

THE CHALLENGES OF AGRICULTURAL AND HOME ECONOMICS EXTENSION IN RURAL NIGERIA

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I. Introduction

Nigeria is passing through a social, economic and technological evolution that is "unhitching" the rural development process from the agricultural development process.

There seems to be a general agreement in the country that most of the efforts and financial investments in agriculture by successive governments from the early sixties to date have yielded very little results. Part of the reason that has been adduced for this state of affairs is that the agricultural and home economics extension services which are the purveyors of teaching and dissemination of improved technologies in the agricultural development process have been relegated to a peripheral position. The results have been low agricultural productivity, recurrent food deficits, inadequate farm level technological break-throughs and inefficient processing of most farm products. (See Table I). This relatively poor performance of the agricultural sector has been a matter of great concern to successive government, research and educational institutions with responsibility for agricultural development.

The purpose of this paper is to make an analysis of the development dilemma before us as professional extension agents and share with you the challenges and implications that this poses for agricultural and home economics extension work in the eighties in Nigeria.

II. The Development Dilemma

Within the last two decades, the agricultural sector in Nigeria has experienced a considerably high level of revolution occasioned primarily by a desire on the part of the various governments to increase food production to ensure self sufficiency.

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TABLE 1 FIELD PERFORMANCE OF MAJOR FOOD CROPS AT THREE LEVELS OF TECHNOLOGY UNDER SOLE CROPPING SYSTEM

Crops	Farmers' Practices under Traditional Technology Yield (kg/ha)	Farmers' Practices under Improved Technology Yield (kg/ha)	% increase ¹⁾	Research Station under Improved Technology Yield (kg/ha)	% increase ¹⁾
Sorghum	785	1,680	114	3,920	399
Millet	740	1,344	82	2,800	278
Maize	1,040	3,000	187	7,840	650
Rice	940	1,445	54	3,360 ²⁾	257
Wheat	1,750	na	na	4,500	157
Cassava	5,570	11,263	102	22,580	305
Yams	6,372	9,004	44	20,070	220

1) % increase above Traditional Technology Yield.

2) refers to upland rice. Best swamp rice yields of 4,800 kg/ha and irrigated yields of 5,600 kg/ha have been recorded.

Source: H. M. Hayes and D. W. Norman: *Food Crop Production Prospects in Northern Nigeria*. Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria. 1972. (Mimeo).

The 1950s and 1960s were a period of huge investments in the establishment of agricultural development centers, distribution of subsidized agricultural inputs and the establishment of government-owned plantations. Consequently, there evolved regional efforts which resulted in the establishment of Farm Settlements, Farm Institutes, School Leavers' Farms etc. in various areas.

In spite of these efforts, the major food crops in the country recorded no significant increases in the yield during the early sixties and seventies with the exception of rice and maize. (See Tables II & III).

Generally the performance of the food sub-sector according to Olayide (1976) has been rather poor. The situation has up till now not much improved. The growth rate which averages about 2.5% per annum has

TABLE 2 ANNUAL AVERAGE YIELD OF MAJOR FOOD CROPS

Crops	1960-62	1963-65	1966-68	1969-71	kg. per hectare 1960-71
Sorghum	852.58	750.23	637.83	714.21	739.31
Millet	587.46	621.59	506.06	603.84	579.62
Rice	1,089.82	1,221.59	1,424.66	1,164.71	1,219.38
Maize	830.06	858.64	872.51	1,000.00	901.90
Cowpea	335.13	236.59	172.03	228.43	243.49
Yam	9,703.62	9,432.21	7,913.72	10,098.49	9,293.32
Cassava	9,025.55	9,587.01	9,308.47	6,525.06	8,611.52

Source: S. O. Olayide: *Economic Survey of Nigeria*. Aromolaran Publishing Co. Ibadan. 1978.

TABLE 3 ANNUAL AVERAGE OUTPUTS OF MAJOR FOOD CROPS

Crops	million metric tons				
	1960-62	1963-65	1966-68	1969-71	1960-71
Sorghum	3.979	4.172	3.126	4.041	3.830
Millet	2.576	2.643	2.173	2.957	2.587
Rice	0.182	0.215	0.312	0.297	0.252
Maize	1.055	1.148	1.095	1.425	1.181
Cowpea	0.435	0.622	0.593	0.903	0.638
Yam	12.867	14.818	11.649	11.997	12.833
Cassava	7.212	7.982	8.588	6.175	7.489

Source: S. O. Olayide: *Economic Survey of Nigeria*. Aromolaran Publishing Co. Ibadan. 1976.

not been able to keep pace with the population increase and has failed to meet the food needs of the nation. The situation has deteriorated to the extent that the country has resorted to massive importation of food which was about \$165 million in 1974, rose to about \$300 million in 1975 and by 1979 was about \$.12 billion of which rice was \$280 million.

Effects were also directed to the improvement of export crops such as cocoa, rubber, palm oil and groundnut without much improvement in total output (See Table IV).

TABLE 4 PRODUCE PURCHASED: COCOA, GROUNDNUT, PALM OIL AND RUBBER

Year	1,000 tons			
	Cocoa	Groundnut	Palm oil	Rubber
1963-64	202	NA	152	63
1964-65	285	NA	150	72
1965-66	173	994	174	69
1966-67	242	1043	132	70
1967-68	229	690	32	48
1968-69	185	778	4	NA
1969-70	202	656	12	NA
1970-71	278	286	25	NA
1971-72	230	307	31	NA
1972-73	225	559	21	NA

Source: *Annual Abstract of Statistics*. 1975.

Progress in the country's agricultural development was measured in terms of quantity of improved seeds and fertilizers distributed to farmers and in the number of demonstration plots established to prove the efficacy of the recommended practices. It was patently clear that these efforts did not impress the farmers and have resulted in decreasing output (Tables III & IV). It is therefore not surprising to find that many farmers are deserting the rural areas to find better opportunities elsewhere.

In the 1970s, the approach to agricultural development and to extension work changed with the adoption of National Accelerated Food Pro-

duction Project (NAFPP); Operation Feed the Nation (OFN); River Basin Authority Programmes (RBAP); Integrated Agricultural Development Programmes (IADP) and now the Green Revolution Programme (GRP). All these were designed to stimulate the masses of Nigerian farmers to increase the production of major staple food crops through integrated use of improved agronomic practices, inputs such as fertilizers and pesticides, high yield seeds with supporting credit, marketing, storage and processing. These new approaches emphasized quick and rapid transfer of new technology to farmers to achieve increases in food production to meet chronic food shortages and conserve the country's foreign exchange. All these have been based on one and only one assumption—that agricultural development is the panacea for our underdevelopment and an effective extension service the vehicle to bring about this improvement of our rural areas.

It is now becoming increasingly obvious that too narrow a focus on agricultural development *per se* is not an adequate means of bringing about much needed changes in our rural areas and that rural development should emerge as a social and economic imperative for the future.

III. Rural Development: An emerging social and economic imperative

The growing significance of rural development has emerged in recent years as the perception and implication of trends in the quality of living have become clear. If there is no sound rural development, it has become painfully obvious that there can be no balanced national economic development in the country (Williams 1978).

It is because there are no other possible occupations for residents of rural households to pursue that it is important to "unhitch" agricultural development from rural development. Rural development deals with changes in the structure of opportunities that residents in the rural areas can avail themselves of and thereby improve their standard of living. *This view is not intended to minimize the continuing national imperative for major attention to agricultural progress* but rather to emphasize the wide range of opportunities for public service available to the extension and other agencies interested in rural modernization (Leagans 1974).

Emphasis on rural development rather than agricultural development in this paper is based on the following four assumptions (Leagans 1974):

- (i) More than 70% of Nigerians live in the rural areas and derive their income from living in these areas. It is therefore important to improve their productive capacity; (See Table V).
- (ii) Rural development focuses on improvements in the quality of life and ways of making a living; modern agricultural development focuses mainly on the quality of commodity production to sustain life:

TABLE 5 TOTAL AND RURAL POPULATION DENSITY BY STATE AND TOTAL NIGERIA. 1976, 1985 and 1995¹⁾

State ²⁾	Total Population density ³⁾ (Inhabitants per km ²)	Rural Population density ⁴⁾ (Inhabitants per km ²)
Anambra	227	240
Bauchi LRD	52	47
Bendel	93	80
Benue	74	72
Borno LRD	35	31
Cross River	180	164
Gongola	40	38
Imo	419	388
Kaduna	80	71
Kano	184	163
Kwara LRD	35	28
Lagos	658	86
Niger LRD	23	20
Ogun	128	97
Ondo	179	116
Oyo	190	90
Plateau LRD	48	43
Rivers	112	92
Sokoto LRD	61	55
Total Nigeria 1976	83	70
Total Nigeria 1985	104	83
Total Nigeria 1995	135	102

Source: 1) UNDP & FAO Country Profile Study, Nigeria. *Agricultural Manpower Planning, Training & Utilization*.

2) States are marked with LRD (Low Rural Density) where rural density is below national average. LRD refers to 1976 values.

3) Total population of 1976 projected from 1963 census data.

(iii) The process of rural development and agricultural development are neither mutually exclusive nor are they identical strategies for each have implications for both;

(iv) Rural development now provides an attractive alternative to tackle more realistically the problem of balanced growth and development between the rural and urban centers.

So a viable concept of rural development includes agricultural development but goes far beyond it in scope, purpose and process. The process requires an infrastructure of such magnitude that it may best be viewed *not* as a *single* program but a *cluster* of interrelated ones functioning simultaneously and in sequence. Hence successful attempts at rural development are likely to emphasize mobilizing a wide range of resources to be focused on basic problems by careful programming and effective coordination of the programs into a unified system of integrated growth centred on continuous developmental change in rural Nigeria.

Such a strategy goes beyond the traditional concept of a single unit agricultural development to an integrated multi-unit, comprehensive rural development designed to improve the quality of life of all people resident in rural Nigeria. The purpose of rural development is therefore to open the doors of opportunity wider so that people can achieve and maintain a satisfying level of economic and social well being.

IV. Challenges and New Direction posed to Extension by Rural Strategy

Because agricultural and home economics extension in Nigeria have failed to make the necessary impact on our rural areas and hence improve the quality of life there, the extension service is therefore faced with the need to modify its designs. The present design and structures are cracking on many corners under new social pressures, economic problems and new educational opportunities emerging since the 1980s with the advent of the new civilian administration.

In order to meet these new challenges extension must chart a new direction just as market pressure are forcing the big time motor car manufacturers to periodically design new models to meet the changing tastes of the consumers. To produce the new model, extension needs a design team which understands the problems and aspirations of the rural people for a better way of life. The new team should comprise a group with imagination, resourcefulness and perseverance and have the courage to try out its new direction.

What then is the new direction which extension must chart in order to assist in the effective transfer of social, economic and technological change to improve the quality of life in the rural areas?

The basic question is whether our extension systems shall be adapted to fit more comprehensively in tackling rural problems or to continue to serve only the agriculture and home economics' interest.

The performance of our extension services so far have shown us that our rural society (especially agriculture) can no longer be manipulated as a separate entity of Nigerian society. We are becoming painfully aware that too narrow a focus on agricultural development *per se* is not an adequate means for analyzing the many complex problems facing our rural areas.

Agricultural extension has developed its technical competency primarily to serve agriculture and home economics. The myriad of complex problems facing our rural areas is demanding a new system that can serve beyond this area of need. In other words, much of extension's future depends on its ability to export its revolutionary ideas beyond its cozy home in agriculture and home economics. It should direct its efforts to

solving wider public problems of economic and social importance at all levels of society.

The implication of this new direction for extension training cannot be ignored. It means that extension will have to transform its training program to enable its staff to:

- (i) develop a far more realistic understanding of the rest of our rural areas outside of agriculture and home economics;
- (ii) develop more technical competence to tackle problems facing rural people;
- (iii) be more versatile in using communication techniques to enable them to communicate more effectively the improved technology; and
- (iv) develop a change in their attitude from "answer givers" to "problem solvers" in rural and agricultural development matters.

In Nigeria, it is often assumed that there is considerable technology available in agriculture waiting to be put to use and that if this is done, yields will occur and the lot of the farmers will improve. Experience has shown us that the situation is not as simple as we think. It is, perhaps, true that considerably more is known than is being utilized by the farmers at present. But in many cases when the available technologies are put to use, the economic returns have been so poor that our farmers have refused to continue to use them. (Williams and Alao 1972; Alao and Williams 1972). This is because not enough experimental work has been done at the level at which the farmers operate to enable them to perceive how the technology will work under their conditions. The farmers have therefore rightly rejected the new technology and have subsequently been labelled as conservative, unresponsive to change and with limited aspirations whereas the fault lies with the technologies that are being sold to them (Williams 1972).

Therefore, if any effective transfer of technology is to take place for the improvement of agriculture, the following conditions (Williams 1978) must prevail:

- (1) It must be economically viable. The economic climate must be such that the new technology and the improved practices are profitable and fit into the farmers' farming systems and conditions. This is why the programs of IITA and other research institutes in Nigeria in the area of farming systems are crucial and important. If viable solutions can be found to the farming systems, they will go a long way to restore the confidence of our farmers in our research institutes and the extension services.
- (2) The physical inputs, such as improved seeds, fertilizers, pesticides, necessary to put the improved technology into effect must be readily available and obtainable at the *right time* and at *reasonable* cost. Orders for these inputs must be placed well ahead of the

- planting season so that they can be available to the farmers in good time. This also implies the availability of infrastructural facilities like transport and adequate finance to enable the extension agents to fulfil these obligations.
- (3) The improved technology must be simple enough for the farmer to grasp. This is important as many of our farmers are illiterate and may not comprehend the technology if it is too complex. In other words, the technology must be feasible within the educational attainment and cultural acceptance of our farmers. (Williams 1972).
 - (4) Effective linkage is essential between the centres of research activities and the States' extension services. There should be effective communication links between IITA, Agricultural Research Institutes, the Faculties of Agriculture and the Extension Services, if effective solutions are to be found to the myriad of problems faced by our farmers. This is done at present with a lukewarm attitude in an atmosphere of mutual mistrust and antagonism. The success story of AERLS, Institute of Agricultural Research, Faculty of Agriculture, all at Ahmadu Bello University, and the Northern States' Extension Services is a pointer to us in the south as to what can be achieved to assist the farmers. (Okigbo *et al* 1981). There, one will find a clear policy which leaves one in no doubt that the extension work in the Northern States is the responsibility of the states and the role of AERLS is to support their extension efforts with excellent cooperation between the research workers and the extension agents and services.

V. Conclusion

In conclusion, it should be noted that the complexity of the problems facing our rural areas demands new challenges for extension services. These challenges must go beyond the traditional confines of agriculture and home economics which are the cozy home of our extension services at present.

We also need to look more closely into the transfer of technology to the farmers in our rural areas at present. It is obvious that all is not well. We need to supply our institutions, namely research institutes and the extension services, with the wherewithal to assist them in delivering the goods to our rural people to enable them to improve their quality of life.

If we refuse to accept the challenge which these problems pose, other agencies more versatile than the extension services will move into the vacuum now being created by the dynamics of current technical, economic

and social changes in our rural areas.

The potential in the concept and philosophy of extension education in helping to solve the problems of rural life is tremendous and we should take the bull by the horns before it is too late.

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