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Availability, Preference and Constraints to Use of Information Sources among Crop Farmers in Abak Agricultural Zone of Akwa Ibom State

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Abstract: The study investigated information sourcing situation surrounding crop farmers in Abak agricultural zone of Akwa Ibom State, Nigeria. Specifically, effective and responsive media sources were mapped in terms of availability, preference and Constraints to use among crop farmers in the study area. A multi-stage sampling technique was used in the selection of respondents. Preferred Sources of Information Questionnaire (PSIQ) with reliability index of 0.84 was administered on 90 Crop farmers in the study area. Data were analysed through the use of descriptive statistics. Findings revealed that the dominant age bracket constituted 64.5% of the sampled population. About 81.1% of the respondents were male and 55.6 % were married. 15.5% attended higher institution and 57.7% acquired SSC. Majority (52.22%) had between 3-10 years of farming experience while 66.67 % took crop farming as their primary occupation. 95.6% of the respondents identified mobile phones as their major available source of information while 92.2% identified both television and radio as their available sources of information. Other major available sources of information were internet (91.1%), co-farmers (90%), and extension agent (82.2%). Crop farmers association and posters (50%) each were considered the least available sources of information. Television and mobile phones with a mean value of 1.8 each were the most preferred sources of information utilized by crop farmers in the study area, followed by extension agents (1.6), internet (1.6) and co farmers (1.5). The results across all the constraints portrayed that almost all the identified constraints (16 out of 19) had influence on the utilization of available sources of information by the respondents. Adequate training centers, access to ICTs centers and increased extension agent ratio should be put in place to ameliorate the severity of the constraints faced by the respondents in utilizing the available sources of information in the study area.

Keywords: Availability**,** Preference, Constraints, Information, Utilization, Crop Farmers, Agricultural Zone.

INTRODUCTION

As the world population is increasing, the demand for crop and other crop products has also continued to increase, especially their nutritional advantages. This calls for improved crop farming technologies and other information needed for increased production level. Human race has continued to depend on information for effective and adequate agricultural production. There is need for trends of periodic reassessments of the sources in which information are disseminated to the end-users to build confidence and enable producers optimize efficiency and productivity in agricultural production. Information plays a vital role in our present day society as a result of the advancement in information and communication technologies (ICTs) [1]. In the quest for national development especially to help developing countries like Nigeria to reduce hunger, promote food security and alleviate poverty, improvement of agricultural produce through modern technologies was chosen as a major means of rural development and poverty alleviation. Therefore, provision of timely, adequate and appropriate agricultural information through an effective and reliable information sources to the rural and urban farmers is necessary to boost their production capacity.

Institutions or individuals can constitute information sources that create or bring about a message [2]. A good information source should be relevant, timely, accurate, cost effective, reliable, usable, exhaustive and aggregated [2]. Information utilization in agricultural sector to a large extent enhances farming productivity, especially if timely information is provided on weather trends and best farming practices. Timely access to market information helps the farmers to make correct decisions about what crop to cultivate and where to sell their products and

buy inputs [3]. Information sources help to guide extension and other agricultural programs to better target specific groups of farmers [4]. Imagine the world without information; life would have been so clueless and meaningless. It is an element of man's cycle such that there is no life in modern society without information [5]. Information helps farmers to make critical and rational decisions regarding production, marketing, management and cope with every day difficulties, avoid agricultural risk and to understand their opportunities for investment.

According to Dankwah and Hawa [6], an improved information and knowledge flow within the agricultural sector is essential in improving small-scale agricultural production and linking increased production to remunerative markets, thus leading to improved rural livelihoods, food security and national economy. Aina [7] opined that farmers would benefit from global information, if information centers are cited in rural areas with all the information and communication gadgets. Mapatara [8] revealed that, farmers need information to know the various techniques for improving and increasing agricultural productivity, for instance, information on the use of fertilizers, useful pesticides, high quality seeds, access to agricultural credit facilities, and good marketing of their agricultural produce. Mgbada [9] also described that access to sufficient information is very vital to increased agricultural productivity. Kamba and Lesaoana-Tshabalala are of the view that information has the powerful to address various agricultural needs for small scale farmers and if used appropriately, it could improve a nation's economy [10, 11].

Nevertheless, Boz and Ozcatalbas in Turkey found that, family members, neighbor farmers, extension services, input providers and mass media were the main sources of information used by farmers to access agricultural information [12]. Furthermore, the study by Okunade found that the key sources of information used by farmers in accessing agricultural information were result demonstration, general meetings, group discussion, lectures, television, radio, cinema, leaflets, bulletins, letters, and circulars [13]. Bachhav also found that the major sources of information among Indian farmers were colleague farmers, Newspapers and government offices [3]. The study conducted by Benard and Dulle in Tanzania revealed that the major sources of information used by farmers in accessing agricultural information were family/parents, personal experience, radio, neighbor and or friends and agricultural extension officers [14]. Therefore, Information dissemination can be conceptualized as a system of information flow by which new ideas or innovation are released from a source (researchers) through a medium to a receiver (end-users) with the sole aim of changing his/her skill and behaviour.

However, it has also been observed that farmers in the rural areas are most times suspicious of modern agricultural practices especially ideas from researchers and extension officers. Most of them do not understand the principles of modern agriculture and have little interest in accepting information on these principles [13]. Rural farmers in Akwa Ibom State are still in the subsistence class. Their produce is barely for the family. Subsistence agriculture is characterized by extremely limited capital resources, use of traditional methods of production and low land, low labour productivity and low income. These characteristics tend to perpetuate the existing situation where agriculture produces are barely enough for survival and cannot make a substantial contribution to economic growth in terms of food security within the state [15]. The individual farmers are comparatively powerless against market forces and unable to obtain economies of scale by their effort. All over Abak Agricultural Zone of Akwa Ibom State, the small family farm with little output dominates agriculture. Societal laws and customs in many cases have led to continuous fragmentation and thus reduced the majority of farms to small and often scattered holding. Most of these farmers are near or even below the economic viability.

Farmers in Abak Agricultural Zone can hardly increase their productivity through expansion or intensification of utilization of modern farming methods such as mechanization, pest control, seed selection and adequate marketing. The farmers can hardly supply inputs out of their own resources, this leads to lower productivity, underemployment, low income, low savings, low investment in farm and low yield [15]. Farmers in Abak agricultural zones seems to be trapped in this vicious poverty cycle due to their low output, low farm production; low income and above all, they seems unable to make the necessary investments in farm expansion due to lack adequate information. The consequence of this is that they are unable to improve their living standard. To break out of poverty, these farmers need strong and reliable agricultural information to boost their production. But the extent to which crop farmers in Abak agricultural zones have used information sources to access modern production techniques is yet to be evaluated, hence the need for this research. As specific objectives, this paper; mapped the socio-economic characteristics of respondents, identified the sources of agricultural information available to respondents, identified the preferred sources of information utilized by the respondents and analysed the constraints to the use of available information sources by respondents.

METHODOLOGY

This study was conducted in Abak agricultural zone of Akwa Ibom State in Nigeria, which is made up of five local government areas namely Abak, Etim Ekpo, Ika, Oruk Anam and Ukanafun. There are nine (9) blocks which cut across the five local government

areas with each block comprising of eight (8) cells (villages). The zone lies between latitudes 4^0 33'' and 5^0 75'' N and longitude 7^0 35'' and 8^0 25'' E. Simple random sampling technique was used to select three local government areas namely Abak, Etim Ekpo and Oruk Anam. Purposive sampling technique was then deployed to select five communities with high concentration of crop farmers in each of the selected Local Government Area. Thereafter, six (6) crop farmers were randomly selected in each of the selected community to make a total of ninety (90) crop farmers used for the study. Preferred Sources of Information Questionnaire (PSIQ), designed by the researchers was used to elicit information from the respondents. The questionnaire was subjected to face and content validity and revision made based on feedback. After that, the instrument was trial tested through a pilot study using two communities and forty respondents. These communities and respondents were not involved in the final study. The questionnaire had four sections. Section A extracted information on the socio-economic characteristics of the farmers such as gender, age, primary occupation, years of farming experience etc. Section B was a list of information sources in a 2-point scale which elicited information from the respondents regarding the information sources available in the study area it had a Kuder Richardson 20 (KR20) coefficient of 0.7. Section C was a rating scale which elicited information from the respondents regarding their preferred information sources. It was a 3-point rating scale with Cronbach alpha coefficient of 0.84. Section D was a 4-point rating scale which measured the constraints faced by the farmers with regards to information sources utilization. The scale was also reliable with Cronbach alpha coefficient of 0.82. The researcher visited the communities and upon self introduction, briefed the respondents about the study to boost their understanding and be properly guided while providing appropriate answers or responses. The instruments were administered and retrieved the same day. Descriptive statistical tools were used to analyze the data. Specific objectives 1 and 2 were analysed descriptively using frequency count and percentages. Specific objectives 3 and 4 were also analysed descriptively using frequency count and percentages as well as mean and mean ranking.

RESULTS

Socio-Economic Characteristics of the Respondents

As shown in table-1, majority (64.5%) of the respondents were within the age bracket of 25-40 years, 21.1% were within 41-60 years, 4.4% of the respondents were less than 25 years of age while only 10% of the respondents were 60years and above. The results also reveal that 81.1 % of the respondents were males while 18.9 percent were females. Item 3 on table 1 shows that 55.6 % of the respondents were married, 35.6% were single, and 2.2% of the respondents were divorced while 6.6% were widowed. This indicates that crop production is lucrative business which is capable of providing food and income for the sustenance of families and couples.

Item 4 on Table1 also showed that 14.4% of the respondents acquired primary education, 15.5% acquired College/University education, 57.7% acquired secondary education and only 12.22% had no formal education. By implication, majority of the respondents were literate having attended one level of education or the other. This is advantageous with regards to utilization of information sources on crop production. The table on item 6 reveals that 66.67 % took crop farming as their primary occupation, 11.11% took other occupations as their primary occupation, 6.67 % had trading as primary occupation, 11.11% were into poultry production, while 4.44% of the respondents were into fish production. Item 7 on table 1 reveals that Majority (52.22%) of the respondents had between 3-10 years of farming experience, about 27.7% had less than 3 years of experience, 15.56% had between 11-20 years while 4.4% had above 20 years of farming experience. This implies that that majority of crop farmers had good experience in crop farming business. Results have also indicated that 51% of the respondents had 6 to10 persons in their households, 40% had 2 to 5 persons, and 5.5% had less than 2 persons while 3.3% had household size of 10 people and above.

Sources of Agricultural Information Available to the Respondents

Results on Table-2 revealed that all the sources of information identified were available to the respondents. About 95.6% of them attested to the fact that mobile phones were their major available source of information while 92.2% identified both television and radio as their available sources of information. Other major available sources of information identified by the respondents were internet (91.1%), co-farmers (90%), extension agent (82.2%), farm input distributors (81.1%) and friends (80%). Crop farmers association and posters (50%) each were considered the least available sources of information which were attributed to posters not giving them enough detailed information and lack of interest in joining the crop farmers association.

Table-1: Socio-Economic Characteristics Distribution of the Respondents

Item	Socioeconomic Characteristics	Frequency	Percentages
1	**Sex**		
	Male	73	81.0
	Female	17	18.9
	Total	**90**	**100.0**
2	**Age**		
	Less than 25	4	4.40
	25-40	58	64.50
	41-60	19	21.10
	60 and above	9	10.00
	Total	**90**	**100.0**
3	**Marital Status**		
	Married	50	55.5
	Single	32	35.6
	Divorced	2	2.2
	Widowed	6	6.6
	Total	**90**	**100.0**
4	**Educational Level**		
	Primary	13	14.44
	Secondary	52	57.78
	College/University	14	15.56
	No formal education	11	12.22
	Total	**90**	**100.0**
5	**Religion**		
	Christianity	88	97.7
	Islam	1	1.11
	Pagan	1	1.11
	Total	**90**	**100.0**
6	**Primary Occupation**		
	Crop farming	60	66.7
	Poultry production	10	11.11
	Fish farming	4	4.44
	Trading	6	6.67
	Others	10	11.11
	Total	**90**	**100.0**
7	**Years of Farming Experience**		
	Less 3 years	25	27.78
	3-10	47	52.22
	11-20	14	15.56
	Greater than 20	4	4.44
	Total	**90**	**100.0**
8	**Household size**		
	Less than 2	5	5.56
	2-5	36	40.00
	6-10	46	51.11
	Greater than 10	3	3.33
	Total	**90**	**100.0**

Source: Survey field, 2016

Table-2: Distribution of Respondents based on Available Sources of Information

Sources of Information	Available	Not Available	Total
Mobile Phone	86(95.6)	4(4.40)	90(100)
Television	83(92.2)	7(7.80)	90(100)
Radio	83(92.2)	7(7.80)	90(100)
Internet	82(91.1)	8(8.90)	90(100)
Co-farmers	81(90.0)	9(10.0)	90(100)
Extension agents	74(82.2)	16(17.8)	90(100)
Friends	72(80.0)	18(20.0)	90(100)
Farm input distributors	73(81.1)	17(18.9)	90(100)
Workshop/seminar	60(66.6)	30(33.3)	90(100)
Videos	62(68.9)	28(31.1)	90(100)
Family	62(68.9)	28(31.1)	90(100)
Farming training centers	60(66.6)	30(33.3)	90(100)
Newspapers	62(68.9)	28(31.1)	90(100)
Magazines	63(70.0)	27(30.0)	90(100)
Local Govt. Officials	51(56.7)	39(43.3)	90(100)
crop farmers association	45(50.0)	45(50.0)	90(100)
Posters	45(50.0)	45(50.0)	90(100)
Neighbours	46(51.1)	44(48.9)	90(100)

Source: Field Survey, 2016.

Note: Numbers in parenthesis represents percentages while those outside represents frequencies

Preferred Sources of Information Utilized By the Respondents

Table-3 gives insight into the most preferred sources of information utilized by crop farmers in the study area. Three-point likert-scale of most preferred, preferred and not preferred, with a cut-off point of 1.0 was employed to elicit the information from the respondents. The table shows that television and mobile phones with a mean value of 1.8 respectively were the most preferred source of information utilized by crop farmers in the study area, followed by extension agents (1.6), internet (1.6) and co farmers (1.5). Sources of information with a mean value less than 1.0 were considered not preferred hence not utilized by the farmers.

Table-3: Distribution of Respondents Based on Preferred Source of Information Utilized.

Preferred sources of information	Most preferred	Preferred	Not preferred	Mean N=90
Television	77(85.6)	12(13.3)	1(1.1)	1.8
Mobile phones	77(85.6)	11(12.2)	2(2.2)	1.8
Extension agents	61(67.8)	19(21.1)	10(11.1)	1.6
Internet	59(65.6)	27(30.0)	4(4.4)	1.6
Co-farmers	54(60.0)	29(32.2)	7(7.8)	1.5
Workshop/seminar	40(44.4)	34(37.8)	16(17.8)	1.3
Farm input distributors	43(47.8)	34(37.8)	13(14.4)	1.3
Radio	26(28.9)	56(62.2)	8(8.9)	1.2
Farming training centers	45(50.0)	22(24.4)	23(25.6)	1.2
Videos	26(28.9)	46(51.1)	18(20.0)	1.1
crop farmers association	27(30.0)	35(38.9)	28(31.1)	1.0
Friends	12(13.3)	57(63.3)	21(23.3)	0.9
Magazines	12(13.3)	57(63.3)	21(23.3)	0.9
Local government officials	27(30.0)	30(33.3)	33(36.7)	0.9
Newspapers	7(7.8)	57(63.3)	26(28.9)	0.8
Family	3(3.3)	59(65.6)	28(31.1)	0.7
Posters	3(3.3)	42(46.7)	45(50.0)	0.5
Neighbours	3(3.3)	39(43.3)	48(53.3)	0.5

Source: Field survey, 2016. Rating scale: most preferred =2, preferred =1, not preferred =0. Note: x <1.0 = Not preferred; >=1.0 = preferred. Numbers in parenthesis represents percentages while those outside represents frequencies

Constraints to the Use of Available Sources of Information

Nineteen constraints to effective utilization of available sources of information amongst the respondents were identified. Response analyses on Table-4 shows the ratio index indicating the degree of severity of the constraints. The severity increases if the index value approaches 1 and becomes less or not serious if the value approaches 0. The results across all the constraints portrayed that almost all the identified constraints (16 out of 19) had above 0.50 incidences having influence on the utilization of available sources of information by the respondents as shown on the incidence column.

Table-4: Constraints Faced By Crop Farmers in Utilizing Available Sources of Information in the Study Area

Constraints to the use of information	Very serious	Serious	Not serious	Not a problem	Pooled incidence index/ Rank
Lack of incentives	43(43.3)	27(30.0)	24(26.7)	0(0.0)	$(0.100)^{a}$ 1st
Insufficient contacts with extension agents	13(14.4)	13(14.4)	54(60.0)	10(11.1)	$(0.956)^{b}$ 4th
Negative attitude of people towards change	6(6.7)	31(34.4)	47(52.2)	6(6.7)	$(0.911)^{b}$ 8th
High cost of adoption	11(12.2)	42(46.7)	29(32.2)	8(8.9)	$(0.933)^{b}$ 6th
Lack of training centres	20(22.2)	44(48.9)	25(27.8)	1(1.1)	$(0.989)^{b}$ 2nd
Lack of internet service	3(3.3)	22(24.4)	46(51.1)	19(21.1)	$(0.789)^{d}$12th
Lack of money to acquire information source	14(15.6)	24(26.7)	48(53.3)	4(4.4)	$(0.966)^{b}$ 3rd
Unavailability of information sources	3(3.3)	9(10.0)	68(75.6)	10(11.1)	$(0.889)^{c}$10th
High cost of telecommunication services	4(4.4)	29(32.2)	53(58.9)	4(4.4)	$(0.889)^{c}$10th
Inadequate access to ICTs	4(4.4)	29(32.2)	53(58.9)	4(4.4)	$(0.956)^{b}$ 4th
Language barrier	2(2.2)	11(12.2)	29(32.2)	48(53.3)	$(0.467)^{g}$17th
Lack of information	2(2.2)	17(18.9)	62(68.9)	9(10.0)	$(0.900)^{b}$ 9th
Low technical know- how	1(1.1)	10(11.1)	59(65.6)	20(22.2)	$(0.778)^{d}$13th
Lack of time to listen to agricultural programmes	1(1.1)	10(11.1)	50(55.6)	29(32.2)	$(0.688)^{e}$14th
Complexity of understanding	1(11)	11(12.2)	49(54.4)	29(32.2)	$(0.688)^{e}$14th
Lack of interest	0(0.0)	8(8.9)	40(44.4)	42((46.7)	$(0.533)^{f}$ 16th
Lack of access to information sources	0(0.0)	20(22.2)	63(70.0)	7(7.8)	$(0.922)^{b}$ 7th
Problem of gender bias on the use of information sources	5(5.6)	8(8.9)	27(30.0)	50(55.6)	$(0.444)^{f}$ 18th
Illiteracy	2(2.2)	4(4.4)	34(37.8)	50(55.6)	$(0.444)^{f}$ 19th

Source: Field survey, 2016. Rating scale: very serious =3, serious=2, not serious=1, not a problem =0. Note: x<1.5 = Not a constraint; >=1.5 = Constraint. Note: Numbers in parenthesis represents percentages while those outside represents frequencies.

DISCUSSION

Majority (64.5%) of the respondents were within the age bracket of 25-40 years. This result portrays that the respondents were relatively young. This category of farmers ought to be active, inquisitive, productive and willing to acquire information on appropriate farming skills in order to contribute meaningfully to improved farming practices and by extension, development of the society. William *et al.*, classified this age (age bracket of 25-40 years) as the age with strength and physical ability expected to put into the management for high productivity [16]. William *et al.*, posited that farmers in their young, active ages would be smarter than the older ones [16]. Results also revealed that 81.1 % of the respondents were males while 18.9 percent were females. This result agrees with the findings of Ofuoku *et al.*, [17], Salau [18], Idrisa, Sulumbe, and Mohammed [19] who found that men were more involved in farming. This may have been attributed to the fact that farming in general is a bit tedious and requires energy. Findings also showed that majority of the respondents were literate having attended one level of education or the other. These corroborates Fadiji, Adeogun, & Kahinde [20] who found that farmers are highly educated and are imbued with ability to access and appreciate the use of improved technology and best practices in their enterprises. As observed by Emaikwu, Chikwendu and Sani [21], education is not only an important determinant of adoption of an innovation but also a necessary tool for successful implementation of innovation for profitability. Majority (66.67%) of the respondents took crop farming as their primary occupation it can be concluded that the right population was selected for the study and the communities were indeed farming communities. Farming appears as a rural occupation where rural dwellers attach much importance to, although they sometimes combine with other livelihood activities. Results have also indicated that 51% of the respondents had 6 to10 persons in their households. It shows that in farming communities, family labour is an important factor in crop production. Oniah, Tiku and Agbobo [22], in their study, reviewed that farmer's household size, educational level and sex

had an inverse and significant effect on the rice enterprises technical inefficiency. Results also revealed that all the sources of information identified were available to the respondents and majority of those sources were preferred by the respondents, as indicated by the means. Agricultural information sourcing undoubtedly creates knowledge, understanding and values as well as positive attitude, skills and abilities among farmers towards farming activities for improved agricultural productivity. Agricultural experts have repeatedly pointed out that solution to crop production problems will require awareness and proper understanding of crop production techniques. Hence, rural farmers really need to seek information about crop production and how best to respond to innovations in crop production strategies. Results across all the constraints portrayed that almost all the identified constraints (16 out of 19) had above 0.50 incidences having influence on the utilization of available sources of information by the respondents as shown on the incidence column on Table-4. By implication, farmers in the study area, in their effort to utilize information sources, were constrained by lack of incentives, lack of training centers, and lack of money to acquire information source, in addition, insufficient contacts with extension agents, and high cost of telecommunication services also constituted constraints to utilization of information sources. The findings agrees with Tologbonse *et al*., who found that challenges facing farmers in accessing agricultural information were outdated information, language barrier, lack of awareness on existence of different information sources, lack of funds to acquire information and poor format of information carrier [23].

CONCLUSION

The study has shown that information sources are available to crop farmers in Abak Agricultural Zone of Akwa Ibom State. The study also revealed that the major sources of information utilized by the respondents were television, radio, extension agent, Internet and co farmers. Despite the availability of these Information sources, the study has discovered major constraints which include; lack of incentives, lack of training centers, lack of money to acquire information sources, inadequate access to ICTs and insufficient contact with the extension agents amongst others militating against the effective utilization of the available source by respondents to boost production.

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