

Problems and Prospects of Agricultural Information Sources Utilization by Small Scale Farmers: A Case from Nasarawa State of Nigeria

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ABSTRACT The main objective of this paper is to discuss the process of communication in the Nasarawa State of Nigeria, including the various communication channels and the role of the extension service. This is a review paper. The authors analysed the main concepts including the problems of information utilization by farmers, communication strategies/process and the role of extension service in communicating with the rural farmers. It was observed that one major constraint in information dissemination was the limited number of trained extension workers. The recommendation was to massively increase the number of trained extension personnel as well as expand the critical training facilities in institution of learning.

INTRODUCTION

Information plays a vital role in our present day society as a result of the advancement in information and communication technologies (ICTs). It, also, helps to relate with one another. Stanley (1990) opined that information is one of the basic human needs after air, water, food and shelter. According to Cambe (1992), man requires information to be able to manipulate factors of production such as land, labour and capital resources into meaningful and productive use.

Agricultural information covers all published and unpublished knowledge on general aspects of agriculture and consists of innovations, ideas and technologies of agricultural policies (Aina 1990). According to Ozowa (1995), agricultural information provides the data used for decision making.

Agricultural information is needed for overall development of agriculture for the improvement of living standard of farmers. The objectives of agricultural information can hardly be realized if farmers have no access to information (Olawoye 1996). Agricultural information creates awareness among farmers about agricultural technologies for adoption. Agbamu (2006) opined that information is the first and indispensable step of an adoption process. Adefuye and Adedoyin (1993) suggested that for a steady flow of accurate understandable and

factual agricultural progress, farmers must know, and act in accordance to agricultural information. Therefore, how far people progress in whatever they are doing in agriculture depends largely upon the availability and access to accurate and reliable information.

Obinne (1994) believes that the major setback in agricultural production in Nigeria is not lack of recommended practices needed for economic growth and rural transformation but that of disseminating the recommended practices to end-users. According to Adeniji (1977) and Idowu (1994) a body of knowledge amassed from research as well as indigenous technical knowledge in the contemporary world is immense. They argued that the impact of the knowledge on course of human development lags behind this enormous knowledge. They claimed that the situation is more so in the field of agriculture where the system that form the entity are stratified into highly formally educated technology generation (researchers), relatively well educated technology dissemination system (extensionists) and a mass of technology utilizing system (farmers) who have little or no formal education. The implication of this stratification, according to them, is that messages, production recommendations, field problems and innovations transferred from one system, to the other, as well as within each system have not been effective in achieving a commensurate development in agriculture. Communi-

cation, therefore is to be conceptualized as a process of information flow by which ideas are transferred from a source to a receiver with the intent to change his/her skill. Adebayo (2004) opined that communication is a key process in information dissemination in agriculture. In a similar vein, Udall (1983) suggested that communication can be regarded as a process by which one person (or group) shares and impacts information to another.

The traditional farmers in Nasarawa State, generally, are suspicious of all new ideas, especially ideas from theoretical people such as scientists and extension officers. Another reason for harbouring the suspicious attitude lies in the culture of the farmers and of the society in which they live. Most farmers in Nasarawa State do not understand the principles of scientific agriculture and have little interest in gaining information on these principles. They see their farms as ways of life and strive hard for incomes which are considered reasonable within their communities. They, also, reduce their risks by having subsistence farm on which they produce almost everything they require.

Farouky (1963) reported that such impressions can only be removed by extension workers. Common weakness of information utilization in the study area lies on scarcity of precise knowledge of real situation and the problems of the farmer, not in a general way, but as they affect farmers in Nasarawa State. Agbamu (2005) agreed that in many developing countries including the study area, too little attention is paid to the understanding of farm-level realities. Always, there is a wide gap between those responsible for preparing and carrying out development plans and the farmers themselves. In most cases farmers in developing countries, who constitute extension clients, are never involved in planning the extension programme but relied in the relatively superficial observation of field officers or arm-chair deductions and rely on generalization of programme planners. Adedoyin and Adebayo (2005) opine that behaviour and motives could be attained by development of a sense of mutual trust and openness or through correcting distortions in communication by way of constructive feedback. In Nigeria, according to Njoku (1991), extension agents are the main sources of farmer's information on improved technologies and are also responsible for educating farmers on the use of improved technologies.

The broad objective of this paper is to examine the problems and prospects of information utilization sources used by small scale farmers in Nigeria using Nasarawa State as an example.

Objectives

This is a review work and the objectives are to:

- (i) Explain the Factors associated with the agricultural information sources used by farmers.
- (ii) Analyze the utilization of appropriate communication channels in agricultural services
- (iii) Describe the process of interpersonal and mass media communication
- (iv) Determine the prospects of information utilization in the study area.
- (v) Determine the roles of extension service in information mobilization and dissemination

OBSERVATIONS AND DISCUSSION

Problems of Information Utilization

These extension agents were used as the main agents of liaising between the extension services and the beneficiaries (SPORE 1997). Hybells and Weaver (1992) perceived communication as a means to livelihood for effective communication and standard for signifying better and meaningful ways of life. Bello (2007) reported that 52.28 percent of the extension workers in the study area had HND/B.Sc. (intermediate, University and Postgraduate levels) degree certificates. By implication, the rest of the extension workers serving the study area had qualifications within the range of non-formal, primary and secondary levels. Abdullahi (2006) argued that there was bound to be a problem in the effectively delivery system because the higher the qualified extension agents the better their handling communication between them and the farmers they were meant to interact with.

Further important factor hindering effective information utilization between farmers and extension workers/agents in the study area is the gross inadequacy of extension agents with a ratio of 1:1500 and a large area of coverage described as "just adequate" by the respondents (Bello 2007).

Agbamu (2000) opined that participation of agricultural extension workers in adaptive research trials allows them to become familiar with the technologies they are expected to promote and, also, helps to ensure that the sociological dimensions of farming are not neglected in the recommended improved farming practices. Bello (2007) reported that 66.70 percent of the extension workers of the Nasarawa State Agricultural Development Programme (NADP) expressed dissatisfaction with their mobility arrangement by the NADP while 63.3 percent of them claimed of lack of personal means of transportation. Orivel (1983) observed that that failure to provide transportation was one the main causes of extension staff lack of effectiveness. Orivel (1983) reported that under remunerations of extension staff contributed immensely to lack of motivation and quick turnover of extension staff with ultimate poor level of performance of T & V system such as the case in the study area.

The more accessible the channels of communication are the more would be used more regularly (Foo 1980). In the study area, most of the farmers leave home as early as 7.30 GMT for their farms and get back between 16.00 GMT and 19.00 GMT (Bello 2007). Therefore, the programme presented in the morning were not accessible to the farmers.

Ozowa (1995) reported that poor reception quality is one of the obvious constraints in the use of broadcasting media in Nigeria (including the study area). Generally, in agricultural extension, both interpersonal communication channels and mass media have been widely applied to disseminate information to farming communities. Okwu and Obinne (2009) suggest that such communication channels include extension agents, farmer-to-farmer contact, friends and relative. Other channels include mass media (newspapers, magazines, posters) and electronics media (radio, television, film, slides, file strips).

Yahaya (2006) opined that the inadequacy of the interpersonal communication strategy in development has lent credence to the emergence of media support in development process. According to Schramm (1967) establishment of a wide-rapidly and inexpensively than before, Okwu and Obinne (2009) posited a popular generalization from communication research that interpersonal communication is more efficacious

than mass communication in bringing about social change. They argued that mass media while perhaps necessary to achieve economics of scale are inferior to personal contact as means of persuading people to change behaviour.

The Process, Concept and Strategies of Interpersonal and Mass Communications

The communication process starts with the source or sender who is an individual or corporate entity that has something to say another, individual or group of individuals. Communication effect forms a critical element in the communication process. What constitutes communication effects are the changes in receiver's behaviour which occurs due to transmission of a message. A notable, although undesirable, element in the communication process is noise. Noise tends to be present in every state of the communication process. Noise is regarded as a technical term for all forms of obstacles which tend to reduce the quality of communication. The negative effects of the communication barrier on communicated message either in mass media or interpersonal communication is described technically as message entropy. According to Merrill and Lowenstein (1979), message entropy is a measure of disorder or a tendency towards disorganization and disorientation, a loss of, or change in primary or basic information, a trend toward information anarchy.

Wilcox (1977) opined that effectiveness of persuasive communication depends on the operation of three factors. These factors, he argued, include: (i) the needs of the persuadee (the person being persuaded); (ii) the credibility of the persuader, and (iii) the logic of the message.

Interpersonal communication is identified with the presence of two more individuals who have the ability to provide ideas for others so act upon in social contact and context. Interpersonal communication process is, however, mostly unstructured with relatively few rules governing the frequency, form or context of the message. In interpersonal communication setting, the process is automatic and participants decide to speak when they choose and to whom they choose. Barland (1968) believes that it is the episodic and aliptical character of interpersonal discourse with its topical vacillations and alternating strategies that is the most widely recognized feature. It is generally believed that

when people engage in interpersonal communication with one another, their fields of experience begin to overlap. This overlapping of fields of experience is called homophile. Bittner (1989) opined that homophile that is present the more the change for effective and meaningful interpersonal communication.

According to Nwosu (1996), mass media are devices employed by anyone involved in a mass-mediated communication situation for moving messages across distance or time. Bittner (1989) distinguished between mass communication and mass media by asserting that mass communication requires the use of intermediate transmitter of information while mass communication involves communicating messages through a mass medium to a large number of people. Mass media can be broadly classified into two or three types depending on the criteria for the classification. For our own purpose the classification shall be done on the basis of the mechanical device used; therefore, we can have and electronic media. However, electronic media as a whole is commonly characterized by the conversion of aura and/or visual signals into electrical impulses that are reconverted into sound and/or visual images which can be heard and/or seen.

Constraints to Utilization of Mass Media and Interpersonal Channels

In developing countries, such as Nigeria, the use of mass media in agricultural technology transfer to rural farmers has its attendant limitations. Technologically, the use of mass media in absence of education, technical skills, appropriate infrastructures, material resources and appropriate land reforms, such as the case in Nasarawa State, mass media initiative alone is unlikely to eradicate the inequality in rural areas. Mody (1991) claimed that printed media serves little purpose in the villages of developing countries (including Nigeria and the study area) dominated by illiterates.

Even though literacy level (such as ability to read and write) does not constitute a pre-requisite for the use of electronic media for the purpose of agricultural extension, it cannot be effectively used in multi-lingual societies and area with different agro-climatic zones like the study area. At the same time, it may not be feasible to translate a particular programme into all the lo-

cal languages in a multi-lingual society. The mass media outfits, according to TARADATT (2002), constitute unusual top-down structures with limited scope for rural participation in the process of production. Most often than not media technology exhibits the ability to narrow the geographical distance without obvious discernable bias.

Interpersonal channel of communication has the disadvantage of being costly in terms of staff requirements, time and clientele's movement compared with mass media. This is because of the number of clientele that can be reached within a given period of time through process of interpersonal channels. Generally, the quality of interpersonal channels is low due to the fact that messages through them become greatly distorted as they flow along interpersonal chains. Fenley and Williams (1984) believed such visits could simply degenerate into personal services by the extension agent or into a personal visits.

Role of Extension in Information Dissemination

An individual who is prone to being persuaded by a given communicator attempts to associate himself to the communicator in the manner that their views agree or not agree. Newcomb (1953) postulated a general motivation model producing a "strain towards symmetry" in the attitudes of two communicators, A and B, towards an object, X. He believed that each communicator has a simultaneous co-orientation towards his or her communication partner (usually the level of attraction and feelings toward the partner) and towards the object of communication (the degree of positive or negative attitude about X). Newcomb identified four basic components of this relational system: (i) A's attitude towards X; (ii) A's attraction to B, (iii) B's attitude toward X; and (iv) B's attraction to A.

Based on the model, both A and B have natural propensity toward balance in their co-orientation toward X and their partner. If, for example, A has negative attitude about X and very positive attraction towards B, but B has a positive attitude toward X and toward A, then A will experience an imbalance resulting in a push toward revision of attitude to regain balance.

According to Newcomb, the strain toward balance can be resolved by one or a combination of: (i) A decreasing the amount of liking for B; (ii) A changing his attitude toward X; and (iii) A changing B's attitude about X to align with A's. Whether A strives for simmering or asymmetry with B in relation to X would depend upon if A was a persuasive or an un-persuasive individual. Persuasiveness can thus be identified with agreement-seeking. A persuasive individual makes a series of explicit or implicit "comparisons" between his own positions and opinions of others seeking to produce and maintain agreement or reduce disagreement. A social psychological model being described can be illustrated thus:

$$A \longleftrightarrow X \longleftrightarrow B$$

Adedoyin and Adebayo (2005), broadly categorized communication based on a number of processes and listed some communication strategies with examples (Table 1).

Table 1: Communication and advocacy strategies

Communication and advocacy strategies	Example	
Face-to-face Strategies	Mass Oral Speech Mass Rally Theatre	Interpersonal Conversation Discussion, Small group meeting Telephone
Mass Media: Electronics	Radio Television Film Slide Presentation	
Print	Newspapers Book Leaflets Magazine Posters	Letter Telegram
Others	Exhibition Talking drum Campaign	Messenger Town Crier opinion leaders
Other strategies: Radio-phones, Radio message, Telex messages, Electronic mails, Internet, Text messages, Inter-communication etc.		

The complexity of human nature and the restrictions imposed by human interactions often complicate the communication process. The solution is to either develop a sense of mutual trust and openness or correct distortions in communication through constructive feedback. To achieve mutual trust and openness, a device known as the Johari Window could be applied

to increase personal and interpersonal awareness. The window consists of four quadrants as follows:

- Quadrant 1* - The free and open area, refers to behaviours known to self and to others.
- Quadrant 2* - The blind area, refers to things about us that others can see but which we are unaware of.
- Quadrant 3* - The avoided or hidden area which indicates things we prefer to keep to ourselves (hidden agenda or personal feelings)
- Quadrant 4* - The area of unknown activity representing the sort of things that are not accessible to us or to others, but which may eventually be revealed. Such behaviours and motives may hold the key to lasting solution to the management of the environment in any community. A change in any quadrant will affect all the other quadrants.

The Johari Window is represented in Table 2.

Table 2: The Johari window

	Known to self	
	Open Area (1)	Blind Area (2)
Known to others	Open Area (1)	Blind Area (2)
Not known to others	Hidden Area (3)	Unknown Area (4)

Communication feedback (response from the receiver to the source) can be used to reinforce a message and make the subject amend his/her ways without feeling compelled if handled with sensitivity and judgement. Feedback is more effective when it is specific, descriptive, clear, directive towards a behaviour which the receiver controls and is goal oriented.

In recent times experts have strongly recommended the use of participatory approaches. A participatory approach ensures high involvement of the clientele in decision-making (Sinkaiye 2011).

Feedback is one of the best ways of getting evidence of effective communication. It enables us to learn about how others see us and how we affect them. It is, thus, an ingredient in the process of evaluation and improving the effectiveness of communication.

Prospects of Effective Information Utilization

Real communication of new ideas will not take place in the study area without personal contact and confidence between the sender and the receiver of the idea. According to van den Ban (1972), rigid social structure is one of the reasons why traditional farmers usually become suspicious of all government actions. He believes that farmers do not trust the high-status government officials and are not confident that the officials will act in their interest. Farmers in Nasarawa State have little understanding of changes elsewhere hence have little confidence in anybody from outside their community. Opinion leaders become very useful.

Opinion leaders, according to Okwu (2006), are usually characterized by more use of the mass media, higher levels of gregariousness and self perception to influence others and as having attributed roles as source and guide. The identification of opinion leaders as intervening variable between the mass-mediated message and audience is significant in the study area for diffusion of agricultural innovations where the more information – active farmers become opinion leaders to the less active ones. Pickering (1984) suggests that in areas emerging from a large subsistence agriculture, extension services are generally poorly organized and frequently are subject to political and administrative abuse. He believes that many extension agents tend to be younger than their audience – in general a grave disadvantage in rural traditional societies. According to Awa (1992), lack of sensitivity to local beliefs and knowledge can severely reduce the ability of technical and extension workers to learn from local peoples' knowledge and experience, which could otherwise render a development project more worthwhile to all concerned. Beynon et al. (1998) as reported by Agbamu (2005) stated that agricultural extension was associated with information, the public good character of which depended on (a) nature of its provision by mass media or personal contact (b) its speed of diffusion and time sensitivity, (c) whether it was embodied in physical inputs. Pure agro-information, according to him, which was not embodied in a physical product such as production was, generally, regarded as both non-sub tractable and non-excludable. Agbamu claimed that if the information diffused

rapidly there was incentive for farmers, not to pay for the information by obtaining the information from other farmers.

Obinne (2012) reiterates the fact that the field of discourse in the communication process indicates a shift from the linear to be systems approach which emphasizes the synergistic interdependence of the elements in the process

Further prospect of information utilization in the study area will be the likely emergence of non-governmental organization (NGOs) that will be willing to provide extension service in poor rural communities as agricultural development aid. In this case, it could be likely that information delivery could become a tool for market competition that would be used by private extension providers.

CONCLUSION

The paper highlighted the fact that both interpersonal channels and mass media communication strategies are applicable sources of disseminating information to farmers in the study area. Problems of limited and poorly trained extension workers constituted considerably, inadequacies of interpersonal communication strategy. Such inadequacy of interpersonal communication strategy was considered attributable to the use of mass media support in conducting information dissemination to farmers. Mass media strategy in absence of education, material resources, appropriate infrastructures, and technical skills is unlikely to eradicate inaccessibility and information utilization among farming communities. Knowledge of real situations and problems of farmers as they affect farmers are pre-requisite to gaining the confidence of farmers in the rural communities.

RECOMMENDATIONS

On the basis of the foregoing, the paper recommends the followings:

- a. There is the need for the extension managers to increase the number of extension workers in the study area with the view to enhancing the benefits derivable to the potential beneficiaries through research-extension-farmers' linkage among farming communities.
- b. Training facilities be made available in the institutions specially established to train

- agricultural workers so that products of such institutions are well prepared to provide improved quality of agricultural messages to farmers.
- c. Training needs of extension workers be identified in the areas of agriculture and communication to serve as guide to organizing training seminars periodically to fill the gaps in knowledge and skills of farmers.
 - d. Impressions for data collection be made to the potential beneficiaries of information sources so as to ensure confidence building mechanism between the farming community and the extension workers.
 - e. Needed infrastructural facilities be made available so as to ensure effective mass media support for information dissemination to farmers.
 - f. Opinion leaders as intervening variable between the mass-mediated message and farmers be encourage to ensure overlapping of field experience for the purpose of effective avenue for intelligent dialogue.

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