

UTILIZATION OF AGRO-INFORMATION AMONG MAIZE FARMERS OF KASHERE, AKKO LOCAL GOVERNMENT AREA, GOMBE STATE

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Abstract.

The study focused to examine the utilization of agro- information among maize farmers in the study area. Purposive and random sampling techniques were adopted to select the wards and the sample size of one hundred and twenty five (125) respondents. Primary data was used for the study using a well-structured questionnaires in which information were solicited on; socio-economic variables, sources of agro-information, mode of acquiring and factors affecting information. The data were analyzed using descriptive statistics and linear regression model. The results showed that; revealed that 42.4% of maize producers were within the age bracket of 26-45 years ,and (31.2%) fall, within 36-45 age range, with a mean age of 35.296 and were active. Majority of the respondents (78.4%) were male and (64.8%) were married. Furthermore 40% of the maize producers that obtain their information through formal source are from extension agents and 21.6% of the respondent that get their information from informal source are from friends.

Keywords: Agro-information, utilization, maize, farmers, Kashere community.

Introduction

Information is very essential for human and societal development. Agricultural information is conceived as a productive resource potentially limiting and influencing the efficiency of production. According to Agbamu (2006.32), farmers' sources of information fundamentally shape the kind of decision they make. Access to adequate information is very vital to increased agricultural productivity Mgbada (2006), Agro-information to improve maize production technologies by farmers are needed in such areas as plant spacing, fertilizer application, weeding, land preparation, access to inputs and credit etc. The importance of maize for human, animal and industrial consumption cannot be overemphasized as it touches the lives of a larger percentage of the population of the world. This calls for improved maize farming technologies and other information needed for improved production level.

Agricultural information interacts with and influences agricultural productivity in a variety of ways. It can help in farm decisions regarding land, labour, livestock, capital and management. Agricultural productivity can arguably be improved by relevant, reliable and useful information and knowledge. Hence, the creation of agricultural information (by extension services, research, education programmes and others) is now often managed by agricultural organizations that create information systems to disseminate information to farmers so that farmers can make better decisions in order to take advantage of market opportunities and manage continuous changes in their production systems. Therefore, there is a need to understand the functions and use of particular agricultural information systems in order to manage and improve them.

Samuel (2001.48) defined agricultural information as the data for decision-making and as a resource that must be acquired and used in order to make an informed decision. Umali (1994.22), classified agricultural information into two broad groups: pure agricultural information and agricultural information inherently tied to new physical inventions. Pure agricultural information refers to any information which can be used without the acquisition of a specific physical technology. On the other hand, agricultural inventions or technologies are those that come in the form of agricultural inputs, management technologies facilitating farm management, marketing and processing equipment.

Rural farmers lack access to knowledge and information that would help them achieve maximum agricultural yield, they are not only grope in the dark but are driven to the urban centers in search of formal employment, as the only option for survival Munyua, (2000.23). Blait (1996.6) pointed out that the least expensive input for improved rural agricultural development is adequate access to knowledge and information in areas of new agricultural technologies, early warning systems(drought, pests, diseases etc.), improved seedlings, fertilizer, credit, market prices etc.

The lack of access to basic agricultural knowledge and information by rural farmers in Kashere community which may be as a result of certain constraints has made these farmers to stick to their old traditional methods of farming and animal husbandry, hence resulting in poor crop and livestock productivity. Information and knowledge are very vital in agricultural development of any community and where they are poorly disseminated as a result of certain constraints, the community's agricultural development becomes highly impeded.

Inwieri (2007.77) opined that, rural people (farmers) who are mainly illiterate require access to appropriate information to be able to make decisions and participate fully in the national development processes, including agriculture. This agricultural information therefore is relevant in a social system. This study is designed to determine the accessibility of agricultural information and also to identify the source of these agro- information and factors that affect the accessibility of agro-information in Kashere community, Gombe State Nigeria.

Problem Statement

Inherent and traditional methods of farming has not helped to improve agricultural productivity The lack of access to basic agricultural knowledge and information by rural farmers in the study area, which may be as a result of certain constraints has made these farmers to stick to their old traditional methods of farming and animal husbandry, hence resulting in poor crop and livestock productivity. Information and knowledge are very vital in agricultural development of any community and where they are poorly disseminated as a result of certain constraints, the community's agricultural development becomes highly impeded. The study focused to determine factors that affect farmers' access to agro-information, and various sources of this information.

Objectives of the Study

The broad objective of the study is to determine the factors that affect the accessibility of agro-information among maize producers in the study area. The specific objectives of the study are to:

- i. identify the socio-economic characteristics of maize producers;
- ii. identify the source of agro information among maize producers for better production; and determine the factors affecting accessibility of agro-information among maize producers

Methodology

The Study Area

Kashere is a class P-populated place under Akko LGA, Gombe State in Nigeria Africa with the region font code of Africa/Middle East. It is located at an altitude of 431 meters above sea level and its population approximately 77,015 as reported in the 2006 census (National Population Commission, 2006). Its coordinates are 9°46'0" N and 10°57'0" E in DMS (Degrees minutes second) or 9.76667 and 10.95 in decimal degrees. The prominent crops produced in Kashere community are maize, cowpea, groundnut, and sorghum. Kashere is a community with five major wards, Anguwar Tafida, Santuraki, Tunburi, Malam Waziri and Bubabani. The major occupation is farming with few civil servants and business men/women and sometimes petty trading in local/neighbouring markets.

Sampling Procedure

The sampling technique adopted was purposive sampling and random sampling techniques. Maize producers were selected purposively in the study area and simple random sampling method was used in selecting 25 respondents from each of the five major wards to form the sample size 125 respondents.

Data Collection

Primary data were used for the study; the primary data used were collected using a well-structured questionnaire. Interview was conducted to collect primary data from the respondents. The questionnaire was used to collect data on socio-economic characteristics of respondents type of agricultural information accessed, and access to agricultural inputs, the source of information, level of productivity and the factors affecting access to information etc. data were obtained for the period of three weeks in May 2017.

Data Analysis

There are many analytical techniques available for use in research and the choice of a particular one depends on the type of data collected in order to achieve specified objectives. However the ones for this study include both descriptive and inferential statistics. Primary data collected was checked for accuracy, coded, and then entered into a computer. Analysis of data was conducted with respect to the objectives of the study using the Software Package for Social Science (SPSS). Data were subjected to descriptive and inferential statistics.

Objective i, and ii was subjected to descriptive analysis using mean, frequency, percentage, standard deviation etc. While objective three was analyzed using inferential statistics (Multiple regressions). Chi square was used in testing hypothesis.

Descriptive statistics: Descriptive statistics was used to summarize data on the socio-economic characteristics of respondents, the purpose was to achieve objective one of the study

which is to determine the socio-economic characteristic of maize producers in the study area. The second and third objective was also analyzed using descriptive analysis.

Regression analysis: is used to measure cause effect relationship. It is used in estimating relationship among variables where $Y = f(X, \beta)$. The fourth objective of the study is to determine the factors affecting maize producers access to agro-information; Multiple linear regression model analysis was used to determine the impact and effects of household size, occupation, sex, education, location and age on the accessibility of maize producers to agro-information. The equation is given as,

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

Where;

Y = Accessibility (Yes = 0 and No = 1)

X₁ = Household size

X₂ = Occupation

X₃ = Sex

X₄ = Education

X₅ = Location

X₆ = Age of respondent (years)

X₇ = Farm size

b = Regression coefficient

e = error term

Chi Square is used for comparative analysis, the chi square statistics is used to investigate whether the distribution of categorical variables differ from one another. Chi Square $\chi^2 = \sum (O - E)^2 / E$. The decision rule states that if the $\chi^2 \geq$ critical value, reject null hypothesis H₀ but if the χ^2 is < critical value accept null hypothesis.

Results and Discussion

Table 1:. Socio-economic characteristics of maize producers

Variable	Frequency	Percentage (%)	Mean
Age			
15-25	16	12.28	
26-35	53	42.4	
36-45	39	31.2	35.296
46-55	15	12	
56-65	-	0.8	
66-75	-	0.8	
Total	125	100	
Gender			
Female	26	20.8	
Male	98	78.4	
None	1	0.8	
Total	125	100	
Marital status			
Single	41	32.8	

Married	81	64.8	
Divorced	2	1.6	
Widowed	1	0.8	
Total	125	100	
Education			
None	8	6.4	
Informal	37	29.6	
Formal	56	44.8	
Quranic	24	19.2	
Total	125	100	
Household size			
1-10	71	78.9	
11-20	18	20	
21-30	1	0.8	
31&above	25	28.0	8.011
Total	125	100	

Source: Field survey 2017

Table 1 revealed that 42.4% of maize producers were within the age bracket of 26-45 years, and (31.2%) fall, within 36-45 age range, with a mean age of 35.296 and were active, this is similar with Daniel (2008.73) who revealed that the mean age was 37.47 years. Majority of the respondents (78.4%) were male and (64.8%) were married. These are in line with Bawa, *et al*, (2014.9) who revealed that majority (79%) of the respondents were male and (83.9%) were married. Also (44.8%) of maize producers in the study area were formally educated with mean household of 8.01 persons.

Table 2 Formal and Informal distribution of agro-information source

Source/Variable	Frequency	Percentage
Formal		
Extension agent	50	40.0
Library	12	9.6
Research Institute	2	1.6
All of the above	13	10.4
Informal distribution	31	24.8
None	17	13.6
Total	125	100
Informal		
Family	16	12.8
Friends	27	21.6
Marketers	9	7.2
Colleagues	17	13.6
Formal distribution	39	31.2
None	17	13.6
Total	125	100

Source: Field Survey 2017

Table 2 reveals that 40% of the maize producers that obtain their information through formal source are from extension agents, 9.6% from libraries, 1.6% from research institute and 10.4% from all formal sources. It also reveals that 12.8% of the respondent that get their information from informal source are from family, 21.6% from friends, 7.2% from marketers and 13.6% from colleagues. This indicates that majority of the respondents get their information through extension agents, this is similar with the findings of Bawa et al, (2014.25) in which majority of the respondents source their agro-information through extension agents.

Level of agro-information utilization

From the definition of utilization which is the manner in which something is used it can be concluded that the 13.6% of the respondents who had no access to agro-information will be exempted from the utilization analysis. Table 2.0 shows the level of utilization of agro-information. Out of the 86.4% respondents who had access to agro-information 66.4% were able to utilize the information while 20% did not utilize the information. This indicates that majority of the maize producers who had access to agro-information were able to use the information to meet their information needs. This is comparable to Ndaghu A.A. *et al.*, (2013.61), who revealed that 68.0% of the respondents utilized agro-information while 32.0% did not utilize the agro-information accessed. His is contrary with the findings of Daniel (2008) which revealed that 2.3% were in high utilization of agro-information, 8.4% were in medium utilization, 85.5 were in low utilization and 3.8% were in no utilization categories.

Table 3.0: Utilization of agro-information

Utilization of agro-information	Frequency	Percentage
Yes	83	66.4
No	25	20
No access	17	13.
Total	125	100

Source: Field Survey 2017

4.1.2 Type of Agro-information

Table 4.0 shows the types of agro-information utilized by respondents and shows the level of utilization to each type. 7.2% of the maize producer's had utilized the information related to processing and storage of maize, 22.4% had utilized the information on seed variety and farming system of maize, 28.0% had information on the use of chemical, fertilizer and machine and 19.2% had information on all three categories of information. This indicates that majority of the maize producers in the study area had utilized the information on the use of chemicals, fertilizer and machines. This is contrary to the studies of Ndaghu A.A. *et al.*, (2013.44) in which majority of the respondents had utilize to information on agricultural credit 60.9%, processing and storage 28.2%, farm inputs 22.7%, marketing 20.0%, fertilizer application and tillage 18.2%, integrated pest management 16.4%, sustainable agriculture practices 11.8% and water conservation 8.2%.

Table 4.0 Type of agro-information utilized by maize producers

Types of agro-information	Frequency	Percentage
None	29	23.2
Process and storage	9	7.2
Seed variety and farming system	28	22.4
Use of chemical fertilizer and machine	35	28.0
All of the above	24	19.2
Total	125	100

Source: Field Survey 2017

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