

ASSESSMENT OF DESIRED COMPETENCIES OF AGRICULTURAL EXTENSION AGENTS IN SUSTAINABLE AGRICULTURE DEVELOPMENT ACTIVITIES IN SOUTHWEST NIGERIA

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Abstract

Agricultural Extension Agents (AEAs) in Nigeria are saddled with the responsibility of helping farmers improve their knowledge and skill in agriculture thereby improving their livelihood opportunities. Based on this the study looked into the effectiveness of the agents in ensuring sustainable agricultural development. Specifically the study described the socio-economic characteristics of the AEAs, determined their levels of knowledge and skills in sustainable agricultural development activities and identified their training needs. Three states: Lagos, Oyo and Ondo states were randomly selected from the six in southwest Nigeria and all the AEAs in the Agricultural Development Projects in the selected states were sampled. Data were collected using a validated questionnaire. Data analysis was done using appropriate descriptive and inferential statistics. Results of the study revealed that males (68.1%) dominated extension service in southwest Nigeria. The mean age of the AEA was 39 years and the mean year of experience of the AEA was 10 years. AEAs highest mean score on knowledge in sustainable agricultural development activities was recorded in livestock manure management ($x = 3.37$) and the highest mean score in skill was recorded in farmers organization establishment ($x = 2.98$). Some of the training needs identified included participatory needs analysis and livestock manure management. The study concluded that many of the identified training needs are outside the pre-service training of the AEAs.

Key words: agriculture, sustainable development, extension agents, human capital, training needs analysis

INTRODUCTION

The concept of sustainability is illustrated by three interconnected mutually inclusive themes or spheres of the environment, society and economics [17]. The balance of these three spheres informed the definition of sustainable development as the development that allows the present generation to satisfy their needs without jeopardizing the ability of coming generations to meet their own needs. [5] defined sustainable agriculture development as one that results into abundant food production without depleting natural resources or resulting in environmental pollution. It is agriculture that uses natural principles to develop sustainable crop and animal production systems. Furthermore, [17] submitted that sustainable agriculture development is that which is in

line with the values of the society and one whose success cannot be separated from vibrant rural areas, good lives for farm families and food security for all.

Ensuring sustainable agriculture development calls for practice and technology which are technically appropriate, economically viable, environmentally friendly and socially acceptable [10]. Indeed, no agriculture could be said to be sustainable if it is not capable of ensuring a significant family income and a wholesome livelihood [1].

Sustainable agriculture development therefore, seeks to ensure that resources are used efficiently, renewable resources are replaced, and essential non-renewable resources are conserved. There is balance of inputs and outputs by minimizing resource costs and relying more on inputs derived from

the farm. This therefore depends not just on the motivations, skills, and knowledge of individual farmers, but on actions taken by organizations [6].

The goal of agricultural extension is to satisfy knowledge, skills and needs of all types of farmers in order to help them in running their farms efficiently and to become good citizens to improve their quality of life. Thus, the role of extension is very important to support sustainable agriculture which is moving from production to a wider set of sustainability. A key to sustainable agriculture development is the existence of sufficiently well trained personnel in all of the disciplines needed in the planning, development and management processes [23]. This means that the extension worker like a teacher needs to prepare and rehearse beforehand and teach well like a good teacher. The success of extension depends heavily upon selection of qualified and motivated personnel. But the basic problem of agricultural extension management is the lack of skillful field personnel needed to satisfy the requirements of sustainable agriculture. [4]. Training and continuous capacity development of extension agents will better position them to drive the needed institutional and community reorganization needed to ensure sustainable agriculture development and help the farmers with the adoption of the tenets of sustainable agriculture development.

Extension agents are adults most of whom are starters, mid-level career people and people almost at the end of their career and are sourced from different specializations in agriculture and even some of them from non-agriculture related specialization [3]. To keep updating the competencies: knowledge, skills and abilities of these people in recent development issues across the globe like sustainable agriculture development, training as a tool already established in improving human capital is encouraged.

Training that is not geared towards the exact needs of the trainees is bound to fail. This is because the possibility of addressing what is needed to improve performance is almost zero and it cannot be said to command adequate clientele participation since adults are self-

directed in learning and only learn for immediate application and not for future application as children.

Theoretical framework for human capital development and training needs analysis [26] defined human capital as an important ingredient in improving a firm assets and workers to improve production as well as maintain competitive advantage. Human capital implies processes that have to do with capacity development activities in and outside work environment that is targeted at improving what employees know and can do as well as improves his/her values to ensure satisfaction and performance and also by extension improves the performance of the firm [19]. According to [24] human capital is significant for improving the skill, and knowledge and competencies of the employees. [22] defined human capital as “the knowledge, skills, competencies, attributes embodied in individuals that facilitate the creation of personal, social and economic well-being”. Human capital concentrates on the economic behaviour of individuals especially in the way their embodiment of knowledge and skills empowers them to improve their productivity and their income and by so doing increase the efficiency and the wealth of the societies they live in [25]. Considering these definitions of human capital, it could be deduced that the focus of human capital is the knowledge or information, expertise and skills an employee possesses through the investment of education and training. Human capital to extension agents specifically will include knowledge and requisite skills and positive attitude needed in managing extension service systems as well as those required in reaching various clienteles in the field of agriculture and rural development for optimum production and improved livability. This implies that the productivity and effectiveness of each extension agent is a function of the accumulated human capital over the years foundationally during the pre-service training in colleges and universities and continuously through the various in-service and on the job training programmes. This is as a result of changing paradigm of development work and

improvement and update in technologies over the years. This explains the reasons why extension organization cannot afford to fold their arms as far as human capital development is concerned because extension agents' performance will not improve by itself, performance, once deteriorated becomes increasingly difficult to improve and performance will only stay improved if there is continuing support from the performance improvement system [27]. [7] dichotomized between the two types of human capital: the general-purpose human capital and the firm-specific human capital. According to the author, the general-purpose human capital consists of knowledge acquired through education and training in valuable areas to a wide spectrum of firms such as general skills in writing, communication and team work. Firm-specific human capital takes care of expertise gotten through education and training in areas specific to certain industry. Whatever the angle human capital is considered, education and training are its most vital investment although it is not built within the walls of formal educational institutions and frameworks alone. In the light of recent happenings across the globe in agriculture and rural development, agricultural extension agents desire new set of skills or competencies to be more efficient in ensuring agricultural and rural development considering various complications like climate change, environmental degradation, gender issues, hidden hunger and so forth. These competencies are the abilities, skills and knowledge – the behavioural dimensions that will differentiate between effective and ineffective performance of task [20] and [14]. Human capital focuses on two main areas which are the individual and the organization. [12] established four important components of human capital. These are (i) enhancement of individual skills (ii) the development of organizational capacities (iii) adaptability and flexibility and (iv) individual employability. These four components critically considered reveal that the focus of human capital is both organizational and individual development and value addition. Looking from the angle of individual improvement and development,

[11] opined that human capital is important to give the individual a competitive edge while from the organization side, the firm gains advantage over others by possessing crucial resources that cannot be duplicated by their competitors. This implies that as individual competitive advantage increases, the competitive advantage of the firms they work also improves. This means that there is a direct relationship *ceteris paribus* between the development of the competitive advantage of the employees and the overall competitive advantage of their firms within a specific industry. As the discourse on human capital continues, firms develop motivations to improve its management towards reducing risks and increasing productive potentials. This supposes employees skill development in order to become competitive in their organizations [19].

Over time, the theory of human capital has evolved rapidly. Greater emphasis has now been placed on training related areas. This has a deeper relationship to the individual worker in that it sharpens their productivity. Therefore, training is crucial to human capital investment. Training itself as an intervention programme is not floating. Since adults are concerned and they do not learn as children do [18], training must have a direct relevance with what they do and it must promise immediate improvement if it will command their attention. If training programme will therefore be relevant to the need of the employees and the organization, it must be based on adequate training needs analysis that had revealed the various performance gaps [28].

In the light of this study, it implies that to improve the human capital of the agricultural extension agents in southwest Nigeria with a view to raising their individual performance and the entire productivity of extension service within the Agricultural Development Programme, training could be considered an important mechanism. In fact, workforce low competitiveness has been attributed to training [19]. Furthermore, this proposed training cannot achieve the desired result without appropriate training needs analysis using adequate models. Therefore, to improve the

competencies (the human capital) of the agricultural extension agent in sustainable agriculture, training programme based on adequate training needs analysis is desired. The study therefore, aimed to answer the following questions. What is the level of knowledge of agricultural extension agents in southwest geopolitical zone of Nigeria? How competent are the agricultural extension agents in ensuring sustainable agriculture development in southwest geopolitical zone of Nigeria? What specific areas of sustainable agriculture development do they require training on?

Objectives of the study

The specific objectives of the study were to:

1. describe the socio-economic characteristics of the agricultural extension agents in southwest geopolitical zone of Nigeria;
2. determine the knowledge and competence levels of agricultural extension agents in southwest, Nigeria in sustainable agriculture development; and
3. identify the training needs of agricultural extension agents in sustainable agriculture development.

MATERIALS AND METHODS

Southwest geopolitical zone of Nigeria is made up of 6 States which are Lagos, Ogun, Oyo, Osun, Ogun and Ekiti States. Lagos, Oyo and Ondo states were randomly selected for the study. All the extension agents with the Agricultural Development Programme (ADP) in the three states were reached using structured questionnaire duly validated and pre-tested. The information collected ranged from socio-demographic characteristics, level of knowledge and competence in sustainable agriculture development. The sustainable agriculture development model used for the study consisted of eighteen items generated by the researcher from desk study. Many of the socio-demographic variables were measured by their actual numbers while level of knowledge and competence were measured on a 5 point Likert type scale of 1 to 5 and categorized according to [3] and [2] as 1 - 1.49 (No knowledge/Not able), 1.5 – 2.49 (Little knowledge/Little ability), 2.5 – 3.49

(Moderate knowledge/Somewhat able), 3.5 – 4.49 (High knowledge/Able) and 4.5 -5 (Very high knowledge/Very able). In all 382 copies of the questionnaire were returned after four weeks. Data collected were summarized using descriptive statistics. Borich model of needs analysis was used to identify the training needs of the extension agents [8].

Borich model of needs assessment involves four steps which are listing competencies; surveying in-service employees (*clientele group*); ranking competencies, and comparing high priority competencies with training programme content. Applying this model to prioritize the needs of a group of employees, a discrepancy score will be calculated for each employee for each issue raised by subtracting the competency score from the knowledge score. A weighted score will then be calculated by multiplying the discrepancy score by the mean knowledge rating for each issue raised. A mean weighted discrepancy score (MWDS) will be calculated by taking the sum of the weighted discrepancy scores and dividing by the number of complete participant responses for the issue. The individual and groupings of professional competencies will then be ranked from lowest to highest using the computed mean weighted discrepancy score [13][9]. For this study, a Borich calculator [21] was used to avoid errors due to manual computation of large data set.

RESULTS AND DISCUSSIONS

Selected socio-economic characteristics of agricultural extension agents in the study area

Results in Table 1 shows that males (68.1%) dominated agricultural extension agents (AEA) in southwest geopolitical zone of Nigeria. This result corroborated the findings of [16] who reported that male dominated extension service delivery in Osun State. Also, Table 1 shows that the mean age of AEA in the zone is 39 years. Large proportions (83.0%) of the AEAs were between the ages 45 years and below. Table 1 also shows that majority (83.8%) of the AEAs were married. Result in Table 1 also indicates that majority

(73.0%) of the AEA had Bachelor of Science or Higher National Diploma degrees with 16.2 per cent having Master of Science. The study presents an interesting result as almost all the AEAs (96.6%) read agricultural related courses such as agronomy, agricultural extension, agricultural economics, and animal science with only 3.4 per cent that read non-agricultural related courses.

Table 1. Selected socio-economic characteristics of the agricultural extension agents

Variables	Frequency	Percentage
Gender of agents		
Male	260	68.1
Female	122	31.9
Age of agents in years		
≤ 25 years	5	1.3
26-35 years	111	29.1
36-45 years	201	52.6
46-55 years	64	16.8
56 years +	1	0.3
Marital status of agents		
Single	58	15.2
Married	320	83.8
Widowed	2	0.5
Divorced	2	0.5
Specialization of agents		
Crop science	121	31.7
Animal science	51	13.4
Soil science	26	6.8
Agricultural Economics	62	16.2
Agricultural Extension	91	23.8
Home Economics	11	2.9
Agricultural Engineering	3	0.8
Non-agricultural related specialization	17	4.4
Level of education of agents		
Secondary school education	12	3.1
Ordinary National Diploma	18	4.7
National Certificate of Education	9	2.4
Bachelor of Science/Higher National Diploma	279	73.0
Master of Science	62	16.2
Doctor of Philosophy	2	0.5
Professional cadre of agents		
Village Extension Agent	269	70.4
Block Extension Agent	56	14.7
Zonal Extension Agent	13	3.4
Subject Matter Specialist	29	7.6
Block Women in Agriculture	15	3.9

Source: Field Survey, 2016

Table 1 reveals that majority (70.4%) of the AEA in Southwest geopolitical zone of Nigeria are Village Extension Agent while others were Block Extension Agents, Subject Matter Specialist, Block Women in Agriculture and Zonal Extension Officer. Table 2 shows that more than half (55.2%) of AEA in the zone had been in service for about

10years while 37.2 per cent had been in service for 11-20 years. The mean year of service of AEA in the zone is 10 years. However, it was interesting to indicate that the mean year of service of AEA in Lagos state is 12 years. On average income, about 46.6 per cent of AEA in the zone made between ₦40,001 - ₦80,000 monthly.

The mean of monthly income of AEA in the zone was ₦60,274 while for the 3 states was Oyo (₦67,552), Lagos (₦76,509) and Ondo (₦69,117) respectively. Average number of farm families covered by AEA in the zone was 485. Average for the states was Oyo (440), Lagos (958) and Ondo (381) respectively. Considering the World Bank standard of one agent to 800 farmers, this finding portrays AEA/farmer ratio as adequate.

However, this findings deviates sharply from that of [15] who reported AEA/farmer ratio of 1:800 and 1:1612 for Oyo and Lagos state in 2012 and 1:1480 for Ondo state in 2011.

Result in Table 2 reveals that many (68.6%) of AEAs in Southwest geopolitical zone of Nigeria had Subject Matter Specialists as their source of information on agricultural issues with 41.8 per cent having radio, academic journal and agricultural books as their sources of information on agricultural issues respectively.

This finding reveals that AEAs utilize various sources for accessing information on agriculture. This will help them to be informed on current happenings and changes in agriculture across the globe.

Perceived level of knowledge on sustainable agriculture development activities

Result in Table 3 shows the perceived level of knowledge of agricultural extension agents in sustainable agricultural development activities. Results in Table 3 shows that the AEAs have moderate knowledge in thirteen of the 18 items listed on sustainable agricultural development activities.

The mean scores are below 3.00 in 7 of the listed items used to conceptualize sustainable agriculture development activities.

Table 2. Selected socio-economic characteristics of respondents

VARIABLES	FREQUENCY	PERCENTAGE	CENTRAL TENDENCY
Information sources on agricultural extension:			
Internet			
Colleagues	79	20.7	
Bulletin/Newsletter	44	11.5	
Radio	49	12.8	
Television	51	13.4	
Text messages	30	7.9	
Subject Matter Specialist	25	6.5	
Journals	262	68.6	
Books	41	10.7	
	36	9.4	
Number of farm families covered:			
≤ 250	148	38.7	Means: Oyo = 470 + 54 Lagos = 658 + 88 Ondo = 441 + 73 SW = 485 + 75
251 - 500	23	6.0	
501 - 750	17	4.5	
751 - 1000	142	37.2	
1001 - 1250	31	8.1	
1251+	21	5.5	
Length of service:			
< 10 years	211	55.5	Means: Oyo = 18.5+ 2.40 Lagos = 12.08+ 3.37 Ondo = 11.27 + 2.31 SW = 10.34 + 2.09
11 – 20 years	142	37.2	
21 – 30 years	27	7.1	
31 years +	2	40.5	
Average monthly income:			
≤ ₦40, 000	115	30.1	Means: Oyo = ₦67, 552±14, 218 Lagos = ₦76, 509±15,682 Ondo = ₦69, 117±21, 503 SW = ₦60, 274±23, 747
₦40, 001 – ₦80, 000	178	46.6	
₦80, 001 +	89	23.3	

Source: Field Survey, 2016.

Table 3. Perceived level of Knowledge of extension agents in issues in sustainable agricultural development

Issues in sustainable agricultural development	OYO ADP	LAGOS ADP	ONDO ADP	SOUTHWEST ADP
Participatory technology development	2.43	2.46	2.41	2.43
Integrated crop management	2.54	2.77	2.62	2.64
Agricultural waste management	2.62	2.78	2.68	2.69
Gender analysis	2.33	2.30	2.22	2.28
Livestock manure management	3.21	3.67	3.23	3.37
Integrated pest management	3.19	3.18	3.27	3.21
Low external input utilization	2.88	2.89	3.27	3.01
Water conservation	2.86	3.05	3.23	3.05
Participatory monitoring and evaluation	2.94	3.53	3.27	3.25
Soil erosion	3.15	3.27	2.51	2.45
Organic farming	2.42	2.43	3.22	3.26
Integrated weed management	2.91	3.42	3.14	3.16
Composting	3.16	3.14	3.22	3.17
Farmers organization establishment	2.95	3.30	3.17	3.14
No tillage	2.83	3.18	3.15	3.05
Participatory needs analysis	2.44	2.53	2.51	2.49
Agroforestry	3.03	2.93	3.16	3.04
Children involvement in programme planning & implementation	2.38	2.21	2.29	2.29

Source: Field Survey, 2016

The highest mean score was recorded in the *livestock manure management* ($x = 3.37$) followed by the mean score of the item *participatory monitoring and evaluation* ($x = 3.25$). The least mean score was recorded in the item *children involvement in programme planning and implementation* ($x = 2.29$). This reveals that in respect of sustainable agriculture development activities, AEAs in the region are deficient in their knowledge on

almost half of the items listed. Analysis of Variance (ANOVA) result in Table 4 reveals that a significant difference exists in the knowledge of the AEAs on sustainable agriculture development activities across the states.

Furthermore, Post Hoc test in Table 5 shows that there is no significant difference in the knowledge of AEAs on sustainable agricultural development activities

between Lagos and Ondo states but a significant difference exists between the knowledge AEAs in sustainable agricultural development activities in Oyo state and Lagos states.

Table 4. Result of Analysis of Variance Test

		Sum of Squares	Df	Mean Square	F	Sig.
SADAKtotal	Between Groups	2190.361	2	1095.180	3.041	.049
	Within Groups	136491.139	379	360.135		
	Total	138681.500	381			
SADAStotal	Between Groups	6555.317	2	3277.659	6.608	.002
	Within Groups	187977.680	379	495.983		
	Total	194532.997	381			

SADAKtotal = sustainable agricultural development activities knowledge total score

SADAStotal = sustainable agricultural development activities skill total score

Significant at 0.05 level

Source: Field Survey, 2016

Table 5. Result of Post Hoc Test

Dependent Variable	(I) State ADP	(J) State ADP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
SADAKtotal	LSD	OYO ADP	LAGOS ADP	-5.76954*	2.34197	.014	-10.3744	-1.1647
			ONDO ADP	-2.85287	2.35834	.227	-7.4899	1.7842
		LAGOS ADP	OYO ADP	5.76954*	2.34197	.014	1.1647	10.3744
			ONDO ADP	2.91667	2.46560	.238	-1.9313	7.7646
	ONDO ADP	OYO ADP	LAGOS ADP	2.85287	2.35834	.227	-1.7842	7.4899
			LAGOS ADP	-2.91667	2.46560	.238	-7.7646	1.9313
SADASTotal	LSD	OYO ADP	LAGOS ADP	4.06580	2.74841	.140	-1.3382	9.4699
			ONDO ADP	-6.36817*	2.76763	.022	-11.8100	-9.263
		LAGOS ADP	OYO ADP	-4.06580	2.74841	.140	-9.4699	1.3382
			ONDO ADP	-10.43397*	2.89350	.000	-16.1233	-4.7446
	ONDO ADP	OYO ADP	LAGOS ADP	6.36817*	2.76763	.022	.9263	11.8100
			LAGOS ADP	10.43397*	2.89350	.000	4.7446	16.1233

SADAKtotal = sustainable agricultural development activities knowledge total score

SADAStotal = sustainable agricultural development activities skill total score

Significant at 0.05 level

Source: Field Survey, 2016.

Perceived level of competence (skill) on sustainable agricultural development activities

Similar to knowledge score, Table 6 shows that the AEAs' competence was also moderate. From the results in Table 6, all the mean scores were below 3.00 which x-rayed the position of extension agents in southwestern Nigeria in ensuring the desired sustainable agriculture development. The highest mean score was recorded in *farmers' organization establishment* ($x = 2.98$) and lowest in *children involvement in agricultural programme planning and implementation* ($x = 2.39$). Generally, the findings of the study

revealed that extension agents in southwestern Nigeria displayed inadequate skills in all the items listed in the study. This is an indication to what the extension agents in southwestern Nigeria are capable of doing in ensuring sustainable agriculture development. Result in Table 4 shows a significant difference in the skill level of the AEAs in sustainable agricultural development activities across the three states. Furthermore, the result of Post Hoc test in Table 5 reveals that no significant difference exists between the skill level of AEAs in sustainable agricultural development activities in Oyo and Lagos states but a significant difference exists between the skill

level of AEAs in sustainable agricultural development in Ondo and the other two states.

Table 6. Perceived level of Competence of extension agents in issues in sustainable agricultural development

Issues in sustainable agricultural development	OYO ADP	LAGOS ADP	ONDO ADP	SOUTHWEST ADP
Participatory technology development	2.53	2.45	2.64	2.54
Integrated crop management	2.93	2.50	3.11	2.85
Agricultural waste management	2.77	2.53	2.81	2.70
Gender analysis	2.54	2.29	2.75	2.53
Livestock manure management	2.76	2.65	2.83	2.75
Integrated pest management	2.98	2.53	3.23	2.91
Low external input utilization	2.63	2.59	3.14	2.91
Water conservation	2.88	2.33	3.11	2.77
Participatory monitoring and evaluation	2.88	2.83	3.19	2.97
Soil erosion	2.77	2.63	3.14	2.85
Organic farming	2.74	2.82	2.98	2.85
Integrated weed management	2.94	2.74	3.16	2.95
Composting	2.87	2.83	3.21	2.97
Farmers organization establishment	2.97	2.79	3.17	2.98
No tillage	2.84	2.69	3.16	2.90
Participatory needs analysis	2.43	2.37	2.53	2.44
Agroforestry	2.95	2.48	3.20	2.88
Children involvement in programme planning & implementation	2.42	2.23	2.53	2.39

Source: Field Survey, 2016.

Mean weighted discrepancy scores (MWDS) of competencies in sustainable agriculture development

Results in Table 7 shows the Mean Weighted Discrepancy Score (MWDS) for the items listed on sustainable agriculture development activities which are the areas of training needs of the AEAs. Eight of the items had MWDS higher than 1. The items were *participatory needs analysis* (1.47), *gender analysis* (1.43), *livestock manure management* (1.39), *children involvement in planning and implementation of agricultural programme* (1.38) *agricultural waste management* (1.25), *participatory technology development* (1.12), and *integrated crop management* (1.11) and *soil erosion* (1.08). Many of these identified training needs were outside the curricula of both undergraduate and postgraduate programmes in many of the universities in Nigeria and as such agents were not exposed to knowledge and expertise in these areas during their pre-service training. The main thrust of sustainable agriculture development in line with the general thrust of sustainable development is producing abundant food without depleting the earth's resources or polluting the environment. Therefore, training AEAs on sustainable agriculture development activities like agricultural waste management and soil erosion management will help them play good part in ensuring the health of the

rural environment in line with the focus of sustainable development. Furthermore, if agricultural production is to be sustainable, then local people must be involved in all the stages of planning, implementation, and evaluation of agricultural programme.

Table 7. Mean weighted discrepancy score of issues in sustainable agricultural development

Issues in sustainable agricultural development	MWDS
Participatory technology development	1.12
Integrated crop management	1.11
Agricultural waste management	1.25
Gender analysis	1.43
Livestock manure management	1.39
Integrated pests management	0.88
Low external input utilization	0.44
Water conservation	0.55
Participatory monitoring and evaluation	0.69
Soil erosion	1.08
Organic farming	0.82
Integrated weed management	0.65
Composting	0.64
Farmers organization establishment	0.48
No tillage	0.47
Participatory needs analysis	1.47
Agroforestry	0.56
Children involvement in programme planning and implementation	1.38

Source: Field Survey, 2016

This is ethical and will definitely empower the rural people. Children especially must be included in any way possible to paint a picture in their minds that will encourage them to be involved in growing crops and raising animals for food and raw materials production. Also,

gender issues must be tackled to provide level ground for both male and female to achieve their full potentials as regard farming especially in the rural areas. Therefore, training AEAs on managing these competencies is germane to the success of their work and by extension to sustainable agricultural development in general.

CONCLUSIONS

The findings of the study establish that many AEAs in southwest Nigeria lacked knowledge and competence in many sustainable agricultural development activities which were not part of their pre-service training. Furthermore, the findings of the study reveal that a significant difference exist between the knowledge of AEAs on sustainable agricultural development between Oyo and Lagos states and a significant difference exist between the skill of AEAs on sustainable agricultural development activities between Ondo and the other two states. Therefore, the following recommendations were made. There is need for constant training needs assessment of AEAs after recruitment to bring them up to date with current developmental issues across the globe. Regular on – the – job training should be carried out for the AEAs to keep them informed and updated on recent developmental and environmental issues like sustainable agricultural development activities. Anytime capacity development programme is being planned for AEAs in southwest Nigeria, the peculiarity of each state should be considered in programme design and implementation.

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