



# Effectiveness of Extension Volunteers in Disseminating Innovation on Dry Season Rice Farming in Remote Communities in Kwara State, Nigeria

## Revalorizing Extension: Evidence and Practice

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## INTRODUCTION

### Background

The use of improved rice production methods such as planting on flat land without ridging, transplanting seedlings at 20cm spacing as opposed to seed broadcasting, Urea Deep Placement technology etc. can significantly increase quantity and quality of output in dry season rice production. However, many rice farmers in Kwara State do not have adequate knowledge of its application.

The high farmers-to-extension agents (EAs) ratio makes coverage impossible in Nigeria (Agbamu and Okagbare 2005). Worst hit are remote communities where the trio of poor infrastructure, inadequate number of extension agents and dwindling allocations to extension has resulted in almost total neglect.

The Department of Agricultural Extension and Rural Development of the University of Ilorin, as part of its spirited efforts at community development secured a grant from the African Forum for Agricultural Advisory Services (AFAAS). The project involved improving access of rice farmers to extension services using agricultural science teachers.

The Universal Basic Education Programme of the Federal Government of Nigeria has provided schools within walking distances in Nigerian rural communities. These schools have agricultural science teachers who reside in these communities, in most cases are natives, and speak the local language of the communities. Teachers are highly respected, and their opinions held in high esteem in rural communities. Importantly, they possess a background in agriculture

The teachers were trained provided with kits and deployed to work with farmers in groups under the supervision of the Agricultural Development Project Office.

## OBJECTIVES OF THE STUDY

The broad aim of the study was to assess the effectiveness of agricultural science teachers as volunteers for extension service delivery:

1. determine the willingness of agricultural science teachers to serve as volunteer EAs;
2. Compare farmers' level of access to extension services before and after the project
3. assess the effectiveness of the volunteer EAs in providing extension services to farmers; and
4. Identify the determinants of effectiveness among the Volunteer EAs

## METHODOLOGY

### The Study Area

The project was carried out in Edu and Patigi Local Government Areas of Kwara State, North-central Nigeria.

### Sampling Procedure and Sample Size

- Purposive selection of Edu and Patigi Local Government Areas of Kwara State being the hub of rice production in the state.
- Total sampling of all 52 Agricultural Science teachers in the two Local Government Areas.
- Random selection of 3 farmers each from 52 farmer groups to give a total of 156.

### Data Collection and Analysis

Field survey involving the use of two sets of questionnaire and two sets of interview schedule. Descriptive statistics, the Multiple Regression Analysis (OLS), and the Probit Regression Analysis.

## RESULTS AND DISCUSSION

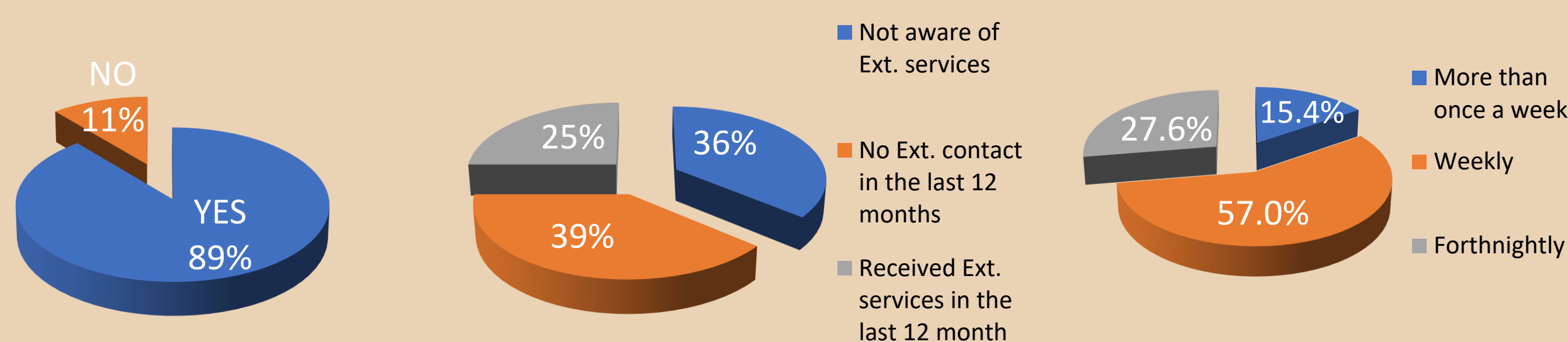


Figure 1: Willingness of Agricultural Science Teachers to Serve as Voluntary Extension Agents

Figure 2: Level of Access of Farmers to Agricultural Extension Services

Figure 3: Distribution of Respondents by Frequency of Extension Visits

## RESULTS AND DISCUSSION contd.

Table 1: Parameter Estimates from Probit Regression Model to Investigate Determinants of Willingness of Agricultural Science Teachers to Serve as Volunteer Extension Agents

Variable	Regression Coeff.	Standard Error	t-value
Constant	-2.0889	0.5175	-4.0364
Age	-0.2354**	0.1118	-2.1048
Sex	0.4013	0.2794	1.4362
Marital status	0.1479	0.3307	0.4473
Educational level	0.2375***	0.0308	7.7172
Ownership of personal farms	-0.7323	1.2386	-0.5912
Years of teaching experience	-0.0102	0.0096	-1.0577
Pearson Goodness of fit (chi square value)	4.938E+10		
DF	46		
P	.000		

\*\*\* 1%, \*\*5%

Table 2: Perceived Effectiveness of Agricultural Science Teachers in Performing Agricultural Extension Roles

Agricultural Extension Roles	Highly Ineffective	Ineffective	Not sure	Effective	Highly Effective	Mean score
• Efficient combination of indigenous and improved practices	0.0	45.7	0.7	48.3	5.3	3.13
• Training in agribusiness	0.0	0.0	0.7	77.5	21.9	3.21
• Effective use of farmer-to-farmer as information source	0.0	45.7	0.0	32.5	21.9	3.30
• Information on value addition	78.1	21.2	0.0	0.7	0.0	1.23
• Facilitation of farm credit	63.6	32.5	0.7	3.3	0.0	1.44
• Facilitating access to low-cost agro-inputs	0.0	11.9	7.3	44.4	36.4	3.05
• Climate related information	0.0	0.7	1.3	72.2	25.8	3.23
• Pest and diseases management	9.3	35.8	17.9	35.8	1.3	2.84
• Training on record keeping	0.0	2.6	4.0	74.8	18.5	4.09
• Information on improved soil management practices	0.7	2.6	8.6	76.2	11.9	3.26
• Better postharvest handling	0.0	2.0	10.6	81.5	6.0	3.91
• Reduction in crop losses	0.0	0.0	1.3	57.0	41.7	3.40
• Information on timely and appropriate marketing of crops	0.0	41.1	7.3	38.4	13.2	3.04
• Increase in quality and quantity of produce	0.0	6.6	7.9	75.5	9.9	3.89

Table 3: Determinants of effectiveness of Volunteer EAs

Variables	β	S.E	t	P Value
Constant	159.456	9.386	16.989	0.000
Age	-0.523**	0.342	-1.529	0.014
Sex	3.387	3.558	0.952	0.342
Education	0.819***	0.401	2.042	0.003
Marital Status	-1.397	5.031	-0.278	0.781
Distance to clientele	-1.871*	1.090	-1.716	0.093
Teaching Experience	0.106	0.142	0.749	0.454
Farming Experience	2.539	3.402	0.746	0.466
R <sup>2</sup>				

\*\*\* 1%, \*\*5%, \*10%



Agricultural Science Teachers Training Programme



An agricultural science teacher (Volunteer Extension Agent) on a demonstration plot with a farmer-group



Presentation of a Rice Destoner to a women rice processor group

## CONCLUSION

Findings lead to the conclusion that agricultural science teachers are willing and can be effective volunteer agricultural Extension Agents to farmers within close proximity to them. The unique advantage of this initiative is the multiplication of agricultural extension service providers at minimal cost thereby enhancing farmers' access to extension services. The cost implication and institutional framework are currently being worked on in a bid to assess the possibility of extending same to other rural communities.

## REFERENCES

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2. Rogers, E. M. (2003) *Diffusion of Innovation* (5<sup>th</sup> ed), New York, Free Press

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4. National Cereal Research Institute (NCRI), Badeggi
5. Notore Fertilizer Company Limited
6. Kwara State Teaching Service Commission.