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The Role of Communication in the Agricultural Industry in Africa

Abstract

The present effort by the Federal Government of Nigeria and some African, countries like Kenya to alleviate poverty through mass production of food may not be achievable without effective communication. Communication will enhance cross-pollination of ideas, interchange of thoughts, opinions and information between or among various agricultural industries continent wide. A case in point was the recent control of the spread of bird flu in Nigeria. In this paper the use of communication in the promotion of Agricultural Industry will be x-rayed. The use of Radio, Television and Film to educate farmers on the current techniques of fertilizer application and the advantages of various species of crops will be discussed. The role of agricultural centres like the IITA Ibadan Nigeria, the Africa Rice Centre, the cassava industry, and the banana and plantain industry will be highlighted. The Nigerian Federal Government effort in the promotion of sustainable agricultural industry in Nigeria is among the practical steps in the right direction. Only with effective communication will all the foregoing be coordinated for the benefits of the agricultural industries in the continent.

Introduction

Without effective communication, the agricultural industry will remain parochial and primitive. The functions of communication are most easily realizable in the agricultural industry. A case in point is the use of the mass media to control the spread of bird flu that recently engulfed the poultry industry in Nigeria.

There is no gainsaying in the fact that without effective

communication, in which detailed information was given to farmers and the Nigerian populace on the signs and symptoms of the diseases, the mode of spread and warnings on the dangers of handling or eating the meat, the country could have lost lives and money. The country would have had an experience worse than the bubonic plague, which spread over Europe in the 14th century. The plague wiped out about a third of the population (Lokyer, 1964). Data from the *Concise Home Medical Guide* shows that in 1664-5 the plague killed 70,000 persons in London alone. It postulated that if communication in Europe was as effective as it is today, the tragedy would have been averted.

The task of this paper is to highlight the vital role of communication in promoting sustainable growth and development of modern agricultural technology.

Types and Functions of Communication:

Succinctly put, communication, can be defined as:

> the imparting or interchange of thoughts opinions, or information by speech, writing or signs. Communication processes are sign-mediated interactions between at least two agents, who share a repertoire of signs and semotic rules- *wikipedia, the force encyclopedia/http: //en,wikipedia.org/wiki/communication. Pg. 1 of 3.*

In the communication process, it postulates information is packaged, channelled and imparted by a sender who is the encoder to a receiver who is the decoder via same medium. The receiver on decoding the message gives the encoder a feedback. Communication of all forms must have a sender, a message and a receiver.

Communication can also be defined as actions whereby 'actors' impart information to one another. It involves methods of putting the required messages across, conveying the information and data where it is needed, in the form in which it can be used as well as expressing ideas and proposals.

Communication may be intra-personal, interpersonal or global. UNESCO (1980) identified eight main functions of communication, when considered in its broadest sense. Modern communication systems, ranging from entertainment to space exploration, are

developing so fast that there will be many new communication functions which may be applicable to this paper. The importance of interpersonal communication stems from the functions it achieves. Whenever we engage in communication with another person, we seek to gain information about them. We also give information through a wide variety of verbal and non-verbal cues.

The Role of the Food and Agricultural Organisation (FAO) of the United Nations

FAO leads international efforts to combat hunger. It serves both developed and developing countries, by providing a neutral forum where all nations meet as equals to negotiate agreements and debate policies. Its activities comprise four main areas:

Bringing information within reach
Sharing policy expertise
Providing a meeting lace for nations
Bringing knowledge to the field.

FAO puts information within reach, serving as a knowledge network, and using the expertise of its staff to collect, analyze and disseminate data. It lends its years of experience to member countries in devising agricultural policy, supporting planning, drafting effective legislation and creating national strategies to achieve rural development and hunger alleviation goals. As a neutral forum, FAO provides the setting where rich and poor nations can come together to build with common understanding. Finally, FAO puts to test, its breadth of knowledge in thousands of field projects throughout the world. In crisis situations it joins the World Food programme and other humanitarian agencies to help people rebuild their lives.

Agricultural Industry in Nigeria and Africa

A declaration of African Union (2004) estimated that over 300 million Africans are affected by hunger, yet over 70% of African's rural people earn their living from the land. Since hunger increases susceptibility to disease, hinders learning, and leaves a person weak and unable to work or meet family needs, it is an obstacle to progress.

Bayer and Wanyama (2004) contend that most African farmers still depend primarily on their local knowledge, but when they find opportunities they venture into enterprises, such as more intensive goat keeping in parts of Kenya or pig-keeping in parts of Southern Nigeria. They observed that in contrast to industrialized countries, where farmers are now a small minority, African farmers make up the vast majority of the work force such as 80% in Tanzania, 75% in Kenya, 70% in Nigeria, and 30% in South Africa, considered as the Industrial giant on the continent.

Constraints to Cassava Production

According to FAO estimates, Africa accounted for 54% of the total world production of cassava, which stood at 170 million, tones in 2000. In 1999, Nigeria produced 33 million tones, becoming the world's largest producer of cassava. Cassava is mostly grown on small farms, usually inter-cropped with vegetables, plantain, crops (such as oil palm) yam, melon, maize, groundnut and other legumes. Application of fertilizer remains limited among small-scale farmers owing to high cost and lack of availability.

The major disease affecting cassava in Africa are mosaic disease, bacterial blight, anthracnose disease and root rot, while the main pests are green mite, mealy bug and the variegated grasshopper. When pests and disease combine with poor cultural practices, yield losses may be as high as 50%. Besides, as a root crop, cassava requires considerable labour to harvest, and because it is a highly perishable root, must be processed into storable form soon after harvest. Furthermore, many cassava varieties contain cyanogenic glucosides and inadequate process can lead to chronic toxicity (International Institute of Tropical Agricultural (IITA) Ibadan, Nigeria).

Steps Taken by IITA to Improve Cassava Production in Africa

To improve cassava production and increase food security in Africa, IITA has developed improved varieties, which are disease and pest resistant, low in cyanide content, drought resistant, early maturing, and high yielding. The improved varieties have been introduced throughout African's cassava-belt, and they give sustained yields of about 50% more than the local varieties. IITA's biological control

programme has successfully reduced the damage done by cassava mealy bug by 95% and the cassava green mite by 50%. Production losses owing to processing time and labour have equally been addressed by IITA scientists. They have been developing effective and simple machines and tools, which can reduce losses by 50% and labour by 75%. Training in processing and utilization of high quality cassava flour has been carried out in ten African countries. Effective communication has assisted IITA to improve cassava production and increase food security in Africa.

Africa Rice Centre

Africa Rice Centre, an autonomous inter-governmental research association of African members states is anther food-production industry, which plays a leading role in contributing to poverty alleviation and food security in Africa through research, development and partnership activities. Created by constitution in 1970 by eleven West African counties with the assistance of the United Nations Development programme (UNDP), the Economic Commission for Africa (ECA) and the FAO, it was constituted as the West African Rice Development Association (WARDA), now renamed the African Rice Centre with seventeen adhering member states.

The modus operandi of the centre is partnership at all levels of research and development activities conducted in collaboration with various stakeholders, primarily the National Agricultural Research System (NARS), academic institutions, advanced research institutions, farmers' organisations and NGOS.

Constraints to Banana and Plantain Industry

Bananas and plantains are major food crops in developing countries, as well as important export crops to industrial countries; constituting one of the top five internationally traded tropical commodities. Besides being an important source of revenue for many small-scale farmers, it is estimated that about 20 million people eat plantain or banana as their major source of dietary carbohydrate, especially in East Africa where they constitute the main staple food for about 50% of the population. The reason adduced by IITA is that they are easy to grow with relatively stable

production. Besides, the fruits are highly nutritious, containing large amount of carbohydrates and minerals such as phosphorus, calcium and potassium as well as vitamins A and C.

The fruits can be fried, baked or roasted and are also sold in pulp form, as chips, and as confectionary. The fruits can also be used as animal feed. Almost 75% of the world's plantains are grown in Africa with Uganda as the largest producer. In 2000, about five million hectres were planted with plantain and nearly four million with banana.

According to the IITA communication network, the banana weevil and parasitic nematodes constitute the major pests and if plantains are infected with both weevils and nematodes, yield losses may reach 85%. The most important diseases are banana streak virus, banana dieback virus, cucumber mastic virus, fungal leaf sport, and black sigatoga leaf sport disease. Plants infected with these diseases produce very poor yields, with up to 60% losses.

Another major constraint to plantain and banana industry is that the fruits are highly perishable, with an average market life of 1-10 days at ambient tropical temperatures. Finally, banana and plantain farmers experience yield declines owing to decreased soil fertility caused by shortened fallow periods.

Steps by IITA to Improve Banana and Plantain Production

Working on banana and plantain improvement from a holistic perspective, IITA combined improved varieties, integrated pest management and better crop husbandry technologies to play a leading role in contributing to poverty alleviation and food security in Africa. Its scientists have been working on developing and introducing new varieties that are high yielding, drought resistant and disease and pest resistant, and have durable fruit quality. Several improved varieties have been successfully disseminated in collaboration with national agricultural research systems and NGOs. Currently, IITA has engaged on controlling banana streak virus in Ghana and Uganda through deployment of resistant varieties in infected areas. Mozambique, Rwanda and Uganda farmers have been trained in the procedure to produce clean planting materials and reduce the spread of nematodes.

Another research priority is the development of sustainable resource and crop management practices to reduce soil degradation such as building of earth dikes on sloping banana plots to prevent the top soil from being washed away, planting of grass or bushes which can be cut down and spread to supply soil nutrients, and the use of dung's and agricultural wastes for making compost. These research advances have contributed to great improvements in banana and plantain production. Finally, to promote improved banana and plantain production in Africa, researchers are experimenting with creating new products from banana and plantain such as bread, wine, vinegar, soap, and industrial starch, through IITA's collaboration with other networks such as the International Network for the Improved Banana and Plantain (INIBAP), Banana Research Network for Eastern and Southern Africa (BARNEA), and Musa Research Network for Western and central Africa (MUSACO).

Programmes Geared Towards the Promotion of Sustainable Agriculture in Nigeria

A lot of effort on the part of government and individuals is being made in Nigeria to achieve poverty alleviation through the promotion of sustainable agricultural industry in Nigeria.

However, owing to space constraint, a few of such efforts will be discussed briefly such as

(a) Production and supply of fertilizer farmers
(b) Construction of dams for irrigation and water resource management
(c) Introduction of Young Farmer's Club
(d) Repositioning of the Poultry Industry
(e) Special Presidential Summit, the Second Economic Forum in Collaboration with FAO on Food Security in Nigeria with the following issues under focus:
    (i) Cocoa and rubber industries
    (ii) Palm oil production
    (iii) Cotton development
    (iv) Development of tropical fruits and vegetable
    (v) Food management and preservation technology
    (vi) Livestock and animal breeding

Irrigation and Agriculture

Huge sums of money have been invested in the construction of dams in Nigeria, essentially for water resources management and irrigation purposes. Irrigation, according to Urama and Hodge (November 2004), is the act of moving water from one place to another in farming to water crops. It is a major human use of land and water resources. The primary reason for growth in irrigated agriculture has been its perceived impact on crop productivity. However, mounting empirical evidence in the literature suggests that land-use intensification made possible by irrigation had deleterious environmental consequences that preclude its sustainability.

The decision to invest in the construction of dams, for irrigated agriculture by the Nigerian government may be as a result of the rapid population growth, coupled with the continuing decline in per capital agricultural productivity. The perceived advantages of irrigation over the traditional rain-fed cropping system are considered as the sine qua non for increasing crop yields and sustainable arable agriculture, especially in Southern-Eastern Nigeria (Urama, 2004).

Conclusion and Recommendations

Communication for development of agricultural industry is a social process designed to seek a common understanding among all the participants. Without effective communication, it would be impossible for the FAO, the IITA, the various NGOs, the government and the various stakeholders in Nigeria and Africa to succeed.

However, without addressing the main reason for poverty in Africa, Bayer and Wangama (2004) postulate that alleviation of poverty through agricultural development alone may not succeed. The reasons for poverty in Africa include insufficient access to land and other productive resources, unfavourable terms of trade for food products, remoteness and weak infrastructure such as roads, markets, health services, schooling, etc. The poor health of farmers (HIV/AIDS, malaria), civil conflicts between groups, external shocks, such as drought, bad governance including corruption, disregard for indigenous knowledge and local agricultural management are also some of the factors.

The following recommendations are meant to serve as solutions to some of the problems posed:

(1) Effective communication should be accepted as a steering paradigm for integrating economic growth, social development and various research organisations as inter-dependent and mutually supportive elements of long-term development.

(2) Communication should be considered as an issue that is not confined to media or to messages only.

(3) With effective communication, it will be possible to provide opportunities for marginalized groups and isolated population to become actively involved in policy development and decision-making.

(4) African livestock researchers should develop their own research agenda that address the real problems of small-scale livestock keepers.

(5) Governments should recognize the fact that while the current process of globalization presents both challenges and opportunities for Africa, it has so far marginalized the continent in a manner that exacerbates problems of poverty, unemployment and lack of competitiveness.

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