Understanding Farmers Information Network; Implication For Effective Extension Delivery In Akwa Ibom State

Odoemelam, L. E, Alocha, O.C

ABSTRACT: Appropriateness of information is a critical factor needed to stimulate the right knowledge and attitude of farmers towards sustainable transformation of agriculture. The study investigated the information network that exists among rural communities in Akwa-Ibom States and its implication for effective extension delivery. Even though (AKADEP)Akwa-Ibom State Agricultural Development Programmes are highly involved in the dissemination process, it is important to analyze the information networks of the farmers to improve exchange of information with the following specific objectives; identify the different wealth groups in the study area, ascertain the information networks that exists in the area; analyze the different information types and assess the strength and weakness of the information sources. Data were generated through Focus Group Discussion and Participatory Observation, employing different methodologies like wealth ranking, information diagram and linkage matrix analysis using Likert's scale type. Data generated were analyzed with simple descriptive statistics and means. Major results show that in wealth ranking two groups of respondents were identified the female households with mean score between 1.9 and male headed household with mean score of 2.00 – 2.99. on information network farmer to farmer with 21%, market 14%, church 15% were highest source of their information network. On perceived weakness and strength of the information network, the information quality, frequency of use, timeliness of information flow, and link up of information were adequate while reliability of information was not adequate. The results show that intra community information flow was suitable and accessible to rich farmers while inaccessible and often irrelevant to poor farmers. Therefore, in the face of threat to food insecurity prevalent in the country, it is important to put in place a platform that will afford farmers to ask questions and get substantive responses, not only from extension agents but through appropriate channels within their information networks.

Keywords: Information network, Effective Extension Delivery and Rural Communities

INTRODUCTION

Agriculture is increasingly being realized as the stronghold of the economy in any developing country in terms of household food provision, contribution to gross domestic production (GDP) and employment of large labour force (Eze, 2013). Agricultural extension is fundamentally acknowledged as information and knowledge sharing for agricultural and rural development. The overreaching objective of agricultural extension service globally remainsthe development of rural sector and raising the standard of living of the farmers through increased farm production and income. It relays farmer's problems and information needs to researchers, and in turn transfer technical information to farmers for implementation or formation of sound opinion which allow them make good decisions in selecting probable solution from alternatives (Idu and Obinne, 2009). The weakness in the research extension – farmer – input – linkage system (REFILS) in Nigeria as in most developing countries has been a major factor limiting to increased food production and sustainability development (Idu and Obinne, 2009). Among several possible factors responsible for this is the speed and accuracy of the transfer of the technologies between the intermediary and ultimate users.

- *Odoemelam, L. E, Department of rural sociology and extension, Michael Okpara University of Agriculture Umudike. Email: lovinasteve@gmail.com.*
- *Alocha, O. C, Department of Rural Sociology and Extension, Michael Okpara Universityof Agriculture Umudike*

However, in Nigeria, research has not brought a clear picture on effective and timely information delivery services to rural farmers. If information is not timely or effective disseminated, adoption of technology may be delayed; this may also referred farm output and worsen food insecurity. However, of pathetic effect is apparent lack of analysis of information media needed to enhance the required access and utilization of necessary production technologies among the farmers. According to Djojomatomo and Pertini (1998), no one medium is the best channel disposition, styles of information processing, user preference and expected socio-economic impacts. In the light of globalizations demands, farmers should have access to various channels of information media as appropriate vehicle for sustainable agricultural transformation (Dimelia Anya, 2004). According to Jabbor (2003) appropriateness of information needs is a critical factor needed to stimulate the right knowledge and attitude of farmers towards sustainable agricultural transformation and rural development. The Akwa-Ibom State Agricultural Development Programme (AKADEP) is involved isndissemination of extension information on agriculture best practices. Evidently the AKADEP involved strategies of face to face extension contacts, radio and television. This combination does not seem to have considered the farmer's preference, knowledge and attitudes towards the channels and their overall socio-economic characteristics in the dissemination of information in Akwa-Ibom State, Nigeria. Above all, since the teeming populace of farmers in Akwa-Ibom State live in rural areas, it is important to understand their information network which is aimed at improving the exchange of relevant information between research and extension networks in the State with the following specific objectives to;

1. identifyingthe different wealth groups in the study area.
2. describeand map out communication networks which exists in the area.

3. Identify the source of agricultural information
4. Analyzes the different information types
5. Assess the weakness and strength of their information sources.

METHODOLOGY

The study area was AkwaIbom State. The State was created on September, 1987. It is located in the South-east ecological zone in Nigeria. Uwatt (2000) reported that it is one of the coastal states located between altitude $4^0$33 and $5^0$33 north and longitude $7^0$35 and $8^0$35 east. The state has a total of 7,245,935,746 (NPC, 2006). Moreover, 73 percent of the population lives in the rural area and are farmers. The state is made up of thirty-one (31) local government areas. The population of the study involves all the farmers in the rural communities of AkwaIbom State. Multistage sampling procedure was used in the selection of the sample size. AkwaIbom State is made up of six agricultural zones – namelyUyo, Eket, Abak, Ikot-Ekpene, Oron and Etinam. In the first stage, 3 blocks and 2 cells were selected from each local government area. In the last-stage, 10 farm families were selected from each cell, bringing the total to 180 respondents. Data were generated through the use of Focus Group Discussion and participatory observation employing different methodologies like wealth ranking, information network diagrams and linkage analysis matrix. Data were generated using 4-point Likerttype for objective 1, Strongly Agree 4, Agree 3, Disagree 2, Strongly Disagree 1.

Adding 4 + 3 + 2 + 1 and divide by 4 = 4 + 3 + 2 + 1 = $\frac{10}{4}$ = 2.5.

The decision rule was for female headed household with mean score between 2.5 and above the household is regarded to be wealthy, while for the female household with mean score between 2.5 and above the female is regarded to be wealthy, if the mean score for any household has mean score of between 2.00 and below the family is said be poor, objective 2 and 3 were analyzed with simple descriptive statistics while objective 4 was also analyzed 3 point Likert Scale type of Very adequate 3, Adequate 2 and not adequate 1.

A mean score of $\frac{3 + 2 + 1}{3}$ = 2 was obtained as the decision rule.

Any mean score between 2.00 and above were regarded as very adequate and any mean score between 1.00 to 1.99 were regarded as adequate and any mean between 0 – 0.99 were regarded as not adequate.

RESULTS AND DISCUSSION

Table 1:Distribution of respondents based on wealth ranking

Variables	SA	AG	DIS	Total	Mean	Remark
Keep a least sheep and goat	105	70	110	285	1.85	Poor
Have sufficient land	180	240	-	420	2.33	Poor
Are food secure	405	70	10	485	2.69	Wealthy
Has no problem with school fees	186	142	57	385	2.13	Poor
Children receive education up to UPE	276	108	34	418	2.3	Poor
Do not own sheep/goat	30	70	135	235	1.3	Poor
Have little land	168	162	43	373	2.07	Poor
Have large land	45	86	137	268	1.48	Poor
Have labor constraints	68	134	266	428	2.37	Poor
Do not have balance diet	60	145	220	425	2.36	Poor
Cannot pay school fees	48	156	204	408	2.26	Poor

Table 1: Reveals respondents wealth characteristics. Two groups of wealth characteristic were identified, the female headed households with mean score between 1-1.9 and the male headed household with mean score of between 2.00 – 2.99. The data on table 1 revealed that the female headed household do not keep at least a sheep and goat, have large family, have labour constraints and do not have balance diet and cannot pay school fees while the male headed household keep at least sheep and goat, have sufficient land, are food secure, children receive education up to universal basic education and has no problem with school. Many male and female headed households were poor except few of the themwith mean score of 2.69 who were wealth and male headed households. 1.00 – 199 were characterized as being food sure, do not own sheep or goat, have large family size, have laser constraints and their children do not go to school while the male headed groups with mean score of between 2.00 and above were characteristicsas having atleast a sheep/goat, have sufficient land, are food secure, has no problem with children school fees and their children receive education up to UPE. According to Orisaekwe and Agomuo (2011) that males have more access to production resources like land than counterpart their female due to socio-cultural factors. Family labour is the most dominant source of labour among farm household in Nigeria, while the female-headed households go for hired labour to increase family income, the male-headed households uses family labourParven (2011). For the female-headed households poverty is itself as important course of land tenure securing, they will find it difficult to expand their land base by purchase and are not included to invest scare savings to update title. Augustine and Deininger (2006) reported that access and security of land is an important requirement for the smooth development of an economy particularly in agricultural based economy. Jiggings (1994) reported that if women have access to productive resources and services in their own right, farming alone is capable of increasing farm productive efficiency and profit.

Table 2: Distribution of respondents based on existing information network in the study area

Variables	Frequency	Percentages
Farmer-farmers	174	21.3
Extension agents	62	7.6
Radio	82	10.0
Village Meetings	78	9.5
Market	116	14.0
Poster	18	2.20
Church	120	14.7
Town Crier	102	12.5
Tele-Centre	32	3.9
Input Provider	32	3.9

Multiple Reponses Field Survey, 2013

Table 2 reveals information networks of the respondents. If the utility of information service are scored according to importance, 4 information services within the samples frame of the cells indentified. The table reveals that farmer-farmer interaction extension 21%, church 15%, markets 14% and town cries 13% were mostly relied upon by the respondents. About 4% of the groups stated that their information sources a times were from input service providers, especially the-headed groups who appear to use this information source extensively about 8% of the respondents as their information source. When compared the extension sources to the aggregated totals of farmer-farmer and Tele-centressources are deceptive. On the contrary, all groups uses this sources irrespective of wealth or gender. It was universally agreed and repeatedly emphasized that the extension officer is a known source of god quality agricultural information but were not regularly seen. Some of the respondents 10% uses radio consistently but complained about that the broadcast schedules is often unknown, so the chance of listening to the agricultural broadcast are random. Village meeting 10% were also cite as an important sources, but the timing is critical. Early in the day, prelude many poorer farmers and women all of who may be undertaking agricultural work, and like wise meeting held after 13.00 well exclude women, as they will be fetching water, and food preparation. Agwu*et al* (2008) noted that the major sources of information on improved technologies to farmers were co-farmers following by radio programmes and (Ninabutu*et al,* 2001) showed that influence of fellow farmers in the adoption process cannot be ignored. Similarly (Faturoti*, et al,* 2008) reported extension agent as the highest sources of awareness of plantain and banana hybrid, but Opera (2010) concluded that illiteracy and poverty levels of famers could militate against access and use of agricultural information.

Table 3: Distribution for Respondents based on Information types received from their information network

Variables	Male	%	Female	%	Youths	%
Awareness Information	106	59	54	30	20	11
Radio	56	33	188	66	3	1.7
Church	112	62	38	21	30	17
Newspaper	186	48	74	41	20	11
Technical Information Demonstration	96	33	56	31	28	16
Extension Agents	109	61	61	33	10	6
Farmers Field School	136	76	42	23	21	11
Radio Neighbours	84	47	96	53		- -
Print Media	101	57	86	20	43	-
Local Market	34	19	146			- -
Market Information					-	-
Traders	-	-	-	-	-	-
Family					-	-
Friends	76	42	104	58		- -

Multiple Reponses Field Survey, 2013

Access to information affects farmer's perception to risk (Feder*et al,* 2003). Table 3 reveals the type of information received by the respondents from their information sources. For awareness information, radio was useful for 58% of the male, 30% of female and 11% of the youth in the various households. (Bangale – Oakeley*et at* 2004) observed that radio owners are frequently males; women often listen to the radio during food preparation, but tension exists between youths who wish to listen to music and adults who may wish to listen to many meaningful broadcasts. Other awareness information sources include churches 33% male 66% female and 2% youths, and newspaper 62% male, female 21% and youths 17%. For technical information tables, also shows that the respondents 47% male, 41%

female and 11% youths prefer learning by doing while 53% male, female 31% and youth 16% state, that the extension agents located near by were a very useful sources of high technical information. According to (Agwu and Afieroho, 2007) lack of assistance from national extension system is often the major reason why female do not adopt farming innovation. The respondents further stated that the information were delivered periodically and was frequently not timely (Orisakwe and Agomuo, 2011) reported that regular contact with extension agents motivates and exposes farmers to innovations and gave them information on how to use the technologies. On market information, all the farmers complained, that there was absence of good quality, reliable and independently sourced market information (Parvan, 2010) noted that new technologies often require repeated and consistent use of new inputs such as fertilizer and pesticides. If farmers are not secure in their access to these sources and the market provide them, adopting the technologies that require that inputs would place them at the mercy of supply streams. He further noted that access to wider markets offer the possibilities of increased food availability due to less spoilage and loss, higher profits for farmers because prices are not deflated due to past harvest flooding of local markets, and the minimization of community price fluctuations.

Table 4: Mean distribution of respondents on their perceived weakness and strength of the information network

Variables	Very Adequate	Adequate	NotAdequate	Total	Mean	Remark
Information Quality	54	102	106	262	1.455	Adequate
Frequency of Use	39	56	139	234	1.3	Adequate
Timeliness of Information Flow	18	32	161	211	1.172	Adequate
Reliability of Information	-	28	136	104	0.911	Not Adequate
Information Linkup	57	62	132	245	1.361	Adequate
Type of Information Received	123	104	93	320	1.777	Adequate

Source, field data, 2013

Decision rule
0 – 0.99 = not adequate
1.0 – 1.99 = Adequate
2.00 and above very adequate

Results on Table 4, shows that all the variables tested none of them had a mean score of Ẋ2.00 indicating that the information received through that channels were not very adequate. All the variables included scored between 1.00 – 1.99 indicating that the information were adequate except reliability of information being delivered through those channels that had a mean score of 0.911. The implication of the result is that the information quality, frequency of use, timeliness of information flow, was adequate but reliability of information was not adequate.

IMPLICATIONS FOR EFFECTIVE EXTENSION DELIVERY

It is evident within any communication strategy that links to research must be articulated and operationalized. Special attention need to be paid to understanding farmersinformation network existing in a specific location. This is because poor farmers information networks are restricted as well as their ability to respond to information received. To ensure that the dissemination process or mechanism is on target and focusing on poorer, farmers, and obligatory information dissemination poverty checks must be an integral part of the monitoring and evaluation process of the ADPs in the State.

CONCLUSION

The study investigated the information network of rural communities in Akwa-Ibom State. The results show that intra community information flow was suitable and accessible to rich farmers while inaccessible and often irrelevant to poor farmers.

RECOMMENDATION

Agriculture as a sector and as a human activity remains the most viable instrument to the existence of man. Therefore, in the face of threat to food insecurity prevalent in the country,it is important to put in place a platform that will afford farmers to ask questions and get substantive responses, not only from extension agents but through appropriate channels within their information networks.

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