

Feasibility of Private Integrated Agricultural Extension Services in Ogun State, Nigeria

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ABSTRACT

Agricultural extension service in Nigeria has remained a responsibility of government in the past four decades. However, the persistent poor funding of the extension service has reduced the effectiveness of extension services to farmers. This informed farmers desire for private organizations and religious bodies to assist in providing services to them, even though this implies financial contribution from the farmers. However, the ability and willingness of farmers to be financially responsible for extension services provided is in doubt. This provided the basis for the study, which aimed at determining the feasibility of private integrated agricultural extension services in Ogun State, Nigeria. Data were obtained from 240 small-scale farmers, 61 extension workers/specialists, 10 subject matter specialists and 6 agro-allied industries through the use of structured interview schedule and questionnaire. Results of the study showed that majority (75.8%) of the farmers were willing to pay for and patronize private integrated agricultural extension services (PIAES). Farmers (80%) in Ogun State have access to Ogun State Agricultural Development Programme extension service, but still do not have the desired impact from the service. Extension specialists/workers and subject matter specialists (93.4%) are willing to establish PIAES in Ogun State. Farmers' access to OGADEP extension service has no significant relationship with their willingness to pay for and patronize PIAES ($r=.003$, $\alpha>.05$). Farmers' access to input service has significant relationship with their willingness to pay for and patronize PIAES ($r=.421$, $\alpha<.05$). Private integrated agricultural extension service is feasible in Ogun State, Nigeria. It is therefore recommended that provision of input services should be added to the present extension service provided by OGADEP and experienced extension specialists, workers and subject matter specialists should be encouraged by government and farmers' groups to establish PIAES.

1.0 INTRODUCTION

In Nigeria, the responsibility of transferring agricultural information and innovations to farmers is usually coordinated by government-owned agricultural extension outfits. The origin of such outfit could be traced to the colonial era, during which the British Government sought for locations and avenues to feed their home-based industries with agricultural raw materials. It was in this process that Nigeria was discovered as a country endowed with the resources needed. The British Government, in order to derive optimum benefits from the nation's resources, provided free extension services to farmers (Williams, 1989; Akinbode, 1989). This marked the 'embryonic stage' in the delivery of extension services in Nigeria. It was characterized by manipulation, coercion and the use of reward to motivate farmers to comply with directives from extension service. The period also witnessed a dearth of scientific information, which prompted government's priority to establish some research institutes. These included Southern Department of Agriculture at Moor Plantation, Ibadan and the Botanical Research Station in Lagos, among others, in 1891 and 1893 respectively (Akinbode, 1989).

The provision of free agricultural extension services by the colonial administration culminated into establishment of extension stations across the country, under a ten-year development plan that was launched in 1946. However, dissemination of agricultural information and innovations witnessed a new approach between 1952 and 1968 with the emergence of the first national development plan. This plan transferred extension responsibilities to regional governments via the regional extension services. However, the regional extension service was faulted because it concentrated on specific projects such as the farm settlement scheme and the commodity-based extension services which ended in failure (Okigbo, 1986 and Akinbode, 1989).

The petroleum oil-boom era of the seventies encouraged government's direct involvement in agricultural production at the neglect of provision of extension services to farmers. This led to total disarray and disgruntlement of a formerly dedicated extension service and workforce (Akinbode, 1989). This period also witnessed the launching of several projects, among which were the Integrated Rural Development Package of 1975, the Operation Feed the Nation of 1976 and the Green Revolution of 1980. These projects were marginally successful before the emergence of the phased and statewide Agricultural Development Programmes (ADPs) in all states of the Federation in the 1980s.

The establishment of the ADPs renewed hope of farmers in government's commitment to assist them, more so as the ADPs adopted the training and visit (T & V) extension system to achieve food sufficiency and sustainability of the agricultural sector. But according to Moris (1991) the T & V system itself had many weaknesses, which had led to poor formulation and implementation of extension programmes. Thus, some authors criticized public extension services as inefficient. This led to the opinion that the cost effectiveness of public extension system should be carefully considered (Rivera and Gustafson 1991; Antholt 1991; Roling, 1988).

The poor funding of the ADPs as a result of the withdrawal of World Bank counterpart-funding of extension service in Nigeria has reduced effectiveness of extension services to farmers (Adebayo, 1998; Adebayo et al, 1999). This invariably increased the problems of farmers who were already laden with many problems such as the lack of credit facilities and unavailability of inputs at the appropriate time (Apantaku, 1999; Apantaku, et al, 2000; Williams 1989). Adedoyin and Ngoyi (1996) were also of the opinion that farmers lacked access to extension workers which prompted them to request for provision of extension services which can be more responsive to their needs by private organizations and religious bodies. It was also opined that for private extension services to meet the needs of farmers, it should aim at integrating services such as inputs, technical information and probably credit facilities among others, because of the problems farmers face with these services, especially inputs (Apantaku and Apantaku, 1999; Apantaku, 1999). This translates to greater commitment from the private organization and farmers themselves (Oluwaga and Salawu, 1996).

One of the major complaints of farmers and a serious factor that impedes adoption and production is inputs problems - lack/unavailability or untimely availability of inputs, high costs and unacceptable quality (Apantaku and Apantaku, 1999; Apantaku, 1999). It is therefore imperative that an extension service that will integrate input service is urgently desired. The private integrated agricultural extension service (PIAES) will no doubt improve the situation. Presently, extension service in Nigeria is free and mainly delivered by ADP, a government agency. The problem of poor funding of the ADPs has complicated their problems and led to ineffective and less efficient services (Adebayo, 1998). Therefore, there is a need for PIAES that would be delivered 100% by the private sector and paid for by the clients, since government can neither effectively fund nor cope with the demands of extension service.

Some studies and reports show that private extension service paid for in part or wholly by farmers is possible. Apantaku, et al, (2000) concluded that small-scale farmers, wealthy citizens, agro-allied industries and the private sector are willing to provide counterpart-fund for extension service in Ogun State, Nigeria. Apantaku et al, (2002) have also found that farmer-groups and associations, community-based associations, religious associations and non-governmental organizations are willing to also provide counterpart-funding for extension service in Osun State, Nigeria. Extension services in some Latin American countries are moving toward self-financing. Some of the potential benefits of this are higher adoption rate, wider discussion of new innovations among farmers and researchers becoming more aware and closer to farmers' ideas and characteristics (Trujillo, 1993). Ashby and Sperling (1994) opined that adaptive research and extension could be financed by "farmers-group-controlled resources". It was also recommended that such farmer-groups be represented on the boards of those agencies they have funded.

The reformation of extension services in the States of Germany included the provision of extension by the State Ministries, Chambers of Agriculture and private extension services. Each state has its own agricultural extension policy. In both Chambers of Agriculture and private extension providers, farmers and farmers groups contribute significantly to fund the service. Some of the lessons highlighted in farmers-group funded extension service are that farmers have to pay something and this may vary depending on the

provider (state or private). Farmers also become responsible for organizing, financing and controlling extension. There are also opportunities for integrating public and private extension services as well as farmers associations and groups (Hoffman, et al 2000; Kidd, 1997; Scarborough, 1995).

This study is underpinned on two theories, the system and community development theories. In system theory, a system is considered a body of several components whose components articulate to form a social system. The functional and contributory prerequisites of the components are essential conditions for the survival and equilibrium of the system (Crosser and Rosenberg, 1976). Thus, in the conceptualized private integrated extension service, the system theory implies that every part involved in extension services must make some contribution to the system for effectiveness. This denotes that every part, be it technical, information, extension workers (service provider), farmers (service receiver), input supply, credit support and marketing system must cooperate and be linked to obtain the desired outcome.

The community development theory assumes that people frequently need to organize and deal with their needs, want change and can change. This indicates that a community or group of people can develop capacities to deal with their own problems (Sanders, 1985; Ekong, 1977; Ekong, 1988). This presupposes that farmers working in groups or as a community want change and can organize to deal with their problems.

Therefore, the aim of the study was to investigate the feasibility of private integrated agricultural extension services (PIAES) in Ogun State. Specifically the study attempted to:

1. highlight the socio-economic characteristics of small-scale farmers in Ogun State,
2. investigate extent of farmer's access to Ogun State Agricultural Development Programme's (OGADEP) extension services and rating of impact of services provided,
3. determine the farmers' willingness to pay for and patronize private extension services,
4. examine the preparedness and willingness of selected agro-allied companies to establish private extension services and
5. determine the preparedness and willingness of extension specialists/workers to establish private extension services.

2.0 METHODOLOGY

The sample for this study consisted of 240 small-scale farmers, 10 subject matter specialists and 61 extension workers of OGADEP all randomly selected from the four operational zones of Ogun State Agricultural Development Programme (OGADEP). It also consisted of 6 (chief executives) of agro-based/agro-allied companies. In selecting the farmers, a block was selected from each of the four zones, making four blocks for the study. Four extension cells were selected from each of the block, making 16 cells. A total of 15 farmers were randomly selected from each cell, making a total of 240 farmers.

Data for the study were collected through questionnaire, structured interview guide and personal discussion and observation (to collect some qualitative data/information). The instruments (questionnaire for extension workers, specialists, subject matter specialists and chief executives of agro-based/agro-allied companies; structured interview guide for farmers) were tested for content validity (using 3 professors of extension as panel of judges) and reliability (using the test-retest method). The instruments were evaluated by the professors and their suggestions incorporated. The final draft was adjudged satisfactory. The reliability coefficient obtained was .73 for the questionnaire and .81 for the interview guide. Data collected were analyzed using descriptive statistics (frequency counts, percentages and mean/mode), Pearson Product Moment Correlation (PPMC) and the multiple regression analysis.

3.0 RESULTS AND DISCUSSION

Socio-economic Characteristics of Farmers

Analysis of data collected in the study showed that 61.7% of the farmers were within 41-60 years of age, with an average of 48.25 years. Majority (84.6%) of the farmers were males and 92% were married (Table 1). This implies that most of the farmers are in their virile age for active farming which is still a male dominated business in Ogun State. More than 60% of them had formal education, while the average family size was 8 persons per family. More than 66% of the farmers had at least 10 years of farming experience.

About 58% had other occupations such as trading, bricklaying and weaving, among others, as secondary occupation. More than 87% of the farmers earned above N20,000 per annum as profit, with an average of N33,250.00 per annum.

Farmers Access to and Rating of Impact of OGADEP Extension Services

A total of 192 (80%) of the farmers agreed that they had access to OGADEP extension service and were visited regularly by extension workers, during which the extension workers trained them, demonstrated new practices and discussed problems of concern. However, only 76 or 31.67% of them had easy access to farm inputs to back up and implement improved packages. Most of the packages need certain inputs for effective implementation and adoption and without them the desired impact would be missing. Only 36.7% or 88 of the farmers rated OGADEP extension service impact as satisfactory and leading to the desired increase in yield and profit (impact). This may be due to the input service problems, which need to complement extension work and farmers ability to try out and adoption the package. Most (93.8% or 225) of the farmers were of the opinion that OGADEP should integrate input service into their programme.

Willingness of Farmers to Pay for and Patronize Private Integrated Agricultural Extension Services

Tables 2 and 3 show that in each of the four zones of OGADEP extension service, more than 70% of the farmers were willing to pay for and patronize private integrated agricultural extension services (PIAES), The specific services which farmers were willing to pay for were bulleting/handbills, training/demonstrations, input services and extension workers' visits and consultancy. The current inadequate access to input services is likely to be a motivating factor in the willingness to pay for and patronize the proposed PIAES. Since farmers are willing to pay and patronize it, PIAES is therefore feasible.

Willingness of Agro-allied Companies to Establish PIAES

Analysis of data shows that only one (16.7%) of the six agro-allied companies was willing to establish private extension service. However, their response showed that UAC Foods and Nestle Foods (public liability company-(Plc) were assisting farmers through their out-grower scheme. However, they abandoned the approach due to excessive costs and technical difficulty in managing the approach. Afprint Nigeria, Plc, through their Afcolt Project still assists farmers in production of cotton by provision of extension services and purchase of their products. Animal Care Consult Plc do advice farmers through their sales promotion effort and also assist them on relevant inputs to use, as after sales services. Unilever Nigeria Plc believes that issues such as establishment of extension services is not part of their corporate objective and should remain the responsibility of government. They also stated that with the present economy of Nigeria, it has a comparative advantage by importing raw materials for their production. This implies that most agro-based and agro-allied industries do not see the need to assist farmers (with the establishment of PIAES) as a means of contributing to agricultural development or enhancing food sufficiency in the economy.

Willingness of Extension Specialists/Workers to Establish PIAES

About 93.4% or 57 of the extension specialists/workers and all 10 subject matter specialists were willing to establish or participate in private extension service. About 61% of the extension workers rated provision of inputs services and training/demonstrations high among the services to be provided to farmers. This is an indication that extension workers considered the provision of inputs and training as unavoidable tasks to make extension service effective and make the desired impact.

Relationship between Farmers' Willingness to Pay for and Patronise PIAES and their Socio-Economic Characteristics

The Pearson Product Moment Correlation of data collected shows that educational status, years of experience and farmers' secondary occupation have significant relationship with willingness of farmers to pay for and patronize PIAES in Ikenne and Ijebu zones. The calculated "r" for each of the three variables were .273, .189 and .225 respectively for Ikenne and .218, .386 and .312 respectively for Ijebu zone at 5% level of

significance. In Ilaro zone, only farmers' secondary occupation showed significant relationship ($r = .192$). In Abeokuta zone, only farmer's educational status was significantly related to their willingness to pay for services ($r = .165$). However, when response from the four zones were combined, using multiple regression, there was no significant relationship between farmers' socio-economic characteristics and their willingness to pay for and patronize PIAES (F calculated = 3.6).

Relationship between Farmers' Willingness to pay for PIAES and their Access to OGADEP Extension Services.

The PPMC analysis for farmers access to OGADEP's extension services and willingness to pay for and patronize PIAES was not significant in any of the four zones and when combined ($r = .003$). This probably implies that, even though farmers were visited regularly by OGADEP's extension workers, they are not deriving the desired impact, hence they are looking up unto PIAES to help them. They are also ready to pay for such service.

However, access to input had significant relationship with willingness to pay for and patronize PIAES in each of the four zones and when combined ($r = .421$). Farmers are willing to pay for and patronize PIAES because they believe and know that inputs problems would be eliminated by PIAES. This implies that access to inputs and input service is a very important factor in extension service and need to be integrated.

4.0 CONCLUSION AND RECOMMENDATIONS

Based on the results of this study, it is concluded that:

1. Farmers in Ogun State have access to OGADEP extension service, but still do not have the desired impact from their service.
2. Farmers are willing to pay for and patronize private integrated agricultural extension services (PIAES).
3. Most private agro-allied companies are not willing to establish PIAES as a means of assisting farmers' production or contributing to agricultural development.
4. Extension specialists/workers and subject matter specialists are willing to establish PIAES in Ogun State.
5. Willingness of farmers to pay for and patronize PIAES does not have significant relationship with their socio-economic characteristics.
6. Farmers' access to OGADEP extension service has no significant relationship with their willingness to pay for and patronize private integrated agricultural extension services.
7. Farmers' access to input service has significant relationship with their willingness to pay for and patronize private integrated agricultural extension services.
8. Private integrated agricultural extension service is feasible in Ogun State, Nigeria.

The following recommendations are made based on the conclusions:

1. Experienced extension specialists, extension workers, subject matter specialists should be encouraged by government and farmers' groups to establish PIAES.
2. Provision of input services should be added as a direct responsibility of extension service provided by OGADEP.

Table 1: Distribution of farmers by socio-economic characteristics

Characteristics	N = 240		
	Frequency of response	Percentage (%)	Mean/Mode
<u>Gender</u>			
Male	203	84.6	Male
Female	37	15.4	
<u>Age (Years)</u>			48.25 Years
20-30	4	1.7	
31-40	53	22.0	
41-50	82	34.2	
51-60	66	27.5	
Above 60	35	14.6	

<u>Marital Status</u>			
Married	221	92.0	Married
Widowed	9	3.8	
Divorced	6	2.3	
Single	4	1.7	
<u>Level of Formal Education</u>			
No Formal Education (nfe)	83	34.6	nfe
Primary Education	80	33.3	
Secondary Education	51	21.2	
Tertiary Education	18	7.5	
Adult Education	4	1.7	
Islamic Education	4	1.7	
<u>Family Size</u>			
1-3	13	5.4	8
4-6	94	39.3	
7-9	56	23.3	
10-12	32	13.3	
Above 12	8	3.3	
No response	37	15.7	
<u>Farming Experience (Years)</u>			
1-3	2	0.8	12.29 Years
4-6	19	7.9	
7-9	24	10.0	
10-12	65	27.0	
13-15	87	36.3	
Above 15	44	18.3	
<u>Secondary Occupation</u>			
Trading	63	26.3	Trading
Pensioners	38	15.8	
Carpentry	17	7.0	
Bricklaying	11	4.6	
Blacksmithing	6	2.5	
Weaving	4	1.7	
No secondary occupation	101	42.1	
<u>Types of Farm Production</u>			
Solely arable cropping	112	46.6	Solely Arable Cropping
Mixed farming	90	37.6	
Arable and cash cropping	26	10.8	
Solely livestock farming	12	5.0	
<u>Annual Farm Income (Profit)</u>			
Less than ₦ 20,000	31	12.9	N33,250
₦ 20,001 - 30,000	63	26.3	
₦ 30,001 - 40,000	52	21.7	
Above ₦ 40,000	94	39.1	

Table 2: Distribution of farmers in each zone on willingness to pay for and patronize PIAES

Zones	Frequency (n=60 for each zone)	(%)
Ikenne	Willing 45	75.0
	Not willing 15	25.0
Ilaro	Willing 46	76.7
	Not willing 14	23.3
Ijebu	Willing 48	80.0
	Not willing 12	20.0
Abeokuta	Willing 43	71.7
	Not willing 17	28.3

Total Willing = 182 (75.8%)

Total Not Willing = 58 (24.2%)

Table 3: Distribution of farmers on willingness to pay for some specific PIAES services

Willingness of farmers' to pay for services (n=240)	Frequency	(%)
Willingness to pay for bulletins and handbills.	146	60.8
Willingness to pay for training and demonstrations.	182	75.8
Willing to pay for input services	218	90.8
Willingness to pay for extension agents' visits and consultancy	182	75.8
Willingness to pay for marketing information	94	39.2
Willingness to sponsor Radio & TV programmes.	51	21.3
Wants input service to be part of private extension service unlike present arrangement which does not.	225	93.8

REFERENCES

- Adebayo, K. (1998). *An Assessment of Nigeria Agricultural Development Programmes Without World Bank Funding*. Master of Agriculture Thesis, Unpublished. University of Agriculture, Abeokuta, Nigeria. pp 32-37.
- Adebayo, K., Idowu, I. A, Omotayo, A.M., Apantaku, S. O., Olunuga, B., (1999). An Appraisal of the Prospects and Constraints to Sustainable Funding of Ogun State Agricultural Development Programme. *Journal of Agric. Extension*. Vol. 3, 28-39.
- Adedoyin, S. F. and Patrick-Ngoyi, A. (1996). *Diocesan ADP: An Extension Communication Strategy of Ijebu-Ode Catholic Diocese for Promoting Sustainable Rural Development*. Proceedings of the 8th Annual Conference of Nigeria Rural Sociological Association. Pp. 169-180.
- Akinbode, I. A. (1989). *A Discussion Paper on Extension Services within the Strategy of Agricultural Development in Nigeria in the 1990's*. University of Ife, Ile-Ife, Nigeria pp. 36-43.
- Antholt, C.H. (1991). Agricultural Extension in the 21st Century: Lessons from South Africa. In Rivera, W. and Gustafson, D. (Eds). *Agricultural Extension Worldwide*. Elsevier, New York. pp. 360-367.
- Apantaku, S.O. (1999). Target audience adoption of agricultural technologies: Case for a new linkage mechanism. *Journal of Extension Systems*. Vol. 15, 57-69.
- Apantaku, S.O and Apantaku, F.S. (1999). Factors associated with difference in improved cassava yield between research station and farmers' field in Oyo State, Nigeria. *The Nigerian Rural Sociologist*, Vol.3, 24-29.
- Apantaku, S.O., Sodiya, C. I., Apantaku, F.S., and Fakoya, E.O. (2000). Alternative internal sources of funds for extension service in Ogun State, Nigeria. *Journal of Sustainable Agriculture*. Vol. 17(I), 37-54.

- Apantaku, S.O., Fakoya, E.O., and Sodiya, C.I.(2002). Stakeholder-groups willingness to counterpart-fund agricultural extension service in Osun State, Nigeria. *Journal of Extension Systems*. Vol. 18, 73-88.
- Ashby, J. A. and Sperling, L. (1994). Institutionalising participatory-client-driven research and technology development in agriculture. *AgREN Network Paper 49*. London: Overseas Development Institute.
- Crosser A. C and Rosenberg R. (1976). *Sociological Theory: A Book of Readings*. Macmillan Publishing Company Inc. New York. pp 490-509.
- Ekong, E. E. (1988). *An Introduction to Rural Sociology*. Ibadan: Jumak Publishers. Pp. 124-139.
- Ekong, E. E.(1977). The administration of community development in Nigeria. *Quarterly Journal of Administration*. Vol. 11 (3), 154-157.
- Hoffmann, V., Lamers, J, and Kidd, A (2000). Reforming the organization of agricultural extension in Germany: Lessons for other countries. *AgREN Network Paper 59b*. 1-20.
- Kidd, A.D. (1997). Towards pluralism in agricultural extension: A growing challenge to the public and private sectors. *Entwicklung and Landlicher Raum*. Vol. 3, 7-10.
- Moris J. (1991). *Extension Alternatives in Tropical Africa*. Overseas Development Institute, London., pp 184.
- Okigbo, N.B. (1986). *Understanding Africa's Rural Household and Farming System*. London: Westview Press. pp. 78-88.
- Olunuga, B.A. and Salawu, R.A. (1996). Sustainable rural development: The Farming systems approach. In *Sustainable Development in Rural Nigeria*, Nigeria Rural Sociological Association Publication. pp. 37-45.
- Rivera, M.W. and Gustafson, D. J. (1991). *Institutional Evolution and Forces for Change*. In *Agricultural Extension Worldwide*. New York: Elsevier Books. Pp. 90-120.
- Rolling N. (1988). *Extension Science-Information System in African Development*. New York: Cambridge University Press. pp.20-28.
- Sanders, T. (1985). Theories of Community Development. *Rural Sociology*. Vol. 23 (1), 2-8. Scarborough, V. (1995). Farmer-led approaches to extension. *AgREN Network Paper 59b*. pp 1-20.
- Shingi P.M. (1983). Towards redefinition of extension. *Social Change*. 13(4) 31-35.
- Trujillo, G. (1993). The El Ceibo regional agricultural and agro-industrial cooperative coordinating committee. In Bebbington, A. J. and Thiele, G. (Ed.) *Non-Governmental Organizations and the State in Latin America*. London: Routledge. pp. 45-49.
- Williams, S. K. T. (1989). *The role of extension service in the strategies of agricultural development in the 1990's*. University of Ife, Ile-Ife, Nigeria pp22-32.