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Contact Farmers Approach to Agricultural Extension in Afijio Local Government Area of Oyo State

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Abstract

An important feature of the T & V system of agricultural extension is the use of contact farmers with the main purpose of multiplying the teaching effectiveness of Village Extension Agents (VEAS). This study was thus designed to examine the use of contact farmers, and the extent to which the objectives of their services are being realised in the study area.

Eighty-five contact farmers and eighty-five non-contact farmers were interviewed in Afijio Local Government Area between May and July, 1992 as sources of data.

The study showed that contact farmers were being used to disseminate technical information to a large population of farmers in almost all aspects of agriculture with a high degree of effectiveness except in fisheries. The process of training contact farmers by VEAs, teaching of non-contact farmers by contact farmers and timely supply of needed inputs to farmers, had not been properly articulated.

Some personal and socio-economic characteristics namely age, level of education, income, family size, number of wives, and number of children showed significant differences between contact and non-contact farmers. These characteristics should therefore be taken into consideration in future selection and use of contact farmers.

It was recommended from the findings of the study that training should be immediately followed by application of knowledge by contact farmers and non-contact farmers to facilitate adoption. Needed inputs should be provided on time. Fishery extension should be strengthened.

Introduction

Aggregate economic development in Nigeria is still constrained by the productivity conditions in Agricultural sector. Unfortunately, this is a sector that is characterised by continuing under-development. The technology of production still remains largely traditional resulting in low resources utilisation and consequently low output. With an estimated total land area of 94.2 million square hectares, 75% of which has been certified cultivable, (CBN/NISER, 1994), Nigeria has a very high potential of producing food crops for home and foreign consumption. This realisation has given rise to many agricultural development efforts, the most recent of which is the World Bank assisted Agricultural Development Projects (ADPs) using the Training and Visit (T and V) system of Extension.

The Problem

The use of the T and V system of Agricultural Extension in reaching farmers recognises the fact that the small scale farmers who are in the majority, constitute the backbone of Nigerian rural economy. The ADPs therefore aim at satisfying the needs of the mass of the small scale farmers through a strengthened, reorganised and well equipped extension system. One of the cardinal features of this system is the identification and use of contact farmers. The main reason for this arrangement is that shortage of agricultural extension workers has limited the number of farmers that could be effectively reached with the improved technical information to improve their production and income. Hence, the use of contact farmers is to increase extension contacts and effectiveness.

An important assumption in the use of contact farmers is that they transmit technical information received from extension agents to other farmers in their locality. For the success of the T and V system, this fundamental assumption must always be valid so that the adoption of relevant and useful farm practices is facilitated.

The study therefore examines the following questions in relation to the use of contact farmers in the agricultural community of Afijio Local Government Areas of Oyo State.

1. What is the nature of contact between the extension agents and the contact farmers?
2. What is the nature of contact between the contact farmers and the non-contact farmers?
3. What are the specific skills or knowledge gained by the contact farmers from extension agents and by non-contact farmers from the contact farmers?

4. What are the agricultural innovations adopted by contact and non-contact farmers?
5. What are the differences in the personal and socio-economic characteristics of contact and non-contact farmers?

The main objective of the study is to investigate the use of contact farmers in disseminating improved farm practices to farmers in Afijio Local Government Area of Oyo State. Specifically, the study examines the nature of contact between the extension agents and contact farmers, contact farmers and non-contact farmers. It also identifies the improved farm practices learned from extension agents by contact farmers, from contact farmers by non-contact farmers. The study identifies the problems encountered in the use of contact farmers in extension and the characteristics of the contact and non-contact farmers.

In order to understand some of the differences between contact and non-contact farmers, the following hypothesis are tested:

1. There is no significant difference in the number of agricultural innovations adopted by contact farmers and non-contact farmers.
2. There is no significant difference in the characteristics of contact and non-contact farmers.

The purpose of the above exercise is to apply the findings in facilitating effectiveness in using contact farmers for extension teaching.

Theoretical Framework

The T and V system of extension aims at establishing effective, systematic and regular contact between professional extension agents and farmers (Benor and Baxter, 1984). The Village Extension Worker (VEW) is responsible for transmission of technical advice on agriculture to farmers. But since it is practically impossible to maintain regular personal contact with all farmers in the locality, these contact farmers provide the multiplier effect required in extension by training other farmers. Benor and Baxter (1984) indicated that this multiplier effect is provided in two ways. First, other farmers in the locality seeing what the contact farmers try on their fields and the results achieved, may be sufficiently motivated to carry out similar practices on their own farms. Secondly, each contact farmer talks about the practices he has been taught to several friends, relatives or neighbours thereby helping them understand and motivating them to adopt the recommendations. This way, a large number of farmers can be quickly reached.

In view of this feature of the T and V system, three main criteria are taken into consideration in selecting contact farmers. First, they must be willing to try out practices recommended by extension agents.

Secondly, they must be prepared to have other farmers visit their fields to observe their practices, and third, they must be accepted by other farmers as reliable sources of advice on farming. This explains why each contact farmer is selected to represent a range of socio-economic and agricultural production conditions of a particular farmers' group so that other farmers in the locality could find him credible.

The selected contact farmers, their characteristics and effectiveness in disseminating extension information and their influence on non-contact farmers must therefore be studied indepth with a view to finding out factors inhibiting their effective performance and making recommendations for better selection and improved performance.

The contact farmers have characteristics such as income, age and sex which influence their relationship with non-contact farmers. They also differ from non-contact farmers in some fundamental ways which influence their effectiveness in teaching non-contact farmers. These parameters are significant in understanding the teaching effectiveness of extension agents.

Methodology

The study was conducted in Afijio Local Government Area of Oyo State. The local government area consists of two agricultural extension blocks: Ilora and Aawe. Communities under the Ilora block have 21 villages while the Aawe block have 8 villages.

The population inteviewed consists of contact and non-contact farmers. The contact farmers were identified through the help of the Block Extension Agents in each block and a comprehensive list of contact farmers' names was collected from the Zonal headquarter office of ADP at Oyo. Other farmers (Non-contact) were identified by the contact farmers themselves. The final sample was made up of 170 respondents consisting of 85 contact farmers and 85 non-contact farmers. Data were collected between May and July, 1992 using copies of interview schedule containing open and closed ended questions duly pretested to establish its validity. In addition it was also validated through the use of judges. The interview schedule sought information on personal and socio-economic characteristics of respondents. Training and adoption related questions were asked including problems associated with use of contact farmers.

All the 170 copies of the interview schedule were analysed. The analyses involved frequency counts, percentages, and averages. The hypothesis were tested with the use of chi square.

Results and Discussion

Nature of contact

Extension agents visited the contact farmers fortnightly, that is, twice in a month to train and review previous training. The contact farmers meet with the non-contact farmers regularly. This study did not indicate the frequencies.

The summary of training received by both the contact and non-contract farmers is presented in Table 1. Data in Table 2 show the innovations adopted by both categories of respondents, while data in Table 3 show the summary of the characteristics of contact and non-contact farmers. The characteristics that show significant differences between the contact and non-contact farmers were age (X^2 = 11.46); level of education (X^2 = 13.50); Income (X^2 = 17.00); Family size (X^2 = 7.48); Number of wives (X^2 = 13.32) and Children (X^2 = 16.34) helping on the farm. The contingency coefficients were between 0.21 and 0.30.

Personal and Socio-economic characteristics

Gender: Very high proportions of both the contact and non-contact farmers are male (72.9% and 78.8% respectively). Female contact farmers are 27.1% and non-contact farmers 21.2%. That females served as contact farmers is quite desirable because women are currently getting more involved in agriculture. This, infact, is consistent with the World Bank's recommendation that each ADP should focus attention on two areas of production each year and ensure that women groups progress in them (Benor and Baxter, 1984).

Age: The mean age of contact farmers was 43 years while that of non-contact farmers was 39 years. This implies that contact farmers, on the average, were a little older than non-contact farmers. Experience at times, come with age. This may explain why older farmers are selected as contact farmers.

Level of Education: Level of education attained by contact farmers was higher than among non-contact farmers. A total of 70.6% contact farmers were educated as compared with 62.3% of non-contact farmers. The proportion of contact farmers without any formal education (29.4%) was again lower than that of non-contact farmers (37.7%). More of the non-contact farmers (52.9%) than contact farmers (47.1%) had primary education while more of the contact farmers (23.5%) than non-contact farmers (9.4%) had secondary and post-secondary education. Formal education predisposes farmers to adopt innovations.

Family Members helping on the farm: The average number of wives helping contact farmers on their farm was 1.05 and non-contact farmers 0.9. Majority of non-contact farmers (50.6%) had just one wife while more contact farmers (37.6%) than non-contact farmers (18.9%) had more than one wife helping them on the farm. Similarly, while the highest proportion of contact farmers (23.5%) had 5 children helping them on the farm. the highest proportion of non-contact farmers (40%) came from those who had no children at all helping them on the farm. Contact farmers therefore had larger families helping them on the farm than non-contact farmers. The availability of labour provided by large families is an asset for contact farmers.

Farming Experience: Respondents were asked to give the number of years they had been farming. The average farming experience of contact farmers was 30.18 years and non-contact farmers 28.88 years. However, the proportion of non-contact farmers who had 35 years and above farming experience (50.6%) was higher than that of contact farmers (49.4%). This suggests that other factors were considered along with farming experience before contact farmers were selected.

Income: A high percentage of non-contact farmers (72.9%) earned N10,000 and below while this represents only 45.9% among contact farmers. Conversely, a higher proportion of contact farmers (11.8%) than non-contact farmers (4.7%) earned N21,000 and above. Mean income of contact farmers was N11,518.71 and non-contact farmers N7,430.38. Contact farmers earned higher income from their farms than non-contact farmers.

Improved farm practice learned: Table 1 indicates that training of contact farmers by extension agents and non-contact farmers by the contact farmers more often by discussions and demonstrations, was in the area of crop production (contact farmers 98.8%, non-contact farmers 98.8%); livestock production (56.5% and 40% respectively); and soil conservation/agroforestry (82.5% and 74.1% respectively). Much of the livestock production practices were discussed with the non-contact farmers (51.8%). Similarly, 78.8% of poultry and 56.5% of fishery practices were discussed with contact farmers, while 85.9% and 29.4% respectively with non-contact farmers.

Crop and livestock production as well as soil conservation constitute the major areas in extension teaching with the T & V system. Poultry production also enjoys a fair attention but fish production is still to gain popularity among the farmers. The highest proportion of "no response" was recorded for both contact and non-contact farmers for fisheries. Many of them appeared not to be aware of fishery extension. Generally, however, a large proportion of the respondents (contact and non-contact

farmers) indicated positive impact of the training they received on their farm operations. Nearly all (98.8%) of contact farmers and 89.4% of non-contact farmers had their crop yields increased. So also, 97.6% and 74.1% respectively had increased income; 92.9% and 88.2% respectively gained more knowledge on farming while 94.1% and 80% respectively also acquired more skills in farming.

Agricultural Extension activities in which contact farmers have been involved

All the contact farmers interviewed had participated in various agricultural extension activities to a very large extent. Such activities include Small Plot Adoption Technique (SPAT), 98.8%; On-Farm Adaptive Research (OFAR), 76.5%; Farmers Field Day, 91.8%; and Extension Training and meeting, 90.6%. As a result of these participations, contact farmers had been able to carry out certain functions for other farmers. These include explanation of innovations (98.8%); helping to procure inputs (68.7%) and siting of demonstration on their farms (96.5%). This agrees with the World Bank's recommendation that contact farmers should explain to other farmers what they did under recommended practices. This was made possible because the contact farmers were in close contact with extension agents and have received a numer of encouraging preferences from them. For example, 95.3% contact farmer respondents indicated that they received first hand information about innovations, 97.6% had SPAT sited on their farms and 55.3% received supply of inputs from extension agents.

Innovations adopted

Similar trends are observed in the adoption of innovations by contact and non-contact farmers which suggests that contact farmers must have been of great influence on non-contact farmers as far as adoption of innovation is concerned. While 98.8% of contact farmers had adopted hybrid maize, 95.3% of non-contact farmers had done the same. Similarly, 96.5% of contact farmers and 87.1% of non-contact farmers had adopted fertilizer application; 30.6% each of both categories had adopted improved oil palm seedlings; 37.6% and 36.5% of contact and non-contact farmers respectively had adopted improved kola seedlings. Invariably, where adoption was high with contact farmers, it was high with the non-contact farmers and where adoption was low with contact farmers, it was also low with non-contact farmers. Summary of innovations adopted is presented in Table 2.

Problems of the Contact farmers approach

Problem of non-availability of farm input at the right time ranked highest among problems highlighted by contact farmers (44.7%) as well as non-contact farmers (54.1%) which they encountered with the ADPs. Contact farmers indicated other commitments of the non-contact farmers as carpenters and tailors which took much of the latter's time as the chief problem they encountered with them. This, the contact farmers claimed, limits the availability of the non-contact farmers and therefore curtails the amount of personal contact they had with them. Conversely, only 24.7% of non-contact farmers indicated inability of the contact farmer to attend to them as a problem.

Testing of hypothesis

Results of the hypothesis are presented in Table 3. The 2 hypothesis were tested with chi-square. The strengths of the chi-square relationships were determined by contingency coefficients.

Hypothesis 1: There is no significant difference in the number of agricultural innovations adopted by contact and non-contact farmers.

A chi-square value of 5.04 obtained indicated that this hypothesis should be upheld. This shows that the contact farmers are very effective in the study area. That the non-contact farmers are adopting innovations means that the latter allowed new things reaching them to trickle down to other farmers and they must have been making concerted efforts to ensure that these other farmers also adopt with a high degree of success.

Hypothesis 2: There is no significant difference in the characteristics of contact and non-contact farmers.

Apart from sex ($X^2 = 0.80^4$) and farming experience ($X^2 = 7.35$) which showed no significant difference, all other personal and socio-economic characteristics considered were significantly different. This shows that contact farmers are likely to be of higher socio-economic standing than non-contact farmers. Contact farmers were older, had more education and larger economic resources than non-contact farmers. The strength of relationship of each significant factor is moderate. This is because the contingency coefficient value C, is 0.21 – 0.30.

Conclusion and Implications

Each contact farmer meets with the Village Extension Workers only twice in a month but meets more frequently with non-contact farmers and because of this regular contact, contact farmers make great impact on the non-contact farmers in their behaviour.

As women were getting more and more involved in agriculture, their participation in leadership positions is becoming more pronounced. Women are now being selected as contact farmers to relate with other women farmers.

Contact farmers are older than non-contact farmers on the average and have more economic resources including higher education and larger families with whom they carry out farm work. They also earn higher farm income. However, farming experience was similar between the two groups of farmers.

Demonstration and discussion techniques were the methods used in training farmers through the T and V system. Training ramifies through all aspects of agriculture including crop and livestock production, fisheries and soil conservation. High degrees of success, higher productivity and income, were achieved in almost all areas except fisheries which is not yet widely adopted. Efforts should be intensified on fisheries.

Training of farmers have led to higher rate of adoption of farm practices. There was delay in training and application of what is learned by farmers. Use of what is learned through training should come immediately after training of farmers.

The levels of adoption of the contact and non-contact farmers were not significantly different. This suggest that the contact farmers were very effective in the persuation role to make the non-contact farmers adopt innovations as much as themselves in spite of the difference in their personal and socio-economic characteristics.

Table 1: **Distribution of respondents by nature of training received**

Farm Practices	Contact Famers		Non-Contact Farmers	
	Frequency	%	Frequency	%
Crop Production				
Discussion	–	–	–	–
Demonstration	–	–	–	–
Both	84	98.8	84	98.8
No Response	1	1.2	1	1.2
Total	85	100.0	85	100.0
Livestock Production				
Discussion	33	38.8	44	51.8
Demonstration	1	1.2	3	3.5
Both	48	56.5	34	40.0
No Response	3	3.5	4	4.7
Total	85	100.0	85	100.0
Poultry Production				
Discussion	67	78.8	73	85.9
Demonstration	3	3.5	–	–
Both	10	11.8	–	–
No Response	5	5.9	12	14.1
Total	85	100.0	85	100.0

Farm Practices	Contact Farmers Frequency	%	Non-Contact Farmers Frequency	%
Fish Production				
Discussion	48	56.5	26	29.4
Demonstration	–	–	–	–
No Response	37	43.5	60	70.6
Total	85	100.0	85	100.0
Soil Conservation and Agroforestry				
Discussion	11	12.9	3	3.5
Demonstration	2	2.4	11	12.9
Both	70	82.5	63	74.1
No Response	2	2.4	8	9.5
Total	85	100.0	85	100.0

Table 2: **Distribution of respondents by innovations adopted**

Innovations	Contact Farmers F	%	Non-Contact Farmers F	%
Hybrid Maize seeds (FAR 237)	84	98.8	81	95.3
Ife Brown Cowpea seeds	65	76.5	44	51.8
Improved Oil Palm seedlings (Terera sp)	26	30.6	26	30.6
Improved Kola seedlings (Cola nitida)	32	37.6	31	36.5
Improved melon seeds	66	77.6	49	57.6
Farm Mechanisation (Ploughing/Harrowing)	56	65.9	41	48.2
Fertilizer Application	82	96.5	74	87.1
Chemical Pest Control	66	77.6	63	74.1
Home Economics (Crop processing)	81	95.3	65	74.5
Others	43	50.6	29	34.1

Table 3 **Summary of Chi square values for comparing the characteristics of Contact and Non-Contact Farmers**

Characteristics	Chi square value	D.F.	Contingency Coefficient	Decision
Personal				
Sex	0.804	1	0.07	Not significant
Age	11.460	4	0.25	Significant
Education	13.50	4	0.27	Significant
Farming Exp.	7.35	5	0.20	Not significant
Socioeconomic				
Income	17.00	5	0.30	Significant
Family size	7.48	2	0.21	Significant
No of wives	13.32	3	0.27	Significant
No of children	16.34	5	0.30	Significant
Innovations adopted	5.04	9	0.17	Not significant
Outcome of training	1.04	3	0.08	Not significant

Level of significance = 0.05

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