Imperative of Communication Strategy to Farmers in the Adoption and Decision Processes of Disseminating Information on Agricultural Products in Africa

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ABSTRACT

Communication is an important diffusion element under which scientific information is shared on ideas, facts and knowledge between individuals or groups. This work takes a look at the Imperative of Communication Strategy to Farmers in the Adoption and Decision Processes of Disseminating Information on Agricultural Products in Africa. The study observes that the appropriate joining and articulating of the six crucial communication elements (services, message, channel, receivers, effect and feedbacks) determine the extent of diffusion of innovations. Based on the foregoing, the study maintains that effectiveness of communication and association sustainability in diffusion process depends on communication skill (ability to select the best media for communication), knowledge of the subject matter, attitude towards self and audience and prevalent culture of environment.
Keywords: Communication, Dissemination, Adoption, Innovation

INTRODUCTION

Proper processing of information is crucial in communication of idea and consolidation of knowledge in order to persuade farmers in the adoption decision process (Fadiji, 2005). Obi (2002) adds that appropriate communication could reduce the time it would take to go through the lengthy process in adopting an innovation in rural areas. Hence we could combine various media so that they could reinforce each other in implementing agricultural (extension) programs. For example, the use of mass media can be useful in eliciting interest and awareness among farmers about innovation in agriculture. However, use of mass media alone cannot achieve meaningful adoption and overall changes in behaviours in the rural areas. This requires efforts to combine mass media with intensive use of telephone, internet field agents (Heeks, 1999; Onu and Ofojebe, 2007).

Moreover, adoption of innovation involves sense of sequential mental activities ranging from the print of farmers knowledge of the innovation to final decision to integrate the innovation in his full scale farming enterprise. Joseph (1989) observes that adoption process follow basically, the same orientation in education, agriculture, medicine and health science, home making and industries. Adoption is a decision making process which essentially involves a number of stages (Edifiogba, 2005). Ani (2007) agrees with that and conclude that three stages namely, awareness, trial and adoption are most important stages. However, according to Agbamu (2007), it involves six stages or steps which are: awareness, interest, evaluation, trial, adoption and discontinuity. Major Sub-Saharan African countries rely

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heavily on the agricultural sector as the mainstream for economic growth, employment creation and foreign exchange generation. In most of these countries, the agricultural sector employs about 70% of the labour force, accounts for 25% of their GDP and 60% of their export earnings (Agumagu, 1988). The sector is also a major contributor to the national food and a stimulant to the growth of off-farm employment (Mgbada, 2002). In the past decade, a number of Sub-Saharan African countries experienced slow agricultural development. Since then, the sector has not grown as fast as the population. Decline in agricultural development is attributed to a number of constraints that include inappropriate national agricultural policies, lack of adequate information provision, low adoption of agricultural technologies and ineffective institutional frameworks (Asiabaka, 2009).

However, inadequate provision of relevant, reliable and comparative information support to stakeholders in agricultural production has been identified as a major constraint (Kiplango, 2003). In the last few decades the United States Agency for International Development (USAID) disbursed funds from its budgets to sponsor agricultural development projects in some Third World Countries. In cases where the USAID did not directly provide financial aid, it provided technical assistance. This was in countries where funds were provided by indigenous government or foundation. The donor-sponsors applied educational technology and development communication strategy to deliver projects in the various beneficiary countries. The United Nations Development Program (UNDP) in Tajikistan was mandated in the framework of Enhancing Agricultural Governance to elaborate a communication strategy (http://www.undp.tj, 2010).

The official source consulted was the comprehensive reports published in the United States Agricultural International Development (USAID) project profiles prepared by Clearing House on Development Communication. During the close study of these project profiles, a focus on the campaign communication strategy was maintained. This communication strategy also needed to reach other stakeholders, such as the civil society, including the "intelligentsia" specific relevant university faculties, local active NGOs, etc. (http://www.undp.tj,2010). This approach facilitated the choice of design and methodology for the study. A systematic analysis of each country's project implementation report was undertaken to gain a close acquaintance with the peculiar circumstances of each nation's project profile. Though this process, objective comparisons of the experiences of each national campaign program was accomplished and this assisted the conduct of the study in a meaningful way, yet farm practice improvement is dominated by the effort of agronomists, scientist, mass media specialists and rural sociologists.

The review was confined to sources published by the Clearing House on Development Communication, Washington D.C, and United States. The citations reflected the development communication literature that was consulted by the reference authors who analyzed the agricultural campaign programs under study. Dey (1977) contends that the use of electronic broadcasting medium for agricultural communication was a novel approach, far from the culture of the Indian people. He did not say if the novel method failed to persuade the target audience. According to Cisneros (1976), agricultural communication for the peasant farmer had consistently used the same media approach.

He proposes variations in the use of media channels for the diffusion of campaign messages in Mexican agricultural communication. Agricultural development communication in Mexico should adopt media-mixed strategy that integrates the regular mass media with interpersonal channels (Sanchez, 1974). Bordenave (1977) explains that the agricultural campaign communication should be integrated with the overall national development plan. He emphasizes that the implementation of agricultural modernization practice in isolation did not fit into the development needs of the target audiences. Cassirer (1977) expresses the view that Radio Communication for the support of agricultural modernization in Senegal should be adapted to the circumstances of the traditional sector where the target population is resident. The use of radio broadcasting for the diffusion of agricultural campaign messages was insufficient for the peasantry in Senegal, but the use of mixed media that integrates the traditional interpersonal networks (Sock, 1976). For an agricultural communication strategy that interprets the visual media for the illiterate members of the target population. However, Anyanwu (1991) expresses that the effectiveness of communication and association sustainability in diffusion process depends on communication skill (ability to select the best media for communication) knowledge of the subject matter, attitude towards self and audience and prevalent culture of environment.

Myren (1974) rejects the over-burdened confidence in the radio channel of communication for a divergent rural audience. Smith (1976) opines that the principle of agricultural information management system was the valid strategy for the evaluation of the communication strategy in the Pakistani campaign. He explains that agricultural management information system was a novel approach to the control of national campaigns. Agricultural communication strategy used in Philippines for small price farmers should integrate a system of getting feedback from the target audience. The integration feedback is a two-way communication system that facilitates objective evaluation (Gonzalez, 1977). From what is known in the reports of the project profiles of developing countries, the implementation of the communication strategy has been in the center of the program performance indexes. In this line of reasoning, the success or failure of most programs depended on the performance of the campaign communication strategy. The choice of packages of mass media channels of communication; the content and strength of the campaign messages; the diffusion strategy; the monitoring effectiveness and the receptivity of the messages are usually dependent on the campaign communication strategy. Recently, pre-program research input has been receiving attention. The use of theory in the campaign communication planning has also been getting the attention of the change agents who are directly involved in the dissemination of campaign information.

An effective post-implementation program evaluation is likely to consider the components of the pre-program planning strategies in such issues as research needs, the use of theory and media use effectiveness. This concentrated on the analysis of the performance of campaign communication strategy in the overall success or failure of the programs under evaluation. The objective of the communication is to provide the independent commission with approaches, methodologies, activities, outputs and outcomes for them to effectively raise awareness among farmers and the rural population about the

Government agricultural reforms and to ensure that a sustainable mechanism is in place for this awareness to continue well after the implementation. Communication as one of the diffusion elements has six essential elements viz: services, message, chanel, receivers, effect and feedbacks (Chaka, 2002). The use of communication strategies in most development campaign program is related to the increasing awareness of the role of information and education in the delivery of national development projects. It was designed to examine and objectively analyze the performance indices of the already implemented national development projects in selected developing countries- Pakistan, Senegal and Mexico. The conduct of the study which was limited to the first phase in all the countries focused on the outlined work parameters as follows:

1.   The characteristics of the target population.
2.   The features of the campaign communication strategies used in each of the nations.
3.   The selection and nature of the channels of communication media packages used in campaigns under evaluation.
4.   The use of communication channels by the change agents.
5.   The content of the diffusion messages that were beamed to the target population.

Nzeakor (1999) points out that information technology could help rural communities and areas to upgrade themselves from peasant farming to modern agriculture through:-

i   Provision of equitable access to new techniques for improving agricultural production.
ii   Reduce food storage losses through more efficient distribution network.
iii   Efficient marketing of agricultural products through information and telecommunication networks.
iv   Establishment of information supplies for monitoring market performance and measuring market failures.
v   Development of information systems to address food security issues such as agricultural production, government subsidies for food security, monitoring of water and land resources, diseases problems, food transformation and storage.

Cases of practical application of different information technologies for extension purposes have been reported in other developing countries. In Australia, farmers involved in the Land Care Program have used the geo-information system technology to solve local problems. These farmers were confronted with serious soil erosion, dug pits and procured air photo and maps which were later digitalized and fed into SIS software that made it possible for a consolidated map to be made for planning and forecasting (Spore, 1999).

In the same Australia, farmer groups participating in the program have joined Land Care Net (an electric network). With the aid of the network, farmers as well as research institutes and government agencies do place information and ask questions about similar groups, send electronic mails to each other on the internet. Through the internet, a farmer group in North Queens Land was able to locate supplies which are several kilometers away by placing species in Western Australia, which is several kilometers away by placing a request on the NET (Alexander, 2004).

In Zambia, local internet service providers such as the Zamnet are used for agricultural commodity exchanges. Field data and preliminary analysis are frequently sent for further analysis across national boundaries through electronic messaging. For instance, data on sorghum and Millet trials in Sahelia centre in Niamey, Niger are regularly sent to India for analysis just as biotechnology data collected at Cornell University are sent through the same channel for analysis at IRRI and vice versa (Kerrigan, Lindsey and Novak, 1994). Information, if properly applied, can improve livelihoods and food security. However, it is widely recognized that the ability of the poor and disadvantaged to access and share new knowledge and indigenous innovations of importance has depended on fragile and often ineffective exchange mechanisms. Toward the realization of the first goal of millennium development (eradication of poverty and hunger); farmers need technology which must be technically viable, economically reasonable, socially acceptable to improve their skills so as to enhance their productivity. Information technologies have not only broken down old farmers allowing critical organizational information to be shared instantly across departments and groups but have also reduced management layers (Ezeugbor, 2008).

FAO Initiatives on the use of Information Technology to Promote Agriculture in the Rural Areas

Food and Agriculture Organization (FAO) establishes the World Agriculture Information Center (WAICENT) as its strategic framework for agricultural information management and dissemination. In response to the high priority, according to FAO (2003), the framework is made to the:

i.   Development of an integrated information system, making appropriate use of the latest developments in information management and technology,

ii.   Enhancement of access to timely and relevant technical information by FAO members and the general public and

iii.   Encouragement of FAO members to utilize information as a key resource for development.

WAICENT as a corporate framework integrates and harmonizes standards, tolls and procedures for the efficient and effective management and dissemination of high-quality information products, including relevant and reliable statistics, texts, multi-media resources, maps and much more. WAICENT enables FAO (1997) members and others to access agricultural information that is essential for reducing poverty and achieving food security and sustainable rural development. The Consultation on Agricultural Information Management (COAIM) is a biannual intergovernmental meeting that brings together policy makers, funding agencies and major players in all the relevant fields of agricultural information, as well as observers from the United Nations and the Non-Governmental Organization (NGO) community. There should be ways to improve the capacities of decision makers, professional and the public-at-large in member countries to access and use information essential for achieving sustainable agricultural development and food security at the national level.

Addressing the difficulty of Information access to the Rural Areas

For purposes of improving food security and livelihood of the poorest strata of rural populations in developing countries, FAO in realizing that diversification is a key approach to sustainable agricultural development, in addition to intensification; the demand for information from institution and communities is set to increase. FAO is expanding its expertise and resources related to the digital divide through many collaborative initiatives developed in response to requests from member States. FAO agricultural information system can be divided into three categories, each impacting food security and sustainable rural development through different mechanism policy-level information system such as FIVIMS for food security, institutional information system for research and development such as AGRIS and VERCON and community-level information system for food security including Farm Nets and SPFS information system (FAO, 2009). To be effective in improving food security, it is essential that the capacity of communities to manage and utilize knowledge be improved. Integrated to this approach is the use of appropriate mixes of technologies and the involvement of the private sector. ICT-based interventions that specifically target poor people in rural communities are found in FAO's poverty reduction work with developing countries, including the special program for Food Security, in farmer's field schools, in extension services and educational projects, and in community development projects. Currently, in India and Bhuta, VERCON type projects are on-going (Riddle, 2008).

Rural Communities Information Network (Farm Net) Concept and Strategy

A Farm Net is a network of rural people and supporting intermediary organizations, such as extension services, using lCT media to facilitate the generating, gathering and exchanging of knowledge and information, operated by farmers and their organization, a Farm Net links farmers to each other and to the resources and services that they need to improve their livelihood through agricultural productivity, profitability and food security. External demand for Information Technology-based interventions has also lead to the development of innovative partnerships between FAO and key members of the international development community such as the World Bank and international research centers of the CGIAR. Within Asia-Pacific, FAO has teamed up with Asia-Pacific Association of Agricultural Research Institute (APPARI) and with the South East Asian Ministers of Education Organization Regional Center for Graduate Study and Research in Agriculture (SEAMEO, SEARCA) in the development of an agricultural research information system and on information management capacity building respectively. In the area of Agriculture, however, only those in research institutes and some offices in the universities and colleges of agriculture have integrated the technology in disseminating information to the target audience or intended beneficiaries. Rural farmers who are the main producers of food in Nigeria are yet to benefit from the technology (FRN, 2004).

CONCLUSION

This work reveals a number of issues that are worth the attention of researchers, sponsors as well as campaign communication planners. The study draws conclusion on a number of

matters of learning experience. It reveals the crawling pace of subsistent agriculture in the countries. The communication strategy that is confined on the traditional mass media of communications did not effectively support the agricultural modernization campaign programs of these nations. The communication strategy that utilized extensive variables in the use of interpersonal networks proved to be more effective than the strategy that confined to the traditional mass media of communications. The programs that featured large-scale mobilization of the entire national population made it difficult for the manager of the programs to implement the communication strategy plan. The adoption of ICT for agricultural production among the rural farmers will in no doubt enhance the development of the rural community, food security and method of farming since there will be quick and timely delivery of relevant technical research findings and other information from agricultural organizations. The cost of procurement, awareness, lack of involvement of farmers both in the planning and implementation of ICT projects, physical and network infrastructures among others were the major barriers to rural ICT usage in places where such has taken off. As a result, the following suggestions along with those made by agricultural ICT specialist, which will need to be addressed by policy makers and government, agricultural organizations, research institutes and producers are made. Public, Private and Non-governmental organization should play more active roles in the ICT education of the farmers by getting in close collaboration with the universities and other research/extension institutions. These organizations can build and provide a common environment and infrastructures for the majority of the farmers who cannot have computers individually.

Government should provide the infrastructure for the wide spread of agricultural information with legislation and the opening of an Internet café (or information house), in at least two or more villages apart. Again, they should endeavour to make use of the primary and secondary schools in major villages as computers and internet connections centers. Farmers should be encouraged through education to use ICT so as to enjoy the benefits of e-commerce systems that will help them to sell their farm produce/product at the world trade price on the internet thereby avoiding the exploitative tendencies of the merchants. Research institutions (universities and research institutes and others) have a task in emerging more in multiplying and dissemination of agricultural information to the rural farmers. In line with FAO suggestions, farmer's organization should be encouraged and legislated so as to benefit from FAO-ICT network-"Farm Net" which only recognizes farmer organizations as a means of enjoying such provision. Government and other stakeholders in agriculture should be made to know this, since it is an FAO initiative, which Nigerian is a member State.

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