



Extension Agents' Training Needs for Selected Sustainable Agricultural Production Practices in Ogun State, Nigeria

Ajuwon, I.O.; Olabimisi, A.D.; Ajibade, A. J. and Ayodele, M. A.

Agricultural Technology Department, OYSCATECH, Igboora

Email: opeajuwon@yahoo.com

Abstract

This study investigated the extension agents' training needs for selected sustainable agricultural production practices in Ogun State. Purposive sampling technique was used to select the extension agents in the study area. Descriptive statistical tools namely; frequency counts, percentages and mean were used to describe the data, while Borich model was used to analyse the needs. Pearson's Product Moment correlation was used to test relationship between constraints and extension agents' training needs for selected sustainable agricultural production practices in Ogun State. The analysis of the results revealed that 48.7years is the mean age of the respondents, which implied that extension agents in the study area were still very active. Also, all (100%) the respondents are married and majority (94.4%) were male. The mean year of schooling was 17years while mean year of working experience was 19years; this implies that all the respondents in the study area were educated up to tertiary level. The study also revealed the training needs of the extension agents for sustainable agricultural production practices, which shows that ogisiviculture with MWDS 0.33 ranked 1st among other sustainable agricultural production practices with positive MWDS. Cover cropping with MWDS -0.08 ranked 15th which was the least among other sustainable agricultural production practices with negative MWDS. The study further revealed that limited budget allocated for agricultural extension services (WMS =1.89) was indicated by the majority of the respondents as a severe constraint, while weak linkages between researchers and extension agents with WMS of 1.04 was not a constraint to the respondents. The result for the hypotheses shows a significant relationship between constraint hindering effective delivery of sustainable agricultural production practices of the extension agents and their training needs.

Key words: Extension Agent, Training, Training needs and Sustainable Agricultural Production Practices.

Introduction

Extension is basically a service carried out by either public or private establishment with the motive of responding to the needs and aspirations of farmers and rural dwellers in general for transmission of knowledge and information that can be harnessed in enhancing their productivity, income and welfare by the use of natural resources found within their domain for their sustainability. Extension brings information and new technologies to farming communities, allowing them to improve their production, income and standard of living (Ballantyne and Bokre, 2003). Likewise, Sharma (2003) described extension as an on-going process of getting useful information to people and then assisting these people to acquire the necessary knowledge, skills, attitudes to utilize effectively the information or technology (education dimension). Thus extension has two functions viz, educating and informing.

The goal of agricultural extension services in Nigeria is to facilitate farmer's acceptance while the ultimate goal of Agricultural extension is to improve standard of living through the transfer of improved farming practices to the rural people (Oladosu and Okunade 2006). Extension could play a key role in fostering sustainability through its educational programs but there has been a growing realization that traditional extension models have not been sufficiently effective in promoting adoption of sustainable agricultural practices. Since sustainable agriculture is a knowledge intensive system, it requires a new kind of knowledge, which differs from other forms on the basis of conventional agricultural practices. In fact, conventional extension system cannot accomplish sustainability in agriculture; because today's agricultural extension must consider environmental implications, social issues, and overall economic growth within the agriculture sector (Mohammad, 2009).



Sustainable agriculture production practices is successful management of the resources of agriculture to satisfy changing human needs, to conserve the environment, and increase biological resources (Karami and Mansoorabadi, 2008). Rao and Rogers (2006) defined sustainable agriculture as a practice that meets current and long-term needs for food, fibre, and other related needs of society while maximizing net benefits through conservation of resources to maintain other ecosystem services and functions, and long-term human development. It seems that sustainable agriculture is more than a shift in farming practices; rather, it must be focus on raising consciousness (Somers, 1998). Knowledge and related information, skills, technologies, and attitudes will play a key role in the sustainable agriculture (World Bank, 2006). Consequently, sustainable agriculture system is an information-intensive system (Mazumadar, 2006) because inputs have been replaced by skills, labours, and management. For example, for farmers that practice sustainable agriculture to be successful in managing their farmlands, there must be a continuous network of information, new technologies, and innovations that are available to them. The extension service can play a crucial role in providing this network of information on sustainable agriculture education (Hersman, 2004) Thus, the role of extension is very important to support sustainable agriculture (World Bank, 2006).

Research questions

- 1) What are the socio-economic characteristics of extension agents in Ogun State?
- 2) What are the training needs required by extension agents for effective teaching of farmers on sustainable agricultural production practices in Ogun state?
- 3) What are the constraints hindering the effective delivery of technologies on sustainable agricultural production practices by the extension agents?

Objectives of the study

The main objective of this study is to investigate the extension agents' training needs for selected sustainable agricultural production practices in Ogun State. The specific objectives of the study are to;

- 1) describe the socio-economic characteristics of extension agents in Ogun state.
- 2) identify the training needs required by extension agents for effective teaching of farmers on sustainable agricultural production practices in Ogun state.
- 3) identify the constraints hindering the effective delivery of technologies on sustainable agricultural production practices by the extension agents in the study area.

Hypothesis of the study

There is no significant relationship between the constraints hindering effective delivery of sustainable agricultural production practices by the extension agents and their training needs for sustainable agricultural production practices.

Methodology

The study was conducted in Ogun States in South Western Nigeria. Ogun state is a state in South-Western Nigeria. Created in 1976, it borders Lagos state to the south, Oyo state and Osun state to the north, Ondo state to the east and Republic of Benin to the west. Abeokuta is the capital and largest city in the state. The state's nickname is "Gateway to Nigeria. It was created in February 1976 from the former Western state. The 2006 census recorded a total population of 3,751,140 residents.

Ogun state Agricultural Development Programme (OGADEP) was launched in February 1986. OGADEP is the only agricultural extension agency of the state government, charged with the responsibility of improving farmers' technical knowledge and skills, promoting the adoption of improved agricultural production practices along the entire value chain, provision of rural infrastructures that support agriculture, thereby facilitating increased agricultural production and industrialization in line with the agenda of the Government (OGADEP, 2016).

The population of the study was all the extension agents (EA) in Ogun States Agricultural Development Programme.

It was found out that, there were seventy-one extension agents in the study area. However, for the purpose of this study all the extension agents in the study area were selected



purposively, this implies that this study has seventy-one respondents.

Primary data for this study were collected using structured questionnaires. The questionnaires contained both open and closed ended questions.

Two types of variables were measured in this study and they are the independent variables and the dependent variables. The independent variables include the selected socio-economic characteristics of the respondents such as sex, marital status, religion, academics qualification, level of awareness and constraints while the dependent variable is training needs. Descriptive statistical tools such as frequency counts, percentages and mean were used to describe the data for objectives one and three, while Borich model was used to analyse the second objective. Borich model identifies the discrepancy (needs/gap) between expected competency and present one.

Results and discussion

Table 1 revealed that 48.7years was the mean age of extension agents in Ogun State. . This implies that most of the extension agents in the study area were still in their active and

productive years, this attest to a study by Oladosu and Okunade (2006) which states that extension workers were active, strong and energetic. Also, all the extension agents in the study area were married. This is to the advantage of the programme because farmers tend to accord respect to married agents than the unmarried ones. It was also revealed that (94.4%) most of the respondents in Ogun state were male and 73.2percent were Christians in the study area.

In addition, 17years was the mean years spent in school by the respondents Ogun state, this implies that all the respondents were educated up to tertiary level, this is in line with Oladosu (2006), who asserted that extension workers were knowledgeable, polite, cheerful and well skilled in the dissemination of messages and the aforementioned were the expected attributes of a learned extension personnel. Also, 19years were the mean years of experience of the extension agents in Ogun states. This implies that the extension personnel in Ogun state agricultural development programme were well experienced in terms of numbers of years in service.

Table 1: Distribution of Extension Agents According to their Socio-economic Characteristics

Variables	Frequency	Percentage	Mean
Age			
30 – 39	5	7.0	48.0
40 – 49	29	40.9	
50 -59	37	52.1	
Marital Status			
Married	71	100.0	
Sex			
Male	67	94.4	
Female	4	5.6	
Religion			
Islam	19	26.8	
Christianity	52	73.2	
Years of Schooling			
11 – 15	23	32.4	17.0
16 – 20	40	56.3	
21 – 25	8	11.3	
Working Experience			
6 – 15	18	25.4	19.0
16 – 25	35	49.2	
26 – 35	18	25.4	

Source: Field survey, 2023

Table 2 shows that extension agents in Ogun state need training and retraining on some sustainable agricultural production practices with positive MWDS such as; graded bundling (0.29), horse gram (0.26), ogisiviculture (0.33), silivepastoral (0.32), strip cropping (0.11), sun hemp (0.18), alley cropping (0.08), vegetable barriers (0.01), crop diversity (0.03), rotational grazing (0.02), deep ploughing (0.04), mulching (0.03), micro irrigation (0.03), and tree farming (0.01).



Table 2: Training needs of the Respondents for Sustainable Agricultural Production Practices

S/N	Practices	MWDS	Rank
1	Ogisiviculture	0.33	1 st
2	Silivepastoral	0.32	2 nd
3	Graded bundling	0.29	3 rd
4	Horse gram	0.26	4 th
5	Sun hemp	0.18	5 th
6	Strip cropping	0.11	6 th
7	Alley cropping	0.08	7 th
8	Deep ploughing	0.04	8 th
9	Crop diversity	0.03	9 th
10	Mulching	0.03	9 th
11	Micro irrigation	0.03	9 th
12	Rotational grazing	0.02	10 th
13	Vegetable barriers	0.01	11 th
14	Tree farming	0.01	11 th
15	Horticulture	0.00	12 th
16	Nutrient management	0.00	12 th
17	Integrated pest management	-0.02	13 th
18	Reduce tillage	-0.04	14 th
19	Marketing	-0.04	14 th
20	Cover cropping	-0.08	15 th

Source: Field survey, 2023

*Mean weighted discrepancy score (MWDS)

Table 3 showed the severity of various constraints hindering effective delivery of sustainable agricultural production practices of extension agents in the study area. In the ranking order, limited budget as a severe constraint was ranked 1st with WMS of 1.98 and closely followed by limited number of extension agents compare to the number of farmers which was ranked 2nd with WMS (1.78). The results attest to a study conducted by Cho *et al*; (2004) where they established that the numbers of field staff working in the agricultural extension management are not

enough when compared to large number of farmers. Also, Kizilaslan *et al*; (2007) had affirmed that agricultural extension sector is characterized by poorly motivated staff, a preponderance of non- extension duties, inadequate finances, the absence of legislative policy for the coordination of work between the management of agricultural extension and other organizations, the dense bureaucratic procedures in the relations between the extension and other organizations, insufficient communication with other organizations and top-down model creates a rigid hierarchy.

Table 3: Constraint hindering effective delivery of sustainable agricultural production practices

S/N	Constraints	Severe (%)	Mild (%)	Not a problem (%)	WMS	Rank
1	Limited budget allocated to agricultural extension services	63(88.7)	8(11.3)	0(0.0)	1.89	1 st
2	Limited number of extension agents compare to the number of farmers	58(81.7)	10(14.1)	3(4.2)	1.78	2 nd
3	Bureaucracy	49(69.0)	21(29.6)	1(1.4)	1.68	3 rd
4	Low salaries	47(66.2)	19(26.8)	5(7.0)	1.59	4 th
5	Poor infrastructure	43(60.6)	26(49.3)	2(2.8)	1.58	5 th
6	Lack of staff motivation	45(63.4)	20(28.2)	6(8.5)	1.55	6 th
7	High cost of purchasing and maintaining equipment and software	40(56.3)	29(40.9)	2(2.8)	1.54	7 th
8	Poor communication with other organization	36(50.7)	21(29.6)	4(19.7)	1.31	8 th
9	Top to bottom approach	13(18.3)	53(74.7)	5(7.0)	1.11	9 th
10	Weak linkages between Researchers and extension agents	20(28.2)	34(47.9)	7(23.9)	1.04	10 th

Source: Field survey, 2023

Table 4 revealed the result of PPMC analysis between constraints and training needs of the respondents for sustainable agricultural production practices. It shows that there is

significant relationship between constraint hindering effective delivery of sustainable agricultural production practices of the



extension agents and their training needs for the sustainable agricultural production practice. The relationships were positive which implies that increase in the significant factor will bring

about more training needs of the extension agents.

Table 4: PPMC analysis between constraint hindering effective delivery of sustainable agricultural production practices of the extension agents and their training needs for sustainable agricultural production practices

Variable	p-value	sig. level	Remark	Decision
Constraint/Needs	0.179	0.030	Significant	Ho Rejected

Source: Field survey, 2023

Conclusion and Recommendation

On the basis of major findings of this study the following conclusions were made;

Ogisiviculture, silivespastoral, graded bundling, horse gram, vegetable barriers, sun hemp, strip cropping and crop diversity were the sustainable agricultural practices in the study that requires high level of training.

Also, extension agents faced various constraints such as limited number of extension agents compare to the number of farmers, limited budget allocated to agricultural extension services in the study area.

Recommendation

Sequel to the findings of this study, the following recommendations were made;

1. There should be periodic training of extension agents in the study area on sustainable agricultural production practices.
2. Ogun States Agricultural Development Programme should be well funded for the Extension Agents to be more effective.
3. Necessary facilities and programme should be provided for extension agents to be more effective and functioning in the study area.
4. Government policy should be reviewed to give room for enabling environments for Extension Agents to be more effective on their jobs.

References

- Ballantyne, P. and Bokre, D. (2003). ICTs: Transforming agricultural extension? Report of an iNARS e-discussion, retrieved October 15, 2007 from http://www.livelihoods.org/info/docs/inars_Supersummary.pdf
- Cho, K. M. and Boland, H. (2004). Agricultural Training in Myanmar: Extension Agents' Perceptions of Training Needs. *Journal of International Agricultural and Extension Education* 11(1): 5-15

- Hersman EM (2004). Knowledge and Dissemination of Sustainable Agriculture Practices by County Extension Agents in Ohio, Pennsylvania, and West Virginia. Master's thesis, Davis College of Agriculture, Forestry, and Consumer Science, West Virginia University.
- Karami E, Mansoorabadi A (2008). Sustainable agriculture, attitudes and behaviors: agender analysis of Iranian farmers. *Environ. Dev. Sustain.*, DOI 10.1007/s10668-007-9090-7.
- Kizilaslan, N. and Kizilaslan, H. (2007). Need for Re organization in Agricultural Extension Services in Turkey. *Journal of Applied Sciences Research* 3:11.
- Mazumadar PK (2006). Information is key to agricultural development *In Participatory planning and project management in Extension science* (eds) Adhikary MM, Sarkar A, Acharya SK, and Basu D, Geeta Somani, New Delhi, , 390- 393.
- Mohammad Sadegh Allahyari (2009) Agricultural sustainability: Implications for extension systems. *African Journal of Agricultural Research* Vol. 4 (9), pp. 781 - 786, September, 2009.
- Oladosu I. O. and Okunade E. O. (2006): Perception of Village Extension Agent in Disseminating Agricultural Information in Oyo Agricultural zone of Oyo state. *A Journal of Social Science Association of Nigeria*, vol. 3, pp 187-191.
- Rao N.H. and Rogers P.P. (2006). Assessment of agricultural sustainability. *Curr. Sci.*, 91, 439-448.
- Sharma, R. (2003). Barriers in using technology for education in developing countries. *IEEE0-7803-7724-9103. Singapore Schools' Computers and Education*, 41, 49-63.
- Somers, N (1998). Learning about sustainable agric. The case of Dutch arable farmers. In: *Facilitating sustainable Agriculture* (eds Roling, NG and Wagemakers MAE.), Cambridge, Cambridge University, pp. 123-133.
- World Bank (2006). Agriculture Investment Sourcebook. Washington, DC, World Bank.