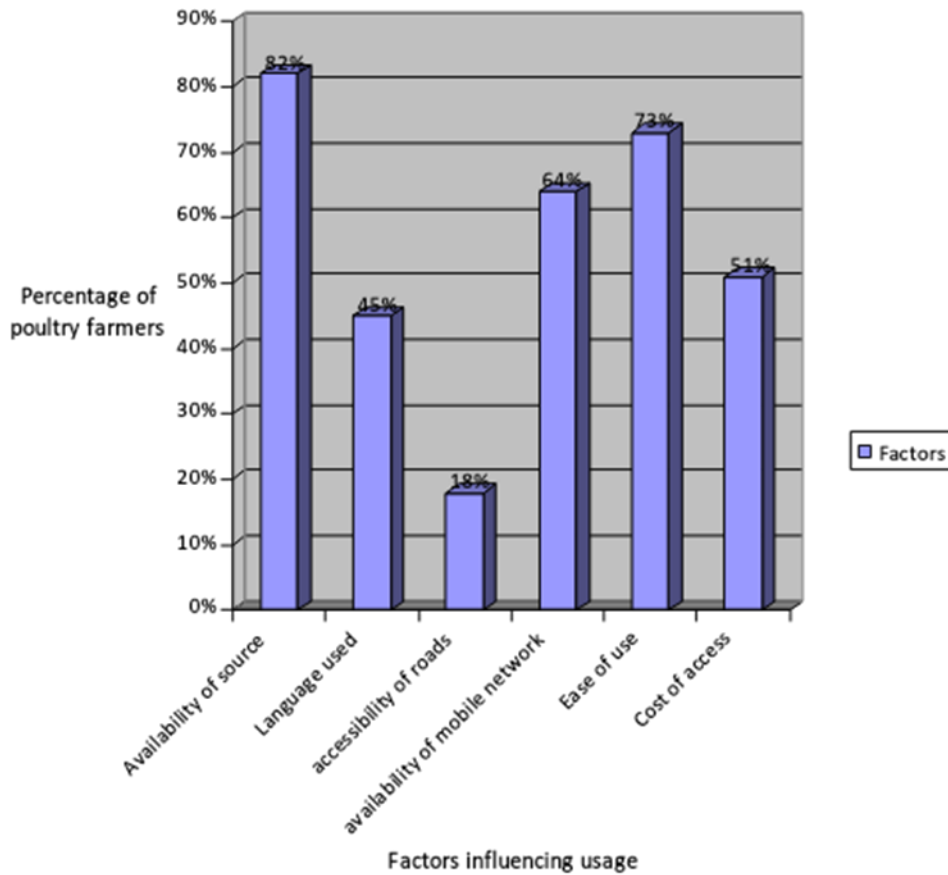


Figure 3 Factors influencing the use of certain agricultural information

4.3 Level of awareness of existing agricultural information by poultry farmers

The study further sought to find out the level of awareness of existing agricultural information by poultry farmers in Menengai West Location. Majority of farmers indicated that they were aware of the existing agricultural information and mentioned several agricultural sources they use. Television, mobile phone, radio, and farmers groups were mostly used sources by poultry farmers in the study area while community libraries and film shows were rarely used. More than half of the farmers do not have access agricultural extension services as shown by Figure 4.

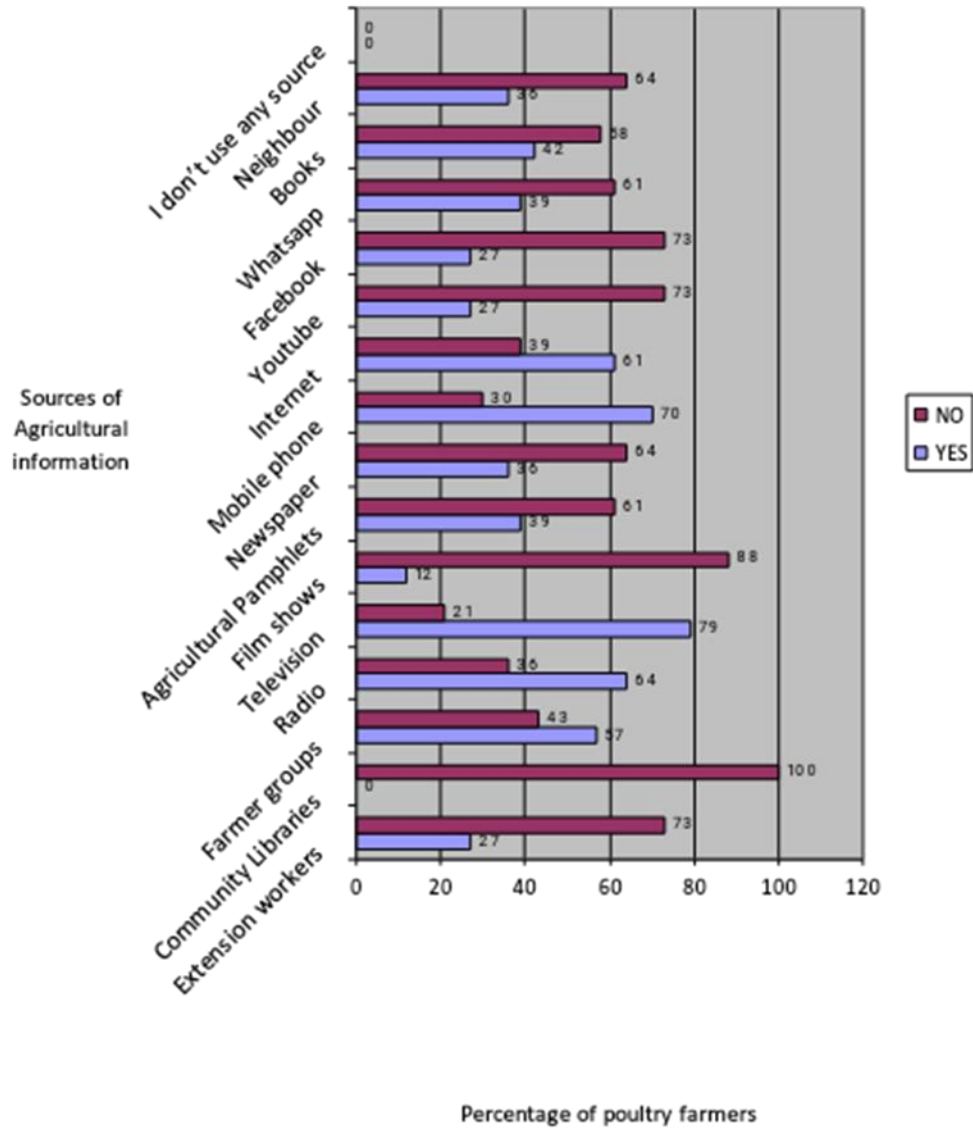


Figure 4 Awareness of existing agricultural information by poultry farmers

4.4 The effectiveness of agricultural information sources

The study sought to establish the effectiveness of agricultural information sources in provision of poultry information. Television, radio and internet are the most effective sources of agricultural information in provision of poultry information. The least effective sources were community libraries, film shows and extension workers as per Figure 5.

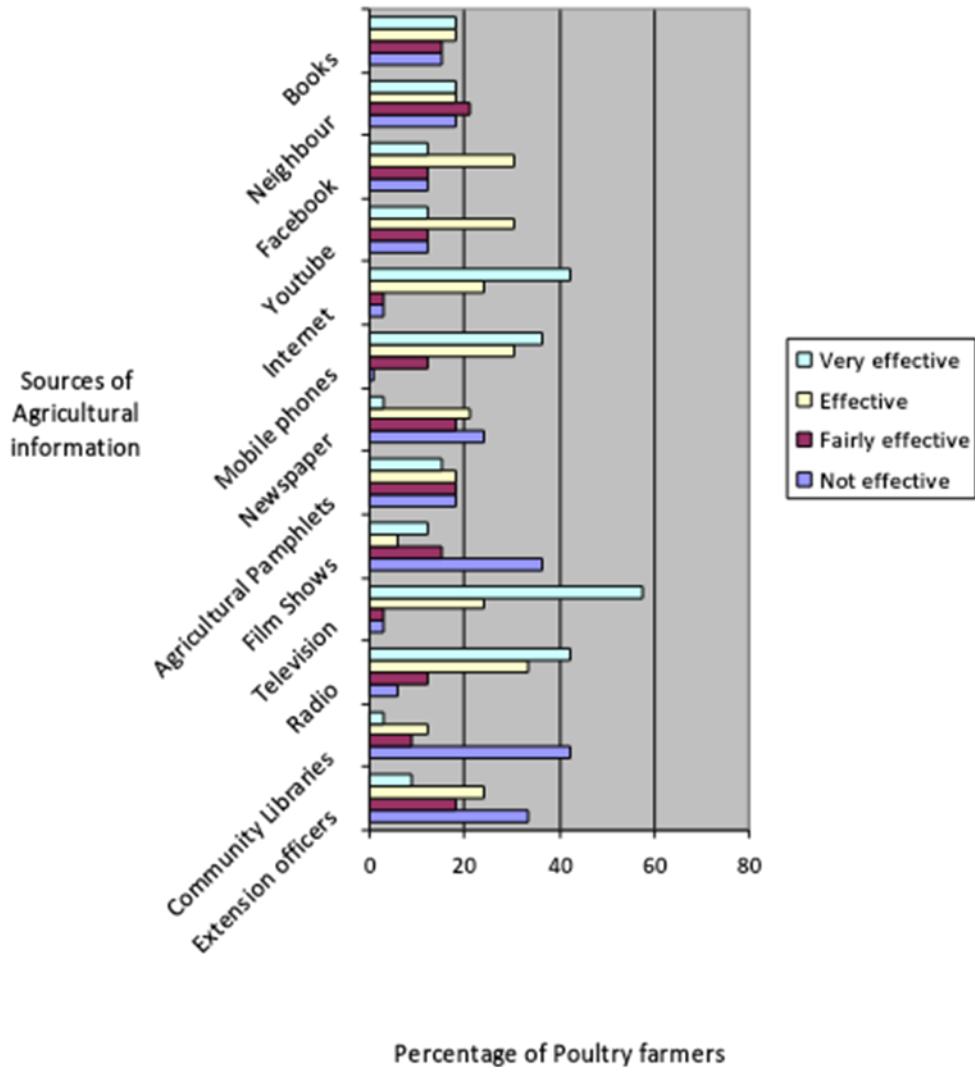


Figure 5 Effectiveness of agricultural information sources

4.5 The challenges faced by farmers in utilizing agricultural information

The study sought to find out the challenges faced by poultry farmers in utilization of agricultural information. Inadequate agricultural extension officers and inadequate funds were major challenges faced by poultry farmers in utilization of agricultural information. Other challenges included; farmers not accessing information on time, poor market, high cost of chicken feed and vaccines, limited access to agricultural services, high cost of research material, information given different from each other, farmers not able to verify authenticity of agricultural information from the internet, lack of adequate digital literacy to use the internet, lack of seminars to keep farmers up-to-date on new challenges, too much information in the internet, filtering what is useful is a challenge, poor connection of internet, and high fees charged at agricultural shows. Figure 6 shows the results obtained.

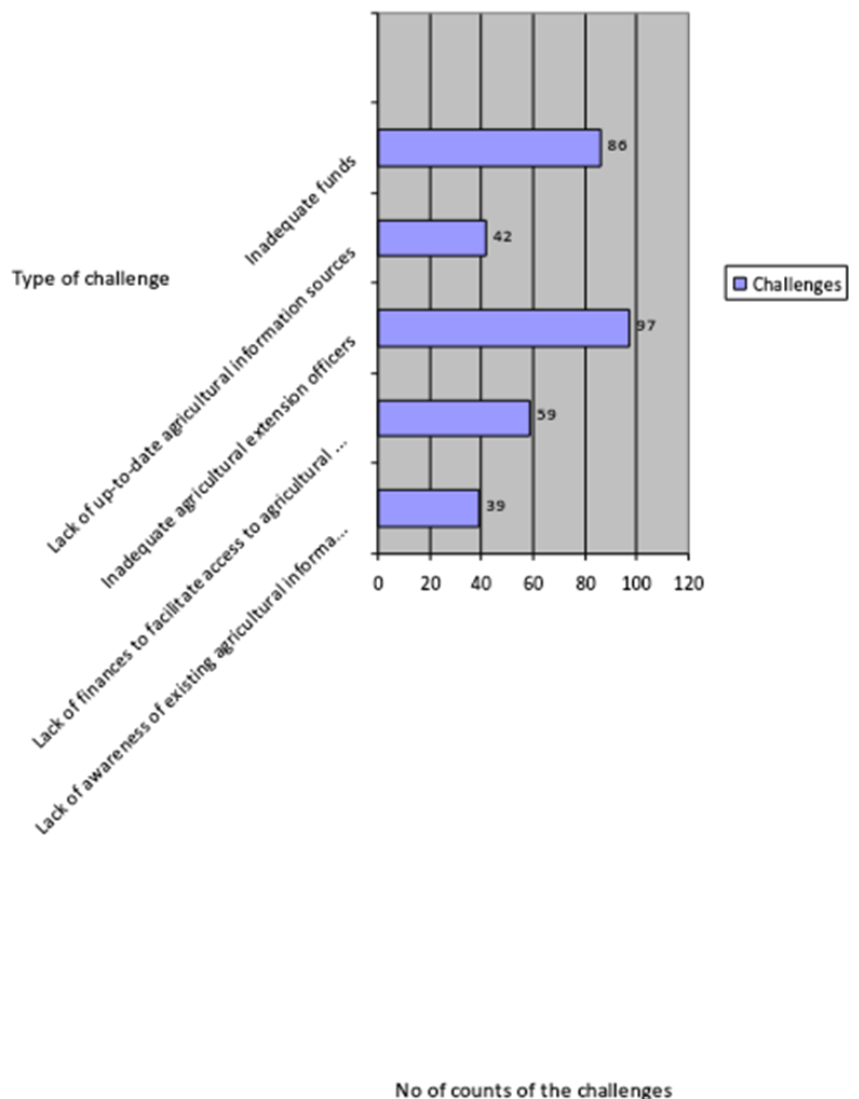


Figure 6 Challenges faced by farmers in utilizing agricultural information

5.0 Conclusions and Recommendations

5.1 Conclusions

The following conclusions were made by the researcher based on the findings: Firstly, poultry farmers utilize agricultural information, they also know the various sources of agricultural information; however some of these sources are not readily available to them. They also utilize agricultural information that is relevant to their day to day poultry farming activities. Secondly, poultry farmers have a positive attitude towards information utilization; however certain factors influence their use these include; availability of source, ease of use and availability of mobile network.

Thirdly, the study concludes that the main sources of agricultural information are television, radio and mobile phones. Television was mostly preferred due to its ability to have both audio and visual where farmers can listen and view agricultural programmes. Radio was also

preferred due its ability to have local vernacular stations where farmers can interact with the radio presenters. Mobile phones were also preferred due to the ability to be used anywhere, anytime to access agricultural information. The least used sources were community libraries since none existed within the study area except for a national library located in Nakuru Town. Extension officers were not readily available since they are very few compared to the number of poultry farmers in the location.

Fourthly, on the effectiveness of agricultural information sources, the study concluded that the most effective source of agricultural information used by poultry farmers in the study area was television owing to the fact the area is connected with electricity and poultry farmers are able to view agricultural programs aired on local channels. The source is also effective since the television shows demonstrates practically how farmers should practice poultry farming hence enhancing productivity. Finally, the study concluded that the main challenges facing utilization of agricultural information include; inadequate agricultural extension officer, inadequate funds, lack of up-to-date agricultural information and poor market for poultry products.

5.2 Recommendations

The County Government should employ more extension officers within Menengai West in order to reach out to poultry farmers in the area in terms of extension service provision e.g. veterinary services for poultry. Moreover the county government should allocate more funding to extension services to facilitate trainings workshops and farm demonstrations. Agricultural resource centers should be set up by Nakuru County Government in rural areas to enable farmers in the location access agricultural information easily and within reach.

The County Government should establish partnership with agricultural institutions in order to disseminate agricultural information to poultry farmers and provide access veterinary services. The Nakuru County Government should have well established and recognised agricultural sources so that farmers can be able to reach them easily. The government need to improve mobile network connectivity in the area since the famers lamented on poor connectivity including internet which they rely on mobile network providers.

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