

INFORMATION NEEDS AND SOURCES OF POTATO RURAL COMMUNITY FARMERS IN PLATEAU STATE, NIGERIA

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Abstract

This study investigated information needs and sources of potato rural community farmers in Plateau State. The main objective of the study was to examine the information needs and various sources preferred by potato farmers. Survey research design was adopted in soliciting and collecting data for the study, instrument used for data collection was questionnaire which was a self-developed and subjected to face validation by experts in the field of measurement and evaluation, it was also tested for reliability by use of test-retest method where a correlation coefficient of 0.843 was obtained. The study population comprises of seven hundred and fifteen (715) registered potato farmers in Plateau State out of which three hundred farmers were sampled for the study. The quantitative data was analysed using descriptive statistics presented in tables with frequency counts and percentages. Findings revealed that potato rural community farmers need information on market and prices of potato, weather and climate condition, storage method, improved seed varieties, disease and pest control while their preferred information sources include friends and relatives. Recommendations such as establishment of community libraries in rural areas, engaging qualified and adequate number of extension workers, organization of adult literacy classes in rural communities were made.

Keywords: Information, Needs, Potato, Sources.

Introduction:

Information can be seen as a resource that can liberate Man. In other words, 'an informed mind is an enriched mind'. Every rationale being needs some information for his day-to-day existence and well-being. No society can grow beyond its level of information awareness, acquisition and appropriation. Due to its importance, all human beings need information, no matter where they live. It is a vital factor that influences all persons be they rural or urban dwellers, old or young, literate or illiterate(Emmanuel, 2012).

Without any prejudice, it is a known fact that information has and will continue to play a vital role in promoting agricultural development. Farmers irrespective of their categories- the subsistence or small scale farmers, medium scale farmers and large scale commercial farmers all need information about new trends in the agro business sector. A number of researchers have stressed the importance of information in agricultural development. Mabuku in Magaji and Lawal, (2020) stressed that, information is very vital in farming activities of any community and when it is poorly disseminated, farming

activities as well as the community development becomes highly impeded. In the same vein, Mishra and Bhatta (2021) pointed out that agricultural information is very essential for small holder farmers to increase farm production and productivity. They however, further emphasised that there is no proper access to accurate and adequate agricultural information to small holder farmers.

Plateau State accounts for 80-90% of potato production in Nigeria. The Jos- Plateau has the favourable climatic condition for potato production; hence the federal government deemed it right to establish an out station of the National Root Crop Research Institute (NRCRI) on potato programme at Kuru, Plateau State. Current potato production in Plateau State is estimated at about 800,000 tonnes (Federal Ministry of Agriculture: Environmental and Social Management Plan, 2020)

Information is an indispensable factor in the practice of potato farming and it is the basis of extension service delivery (Goldferb in Emmanuel, 2012). From the above statement, the researcher also observed that potato rural community farmers need agricultural information to boost productivity because it is an essential tool for the farmers regardless of where they operate, there are various channels through which agricultural information gets to them.

Statement of the Problem

Plateau State is one of the thirty six(36) States of the Federal Republic of Nigeria with a total population of about eight(8) million according to 2016 Census report. The state has an average annual rainfall of 300-700mm. More than seventy five (75) percent of the population of Plateau State are farmers and largely small-scale farmers. Despite the high percentage of Small scale potato farmers in Plateau State, those farmers in the State could

not produce sufficient food to meet domestic demands. Poor agricultural productions are acknowledged to be linked to lack of clear understanding of farmers' information needs as well as poor utilization of sources of information by farmers. Studies that looked at the information needs and sources of small scale farmers have established that the information needs are multidimensional in nature (Harande in Magaji & Abubakar, 2020). Furthermore, Odini(2014) summarized the farmers' information needs to include information on marketing of produce, pest and disease and fertilizer application.

At present, to the best of the researchers' knowledge and the various literature reviewed, there are no studies that have examined the information need and sources used by potato rural community farmers in Plateau State. Many researchers such as (Sani, Kalusopa and Oldokun2014; Mabuku2015; Adio,Yusuf and Kunle(2016)) attempted to discuss information support for farmers and agricultural productivity. However, this study contents that the findings from these studies in other countries and states are not comprehensive and may not be applicable to potato farmers in Plateau State because of varying social, political, economic and environmental factors. The present study therefore, intends to contribute to bridging this knowledge gap by studying the information needs and the various sources of information used by potato rural community farmers to boost its production in Plateau State. Knowledge from this study would enable government and donor agencies to leverage the power of information to provide better and more relevant agricultural support services to potato farmers in Plateau State, Nigeria.

Objectives of the Study

1. To examine the information needs of rural community potato farmers in Plateau State

2. To identify the information sources used by rural community potato farmers to satisfy their information needs.

Research Questions

1. What are the information needs of potato rural community farmers in Plateau State?
2. What are the information sources used by potato rural community farmers to satisfy their information needs?

LITERATURE REVIEW

In this part of the study, findings of previous studies on the correlation between information, needs and sources were explored. Most of these empirical researchers employed the statistical approach for their findings before drawing conclusions.

Information Needs of Rural community Farmers

Information could be seen as a demand, requirement, want or desire. Arora (2014) defined information need as a state or process when one perceived that there is a gap between the information and knowledge available to solve a problem and the actual solution of the problem. A farmer needs information to be able to improve on his existing agro business in order to be up-to-date and well informed in his occupation. Mabuku (2015) studied the information needs of farmers in Namibia. The study reveals that farmers' information needs include animal health information, information on animal husbandry, information on new farming techniques and agricultural policies.

Rural farmers need information to improve their farming practices and these information needs may include the use of fertilizer, pests and disease control, higher yield, planting at the right time, weed control, improved seeds, post-harvest losses and preservation techniques, agricultural credits, agricultural cooperation and so on (Emmanuel, 2012).

Rural farmers need agricultural information to enhance or boost their productivity and also to be informed of modern farming systems in order to meet up with challenges that may arise in their occupation. The various agricultural related information needs of the rural people were identified by Ekoja in Yusuf, Adio, Zwalnam and Suberu (2021) to include; information on pest and disease control, marketing of farm produce, credit and loan, fertilizer use, weed control, food storage and so on.

In a study conducted by Abubakar and Magaji (2020) their findings revealed that the information need of small scale farmers in Katsina state, Nigeria include information on prices of farm produce, weather condition, agricultural loan, improved seeds, fertilizer application, pests and disease control, new farming technology, storage and so on. While Salau, Saingbe and Garba (2013) in a study on the agricultural information need of small holder farmers in Nasarawa state, Nigeria discovered that farmers information needs were numerous and diverse which included information on pests and diseases control, sources of improved seeds/seedlings, crop and animal husbandry, sources of farm credits and marketing information among others.

Furthermore, Ozowa in Sani, Kalusopa and Oldokun (2014) in a study contends that agricultural information is categorized as: i. agricultural technology ii. Agricultural credit and iii. Marketing. His contribution is based on a study on information needs of small scale farmers in Nigeria. The findings confirm that farmers in many parts of Africa, and Nigeria in particular, require technical information about pest and diseases control, new seeds, use of machines and other equipment.

Therefore, understanding the information needs of potato farmers in Plateau state is crucial for increase in quality, quantity, marketing and diversification of agro business sector in line with the government's

commitment to economic diversification in the state and the country at large. However, the information needs of potato farmers in Plateau State have not been unveiled in the literature. Hence, this study aimed at filling this knowledge gap.

Information Sources of Rural Community Farmers

Lwoga, Stillwell and Ngulube (2011) in their study on access and use of agricultural information and knowledge in Tanzania reported that the major sources of information for farmers are predominantly local (neighbours, friends and family) which implies that their major sources of information are traditional. According to Abraham in Emmanuel(2012) identified several channels and sources used to bring information to the audience such as the media, internet, institutions, social functions, town criers, but in the traditional African settings, where most residence are illiterate, the mode of communicating information to such categories of people is through "Town criers".

Information sources are various means by which information is recorded for use by an individual and organization. Bates (2012) defined information source as anything human beings interact with or observe can be a source of information. In other words, it is seen as something that contains and or stores information (Bitso, 2012).

Sources of information are tools that can possibly meet the information needs of different categories of users. They are information carriers. There are different sources of information but what matters are "what" sources are available and relevant to the different categories of users and what sources of information are useful for their different seeking behaviour and mainly for utilization in order to meet a given need. According to Koyenikan in Adio, Yusuf & kunle (2016) categorized information sources

as formal and informal sources where formal sources include state radio stations, local and international print media (such as newspapers, newsletters and journals) and seminars/workshops, while the informal sources are farmers, family friends and personal assessments and judgements.

Aina (2007) held the view that, though the majority of farmers in Africa are illiterate, it is possible to supply them with necessary information through the information gate-keepers popularly known in the North Western Nigeria as "SARKIN NOMA" (information gate-keepers) who is a literate farmer among the farming community with a wealth of experience and vast land. The role of "SARKIN NOMA" is to offer advice and information on regular basis to other farmers for improvement. Similarly, Ugboma (2010) buttressed the various studies cited, where in a study carried out in the Niger Delta region of Nigeria, he observed that 60% of the respondents indicates that, their sources of information is through traditional, as well as personal experience.

From the foregone, one can therefore suggest that information sources such as radio, television, newspapers, mobile phones, printed materials, farmers' group, libraries, extension workers and social media among others are widely used by farmers to get agricultural information for their agro enterprises. Hence, potato rural community farmers in Plateau State should strive to use these agricultural information sources for their agro businesses to improved productivity.

Methodology

The research method used for this study was the survey research design. The survey research design was found appropriate for this study because according to Harle (2009)," it is concerned with the collection of data for the purpose of describing and interpreting existing

conditions, prevailing practices, beliefs, attitudes and on-going processes.

In the case of this study, the existing condition which it sought to describe, interpret and report on, is the determination of the information needs and information sources used by Potato rural community farmers in Plateau State. The study population comprises all the seven hundred and fifteen (715) potato farmers that registered with the potato farmers' cooperative in Plateau State. The cluster sampling technique was used to select sample for the study. Cohen, Manion and Morrison (2007) stated that, when a population is too large a minimum of thirty percent (30%) can be employed as a sample size. In this study, three hundred (300) respondents were used as sample size. Two clusters were randomly selected out of three clusters from three selected Local Government Areas comprising Mangu, Barkin Ladi and Bokkos Local Government Areas in the state. The respondents for the study were the potato rural community farmers in three Local Government Areas of Plateau State. Two hundred and eighty (280) copies of the questionnaire representing (91.1%) out of the three (300) copies distributed, were returned and found useful. Questionnaire was used as instrument for data collection and descriptive statistics was used to analyze the data collected for this study.

Data Presentation, Analysis and Discussion of findings

Demographic Data

The demographic data of potato rural community farmers in Plateau State includes their gender while the survey data revealed that most of the respondents are male (85.1%) while the female respondents constitute (14.9%). In terms of the respondents' age group, the result indicated a wide range with few (5.10%) of the respondents below 20 years of age, (22.8%) are between twenty one to thirty years, (19.2%) thirty one to forty years, (32.6%) forty one to fifty years and (20.8%) are between the ages fifty one and above. In regard to the respondents' educational level, the survey revealed that majority (37.7%) of the respondents possessed the National Certificate in Education (NCE) and the Ordinary National Diploma while few (25.5%) are holders of the Secondary School Certificate. The least which constitutes about (12.9%) are holders of the First School Leaving Certificate (FSLC) where (4.31%) are holders of Adult Mass Literacy Certificate and (19.6%) hold other certificates. In the aspect of farming experiences, the result revealed that (10.9%) of the respondents indicated that they have between one to five years of potato farming experience, (23.1%) have six to ten years, (22.8%) eleven to twenty years, most (25.5%) have twenty one to thirty years and (17.7%) have thirty one years and above.

Research Question 1: What are the information needs of potato rural community farmers in Plateau State?

Table 1: Information Needs of Potato Rural Community Farmers in Plateau State, Nigeria

Information Needs for farming activities	Frequency	Percentage (%)
Agricultural Credit/Loan/ Subsidy	10	3.57
Weather and Climatic Condition	40	14.29
Marketing and price of farm produce	5	1.79
New seeds and fertilizer	80	28.57
Storage Methods	65	23.21
New agricultural technology	20	7.14
Diseases and Pests Control	50	17.86
Any other information	10	3.57
Total	280	100.0

Source: Field Data, 2022.

Table 1 shows the information needs of potato rural community farmers in Plateau State. The result indicated that minority which constitute (3.57%) of the respondents need information on agricultural credit and loan. In regard to information on whether and climate conditions, (14.29%) indicated that they need information on weather and climate. Similarly, (1.79%) of the respondents indicated that they need information on marketing and price of potato. However majority (28.57%) of the

respondents indicated that they need information on new seeds and fertilizer. The result further shows that (23.21%) of the respondents need information on storage methods while (17.86%) need information on new agricultural technology. (3.57%) need information on disease and pests control. This implies that potato rural community farmers in Plateau State need information more on new seeds and fertilizer that will give them high yield.

Research Question 2: What are the information Sources used by Potato rural community farmers in Plateau State?

Table 2: Information Sources Used by Potato Rural Community Farmers in Plateau State, Nigeria

Information Sources Used	Frequency	Percentage (%)
Relatives and friends	100	35.71
Extension workers	10	3.57
Potato farmers' Cooperative associations	30	10.71
Radio and Television	40	14.29
Agricultural Services Training Centre and Marketing	20	7.14
Workshops and Seminars	10	3.57
Agro dealers	70	25
Total	280	100.0

Source: Field Data, 2022.

In terms of the information sources used by potato rural community farmers in Plateau State, the results presented in table 2 revealed that majority (35.71%) of the respondents indicated that relations and friends are used as sources of information followed by (25%) of the respondents who indicated they used agro dealers. Those that indicated radio and television as their source of information constitute (14.29%) of the respondents while (10.71%) of the respondents indicated potato farmers' cooperative associations as their source of information. Those that sought for information from Agricultural Services Training Centers and marketing limited (ASTC) constitute (20%) of the respondents, while those that sought from extension workers as well as workshops and seminars constitute the minority with (3.57%) each. This suggests that potato rural community farmers in Plateau State prefer friends and relatives as their source of information.

Discussion of Findings:

This Cross-Sectional Survey design investigated information needs and sources of

potato rural community farmers in Plateau State. Specifically, the study examined which elements of the agro business in the area of potato production the farmers need information on and what information sources do they consult in potato farming venture.

Information Needs of rural community farmers

In this study, findings revealed that potato rural community farmers in Plateau State were more interested on information about new varieties of seeds and fertilizer. The study also revealed they need information on marketing and prices of farm produce as well as weather and climate conditions. They also need information on agricultural credit/loan/subsidy, new technology, and storage methods, disease and pests control. These findings concur with other studies such as, Ekoja in Yusuf, Zwalmam & Suberu(2021), Abubakar and Magaji(2020, Salau, Saingbe & Garba(2013) and Ozowa in Sani, Kalusopa and Oldokun(2014) which reported that rural community farmers have

significant information needs on marketing, agro technology and agricultural policies weather and climate new seeds and fertilizer, pests and diseases. This result suggests that rural community farmers' productivity is largely dependent on the prices of farm produce and weather condition. In most developing countries, rural community farmers are producing at lost because of poor information on marketing strategies.

In terms of information needs on weather condition, global warming is adversely affecting agricultural production particularly potato in diverse ways. The impact of climate variability and change on rural community farmers in developing countries include; productivity decline, increased poverty, food security and so on (Awazi & Tchamba, 2018). To this end, potato rural community farmers need a lot of information on weather related issues such as Seasonal Rainfall Prediction Report- a report which will indicate the amount, pattern and cessation of rain. Potato rural community farmers equally need information on disease resistant early maturing varieties, pest and disease control, information on marketing to mention but few. Information on these elements can significantly help potato rural community farmers avoid lost and utilize good agricultural best practices that will result in high yield.

Information Sources Used by Rural Community Farmers

In this study, findings demonstrated that almost all potato rural community farmers in Plateau State sourced for information from friends and relatives, agro dealers, extension workers, potato farmers' cooperative associations, radio and television, Agricultural Services Training Centers and marketing limited (ASTC), workshops and seminars. Relatives and friends as well as agro dealers seem to be reliable information source to the farmers as revealed by the study. No doubt, agricultural dealers have always serve as information intermediaries between farmers

and agro-allied industries. They provide information from agro-allied industries to farmers and vice versa. The study also revealed that a good number of potato rural community farmers still depend on radio and television for information. These findings are consistent with previous studies done by Lwoga et al (2011), Ugboma (2010), Abraham in Emmanuel (2012) and Aina (2007).

Kalusopa (2005) argued that small scale farmers have continued to rely on indigenous farming knowledge because they could not access reliable information source, hence they opt to rely on local groups, relatives and personal experiences. In this situation, friends and relatives provide several advantages over other information sources in supporting agricultural development and food security. Their supportive features such as quick and timely access to information as well as proximity, may attract more farmers' attention and help to drive their agricultural productivity.

Cooperative associations as sources of information brings a lot of benefits with it. The literature demonstrates that formation of cooperative associations will help improve the livelihood of rural community farmers in terms of easing market access, improving capacity building and increasing bargaining power (Qiao et al, 2018).

Conclusion

In line with the commitment of Federal Government of Nigeria to diversify the Country's economy through agricultural development, it is important to understand the information needs and information sources used among potato rural community farmers in Plateau State. The advantages of utilizing information to help support agricultural activities are overwhelming. The results of this study revealed that potato rural community farmers need information on marketing and prices of farm produce, weather and climatic condition, improved seeds varieties, storage methods, fertilizer, agricultural credits/loan

facilities and disease and pests control. The study also revealed that most of the farmers prefer information from friends and relatives than other sources of agricultural information. However, other sources of agricultural information such as agro dealers, radio and television, extension workers, farmers' cooperative associations, workshops and seminars as well as Agricultural Services Training Centers and Marketing limited(ASTC) still remain relevant to the farmers.

Recommendations

Looking at the past and present research activities, it is pertinent for government, farmers and all other relevant stake holders to support and improve agricultural productivity which is threatening food security and the socio-economic wellbeing of the people in general. To this end, the following recommendations are made to improve potato yield for rural community farmers in Plateau State:

- Adult literacy classes should be organized in rural areas by the ministry of education so that rural farmers will be educated and be able to access information in the printed media such as pamphlets, hand bills, posters etcetera.
- Community libraries should be established in rural communities as well as provide relevant information materials in local languages for the rural community farmers Plateau State government should employ qualified and adequate number of extension agents to provide adequate extension services to rural community farmers.
- Workshops/Seminars on potato production should be organized for potato rural community farmers on regular basis.
- Government should provide farmers with adequate information on precipitation in the wet seasons. This is because the amount and distribution of rainfall are

important factors in determining the productivity of crops under natural conditions. More importantly is the fact that wet seasons on the Plateau are characterized by temporal and special variations. The magnitude of these variations with regards to the onset, distribution, cessation and length of the season are very important as far as potato farming is concerned.

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