

## Community Farm Extension Model for Agricultural Development in Nigeria

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### Abstract

This paper examines the historical development of agriculture in Nigeria. The country has practiced various agricultural extension systems and programmes yet the much anticipated self-sufficiency in food production remains a mirage. Rural farm families live in abject poverty. Rural-urban migration and youth behavioral problems are on the increase. The Community Farm Extension Model would stimulate agricultural development in all ramifications. It is designed to reach farmers and attract youths into agriculture. The Community Farm Extension Model is recommended for use by the Federal Government of Nigeria and the World Bank.

### Brief History of Agricultural Development in Nigeria.

The history of agricultural development in Nigeria is convoluted and replete with various agricultural extension systems and programmes. Jibowo (2005) and Madukwe (1995) divide the history of agricultural extension in Nigeria into pre-colonial, colonial and post colonial periods. The pre-colonial period involved mainly the introduction of improved varieties and teaching of crops and livestock production practices. During the colonial era conscious efforts were made by the British to increase agricultural production. The first step was to establish the Department of Botanical Research in 1893 with Headquarters at Olokomeji in former Western Nigeria. In 1905, the British Cotton-growing Association acquired a 10.35 square kilometers of land at the site now called Moor plantation, Ibadan for growing cotton to feed British textile mills. Other agricultural development initiatives during the colonial period included the establishment of the Unified Department of Agriculture in 1921, the Kware Irrigation Scheme in 1926, and the Niger Agricultural Project in 1949. The Federal Ministry of Agriculture with its extension component was established in 1967 following the creation of twelve states out of four regions.

From independence to date, federal and state governments have introduced a number of agricultural programmes with extension components. Jibowo (2005) stated that the food production programmes adopted so far by the Federal Government included the National Accelerated Food Production Project (NAFPP) 1972, Agricultural Development Projects, ADPs 1975, the Accelerated Development Area Project ADAP 1982, and the Multi-state Agricultural Development Projects MSADP 1986. Other programmes included Operation Feed the Nation, OFN 1976, the River Basin Development Authority RBDA 1973, the Green Revolution Programme 1980, the Directorate of Foods Roads and Rural Infrastructure DFRRI 1986, the National Directorate of Employment NDE 1986, the Nigeria Agricultural Insurance Scheme NAIS 1987, the National Fadama Development Project NFDP 1992, the Poverty Alleviation Programme PAP 2000, National Economic Empowerment and Development Strategy. NEEDS 2004, and the National Special Programme for Food Security NSPFS 2003

The Federal Government also established programmes which focused on the empowerment of women involved in agricultural production. These programmes included the Better Life for Rural Women 1986, Women in Agriculture 1991, Family Support Programme 1994 and Family Economic Advancement Programme 1999 (Adisa and Okunade, 2005). Some of these programmes were replicated at state and local government levels and some state governments had their independent agricultural development programmes. This brief history shows the continuous search for self-sufficiency in food production by the Federal Government of Nigeria.

### The Problem

The Federal Government of Nigeria has adopted a number of agricultural development

programmes with extension components yet food production remains a mirage. Ovwigho (1985) noted that the Operation Feed the Nation and Green Revolution Programmes initiated in 1976 and 1980 respectively could not achieve the desired goal of self-sufficiency in food production. The programmes were short-lived and lacked cohesion, effective planning and execution. They were mismanaged by successive administrations. Akinsanmi (1994) remarked that the Green Revolution Programme failed because of tight administrative procedures. Many hectares of land were cleared without being cultivated and there was a lack of machinery and the untimely arrival and indiscriminate distribution of inputs. Aderibigbe (2001) stated that before the discovery of crude oil and military incursion into Nigeria politics in 1966, the nation flourished on agriculture. Proceeds from cocoa, oil palm, rubber and groundnut produced in the western, eastern, mid-west and northern regions respectively were used to build physical infrastructure and boost foreign exchange. He opined that instead of taking the discovery of crude oil as an additional source of income, agriculture and other natural resources were relegated to the background.

At the 1996 World Food Summit, Nigeria was identified as one of 82 low-income-food deficit countries (Jibowo, 2005). In a bid to combat the food production problem, the country tried several agricultural extension systems. Madukwe (1995) classified them into conventional extension systems and non-governmental extension systems. The conventional extension systems included the Ministry of Agriculture Extension System, the University Extension System, the Agricultural Development Project Extension System, and Specialized Extension System. The non governmental extension systems encompassed extension systems practised by religious organizations, oil companies and private commercial companies.

The most revolutionized extension system was the agricultural development projects (ADPs) extension system, otherwise known as Training and Visit Extension system. It made an appreciable impact on agricultural and rural development before the withdrawal of the World Bank loan. Many extension agents no longer visit the contact farmers and other rural farm

families. Howell (1984) as cited by Ogunfiditimi and Ewuola (1995) stated that the extension agents were biased in favour of richer farmers. He also noted that the T & V system assumed that a functioning research apparatus was already in place and this was not the case.. CTA (2003), and Ogunfiditimi and Ewuola (1995) found that the conventional extension system had a 'take it or leave it' attitude. Ovwigho and Ifie (2004) noted that the conventional extension system practised in Nigeria cannot thrive well in a democracy. Madukwe (1995) and Ogunfiditimi and Ewuola (1995) explained that the University Extension System in Nigeria was used to promote the National Accelerated Food Production Programme (NAFPP) in the 1970s. The system involved implementing agricultural extension programmes in farming communities around university locations. The system suffered a lot of set-backs which included inadequately trained extension personnel, complicated extension packages, lack of co-ordination and insufficient funds.

In a recent interview the Director General of the Rice Research Institute, Badagi, Abdulahi (2008), noted that programmes which served as links between research institutes and farmers were no longer in existence. He suggested an improved extension service as the only way to overcome the lingering food crisis in Nigeria. No participatory research extension system has been fully practised in Nigeria. Paul (1987) as cited by Igobokwe and Ajala (1995) noted that community participation was an active process whereby beneficiaries influence the direction and execution of development projects rather than being mere recipients of project benefits. The proposed Community Farm Extension Model would boost agricultural production in the country through "grass root" participation of farmers.

### **The Community Extension Model**

In this system the community provides a piece of land not less than 10,000 hectares where crops and animals are produced. The community should have a comparative advantage in the chosen crops and animals. Agricultural extension agents, experts and social workers are employed by the government as resident workers on the farm. The main function of the ministries, universities, research institutes and NGOs is to further complement the researches

carried out on the model farm. Grading equipment, agro-processing plants and service centres are provided on the farm. The community provides unskilled labour. The farmers are expected to regularly visit the model farms to learn about innovations and discuss their production problems and needs. The focus of the research institutes, NGOs, universities and other development intervention agents as well as farmers and other members of the society is on the community model farms as centres of learning and agricultural production. (fig 1). The Community Farm Extension Model is similar to the Village Polytechnic Programme (VPP) of Kenya described by Zarraga and Green (1985). Swanson *et. al* (1984) designed a similar model of technology development, transfer and utilization ( fig 2)

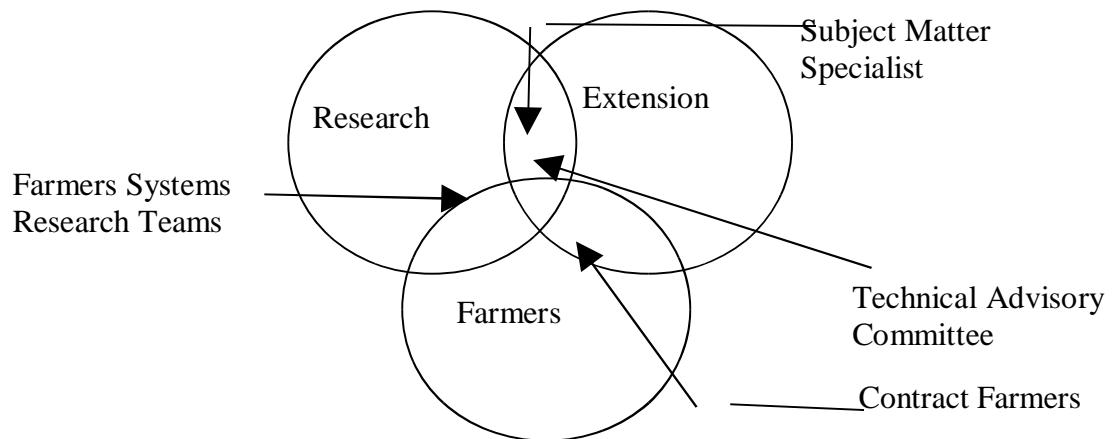
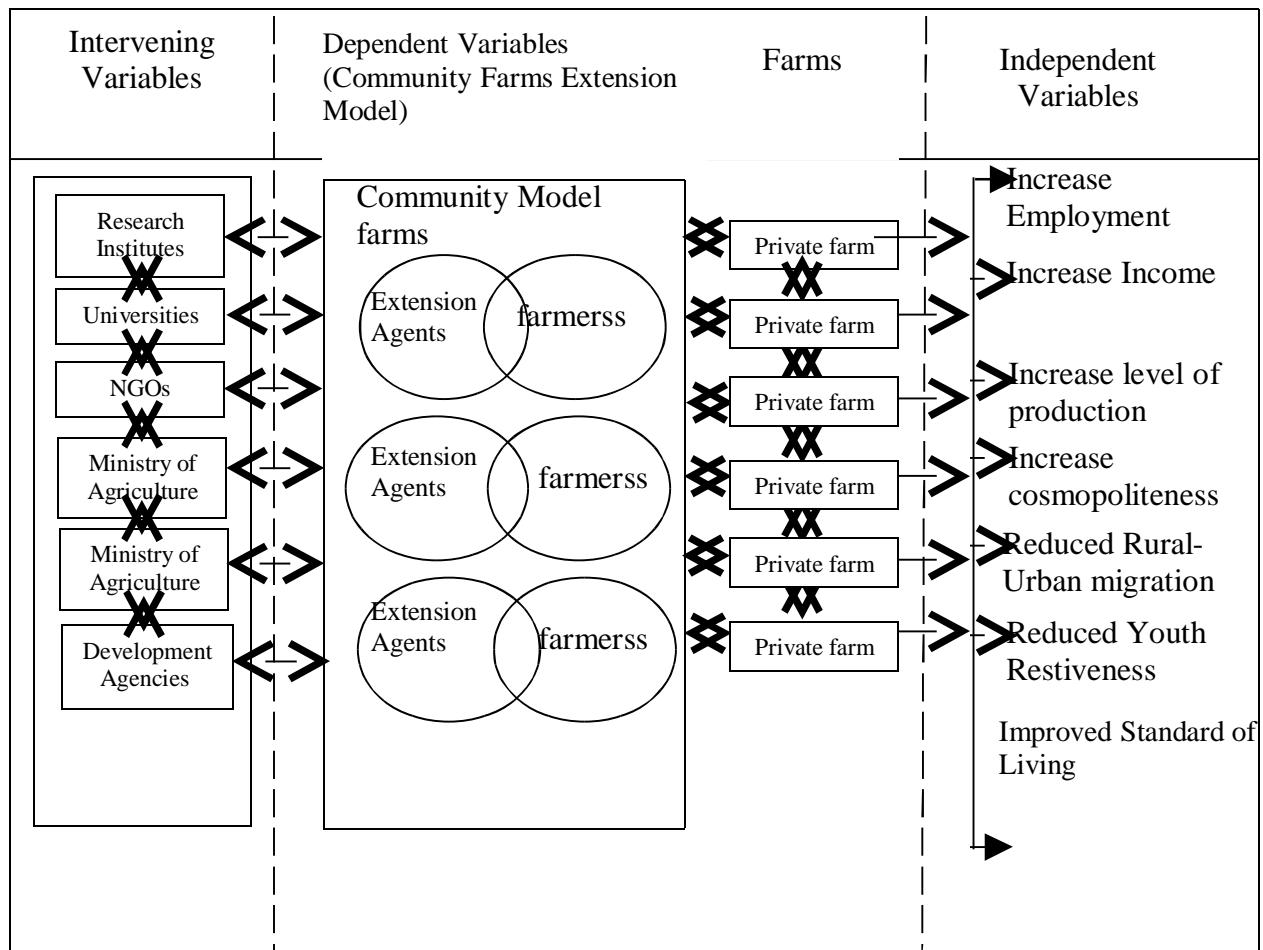


Fig 2. Alternative conception of a technology transfer development and utilization  
Source: Swanson *et.al* (1984). Extension Strategies for Technology Utilization

The differences between the proposed community extension model and that of Swanson *et.al* (1984) is that research institutes serve as intervening variables and farmers have free access to farms where they can see and learn modern technologies. This system will help to reduce the wide gap between extension and farmers in Nigeria. Contact framers are not necessary in the new system.

The community extension model is a development on-farm research centre and an agricultural production strategy. Atta-krah (1990) described two distinct types of on-farm research - experimental on-farm research and development on-farm research. The experimental on-farm research was that form of on-farm experimentation which involved validation or comparison of different technologies or components of different technologies on the basis of standard experimental designs, research controls and statistical analysis. The development on-farm research was less tightly controlled and structured. It was concerned with the introduction of new technologies or systems to the farmers' community and involved the assessment of their relevance, workability and acceptability within a frame of research-development interaction. It enabled researchers to study how farmers react to an introduced technology and how they might adapt and adopt the system to meet their local needs and resource patterns.

### **Linkage specifications**

Research institutes, universities, ministries of agriculture and NGOs serve as intervening variables between the activities of the extension agents and farmers. Farmers have free access to learn and suggest improved technologies. The overall process would help to improve the socioeconomic variables of the farmers which include increase employment, increased income, increased food production, increased cosmopolitanism, reduced rural-urban migration, reduced youth restiveness and improved standards of living. This and other extension systems serve as dependent variables. The probit regression model could be used in analyzing data arising from this model when compared with another system or model.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + ei$$

where  $Y$  = Community Extension Model

$X_1$  = Increase employment

$X_2$  = Increase income

$X_3$  = Increase level of production

$X_4$  = Increase cosmopolitanism

$X_5$  = Reduced rural-urban migration

$X_6$  = Reduced youth restiveness

$X_7$  = Improved standard of Living

$ei$  = Error term

Community farms would stimulate agricultural productivity and increase employment opportunities of youths who leave rural areas to ride motor cycles (popularly known as Okada). The involvement of farmers in influencing research would be high in this system. Biggs (1989) and Reijntjes *et.al* (1992) noted that more fundamental changes could only occur if local people's knowledge was complimented with that of farmers elsewhere and with formal science-based knowledge. Igbokwe and Ajala (1995) remarked that community participation ensured the social acceptability of the project and propensity to participate.

The various participatory research techniques and the farmer field school being practised in some developing countries could lead to sustainable adoption but has no direct bearing on agricultural transformation. If the nation is to revert to her former pride of place in agriculture, we need to blend farmers' knowledge with modern science-based knowledge. Atta-Krah (1994) noted that there was a need for more emphasis on farmers' role in on-farm research and a clear demonstration of what could be achieved beyond the rhetoric of participation or experimentation.

### **Conclusion**

In Nigeria, farmers do not benefit much from extension services and improved technologies. The high financial poverty of farmers occasioned by their low cosmopolitanism reduces their access to improved technologies. There is a need to bring improved technologies closer to farmers in order to stimulate and improve agricultural production. The community farm extension model would stimulate agricultural production and enhance extension services. The proposed model is recommended to the Federal Government of Nigeria and the World Bank for adoption.

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