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Analysis of Farm Management Extension Services Performed By Extension Agents of Agricultural Development Projects in Southwest Nigeria

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Abstract

The study analyzed farm management extension services (FMESs) performed by the extension agents of Agricultural Development Projects in South West Nigeria. Study representatives were sampled randomly from Oyo ADP, Osun ADP and Ekiti ADP, making a 50% representation of the South-West. A proportionate sample of 80% of the total of the extension agents in each of the 3 case studies was randomly selected; making a total sample of 164 respondents for the study. Data were analyzed using simple descriptive statistics such as frequency counts, percentages and mean. Findings revealed that majority (76.8%) of the respondents were males, had higher certificates than ND (92.7%) and supervised more than 199 farmers (61.6%). However, more than half of the respondents were still new in the extension work with working experience of between 1-10 years (55.5%). The results further showed that only few of the change agents performed farm management tasks related to finance and marketing. The major constraints facing the extension agents in performing FMESs in the study area were lack of incentives, farmers' illiteracy and inadequate training ranking 1st, 2nd and 3rd respectively. This study recommends that extension agents should be trained more in the core aspects of FMESs which include linkage to finance and marketing. Also, extension professionals should be well motivated with incentives to ensure that FMESs are adequately rendered to their clients for increased productivity.

Keywords: Analysis, Farm Management Extension Services, Extension agents, Agricultural Development Projects, South-West, Nigeria

1. Introduction

Nigerian agriculture has been characterized by small scale production (Dethier and Effenberger, 2012; FAO, 2017). This characteristic has led to low output due to the fact that the farmers cannot afford yield increasing technologies, hence a further consequence of low income (Ezeh et al., 2012; Ike and Uzokwe, 2015). Due to low output and income, the levels of investment in farms have been very low, leading to abject poverty among these farmers (Eze, 2010). In order to improve the living conditions of the rural poor, Nigerian governments, over the years, introduced and implemented several policies and programmes aimed at revamping the sector (Auta and Dafwang, 2010; Amao, Ayantoye, and Fadahunsi, 2013). Prominent among these programmes is Agricultural Development Project (ADP) previously funded via a tripartite arrangement of the World Bank, the Federal Government and the State Governments. The two cardinal objectives of ADPs were to increase farm productivity and welfare among smallholders through well-coordinated agricultural extension services (Jibowo, 2005; Omonijo et al, 2014). The government's adoption of the ADP underscores the fact that smallholder sector is seen as the focal point of agricultural development (World Bank, 2012; Ajewole et al, 2016).

Farm management is an agricultural profitability approach and it is promoted to assist farmers to identify and analyze problems encountered on the farm, and also seek solutions to these problems (Kahan, 2007; Agriculture Information Bank, 2015). In response to the many changes that are impacting on farming, extension services are recognizing the importance of farm management and marketing support to farmers. Farm management extension services provide business and marketing knowledge and skills to farmers to assist them in making their farms more profitable and competitive. Recently, there has been an upsurge of interest in farm management particularly among the smallholder farmers that are becoming market-oriented, and realize the need to increase profits and become more competitive (Druce, 2012). Thus, farm management has been identified as key profitability tool in any farm business, and it is capable of improving farmers' production and productivity (Kahan, 2007).

Farmers must acquire new skills, ideas, and techniques in order to get profit from their enterprises (Kahan, 2013). However, profit is not the only goal of farm management skill acquisition. Reducing associated production and marketing skills are also important (USDA, 2016). Skills to grow crops and raise animals are, although, very crucial. Successful farming enterprise operation cannot be achieved with little or no farm management skills. Farmers' farm management skills can obviously be enhanced through effective extension service delivery.

Over the years, researchers have only focused on general extension activities of the ADPs in the various sub-sectors of agriculture which include production of crops, livestock and fisheries with little attention paid to the entrepreneurship and marketing aspects of these agricultural activities – thereby leading to paucity of empirical and theoretical data on farm management extension in Nigeria (Saliu et. al., 2009; Odutola, 2012, Nwaobiala, 2017). Inadequate farm management skill has led to poor productivity and welfare among farmers since farm management actually determines the profitability of a farm enterprise (Rolls, 2001; Panzer, 2016). It is also interesting to note that Extension workers nowadays hardly train farmers on produce marketing. This is partly because they themselves were not properly trained in the theories and principles of farm management, which has both agricultural entrepreneurship and marketing as its core. It is against this backdrop that this study undertook a situational analysis of the ADP farm management extension services in order to know whether the objectives of increase in farmers' agricultural productivity and profitability have been met.

The main objective of the study was to assess farm management extension services in crop production performed by extension agents of ADPs in Southwest Nigeria and to also attract researchers' attention to the subject matter. Specifically the study aimed to: examine socio-economic characteristics of the extension agents; investigate the knowledge level of extension agents on farm management extension services; determine the farm management extension services performed by extension agents of ADPs in the study area; examine the extension agents' perception on benefits of farm management extension services delivered to their clientele; and identify the constraints limiting effective performance of farm management extension services by extension agents of ADPs in the study area.

2. Materials and methods

The study was conducted in the ADPs of 3 of the South-Western States of Nigeria and these include Oyo, Osun and Ekiti. *Oyo State* has a total land area of 27, 249km^2. It is bounded in the south by Ogun State, in the north by Kwara State, west partly bounded by Ogun State and partly by Republic of Benin, and bounded by Osun State in the east (Oyo State Diary, 2010). The area is highly urbanized with a population of 5,591,589 (NPC, 2006). The state consists of 33 Local Government Areas (LGAs) (28 Agrarian LGAs), and 4 zonal ADPs located at Saki, Ogbomosho, Oyo and Ibadan/Ibarapa, with headquarters at Saki. *Ekiti State* has an approximate population of 2,384,212 (NPC, 2006) with land mass of 10,898.68km^2. It consists of 16 LGAs, and 3 zonal ADPs at Aromoko, Ikere-Ekiti and Isan-Ekiti, with headquarters at Isan-Ekiti. *Osun State* has landed area of 9,251km^2 with population of 4,137,627 (NPC, 2006). It consists of 30 LGAs, and 3 zonal ADPs at Iwo, Osogbo and Ife/Ijesa with headquarters at Iwo. Ondo and Oyo State bound it in the East and West, respectively while Kwara and Ogun State are its boundaries in the North and South respectively.

Study representatives were sampled randomly from Oyo ADP, Osun ADP and Ekiti ADP, making a 50% representation of the South-West. As at the time this research was carried out, *Oyo ADP* comprises of 89 extension agents (Block Extension Agents (BEAs) = 28; Village Extension Agents (VEAs) = 61); *Osun ADP* comprises of 49 extension agents (BEAs = 31; VEAs = 30); and *Ekiti ADP* comprises of 55 extension agents (BEAs = 16; VEAs = 39). A proportionate sample of 80% of the total of the village extension agents (VEAs) and block extension agents (BEAs) in each of the 3 case studies were randomly selected; making a total sample of 164 respondents for the study. A structured questionnaire was used to collect relevant data for the

study. Data were analyzed using simple descriptive statistics such as frequency counts, percentages and mean. The independent variables were measured as follows: Age (yrs), Gender (male or female), Marital status (single=1, married=2, separated=3, divorced=4, widowed=5), Educational level (ND=1, HND=2, B.SC=3, M.SC=4), and Working experience (yrs). The means for the level of awareness on farm management extension services were derived from 5-point Likert type scale of Very High=5; High=4; None=3; Low=2; and Very Low=1. Mean score of 3.00 and above indicated high awareness while mean score lower than 3.00 indicated low utilization. The means for the perception on the benefits of farm management extension services were derived from 5-point Likert type scale of Strongly Agreed=5; Agreed=4; Undecided=3; Disagreed=2; and Strongly Disagreed=1. Mean score of 3.00 and above indicated high awareness while mean score lower than 3.00 indicated low awareness.

3. Results and discussion

3.1 Socio-economic characteristics of respondents

A summary of the personal characteristics of the respondents is represented in Table 1. Majority (76.8%) are male while the remaining 23.2% are female. This result agrees with Adesoji and Aratunde (2012) who posited that most of the extension agents in Oyo State ADP are male. Most (47.0%) of the respondents are in the age bracket of 35-44 years, followed by 45-54 years (40.9%), while only 4.9% are above 54 years. This implies that majority (87.9%) are in the age bracket of 35-54 years. This also means that most of the respondents are adult but still in their active age. Majority (97.0%) of the respondents are married. It shows that they have the necessary experience to relate well with farming households, especially when handling delicate issues such as settling of family disputes. 45.7% and 37.8% of the respondents are HND and B.SC holders respectively. 9.1% are M.SC holders while the remaining 7.3% are ND holders. These results indicate that extension agents in the study areas are well trained in their field, and this is likely to enhance their extension services delivery to their clientele (farmers). This finding corroborates Adisa and Balogun (2012) who also found that most of the agricultural extension agents in Ekiti State ADP had higher certificates than ND. More than half (55.9%) of the respondents had working experience as extension agents for between 1 and 10 years. This shows that majority of the extension agents are still new in their profession. Frequent training and re-training programmes are needed to be put in place by an organization to strengthen this commitment. Majority (97.0%) of the respondents indicates that they have been attending trainings in their career. However, 65.9% indicate having training fortnightly while others are unresponsive. This also means that trainings may be provided for the respondents aside their fortnightly meetings to improve their professional status. Majority (61.6%) of the respondents supervise more than 199 farmers. This seems to be on a high side as the more the contact farmers, the more tedious the work becomes and this might encourage drudgery among these facilitators. Less than half (49.4%) of the respondents visit their clients fortnightly as recommended by the extension experts. This can lead to some hitches in production and productivity among their clients (farmers) as frequency of contact is important in the adoption and continued use of new ideas. However, Adesoji and Aratunde (2012) reported a high frequency of contact between farmers and extension agents in Oyo State ADP. Majority (66.5%) of the respondents belong to a professional organization. This means that the respondents stand in a better position to upgrade their knowledge through interaction with other professionals.

3.2 Respondents' level of awareness on farm management extension services

A summary of the extension agents' level of awareness on farm management extension services is represented in Table 2. The results show that the extension agents are well knowledgeable in all the tasks under three out of the four categories of farm management extension services examined; and these are land preparation, production and post harvest handling. However, out of the seven tasks examined under marketing, the extension agents had low level of awareness in two tasks which are price fixing (Mean=2.85) and branding (Mean =2.96). These findings indicate that extension agents in the study area need adequate training in marketing strategies which to a great extent defines the profitability of any business venture.

According to Duraisumy (2007), major emphasis is laid on increasing productivity through advocating for production-led extension in the past as it is seen that many farmers have received most of the production technologies from the extension system. However, the extension system needs to be oriented with the knowledge and skills related to the market. This revamping of the extension system will certainty play a catalytic role for ushering in farmer-led and market–led extension which can alleviate poverty (Moni, 2004).

Table 1. Percentage distribution of the socio-economic characteristics of respondents (n=164)

Variables	Frequency	Percentage (%)
Gender		
Male	126	76.8
Female	38	23.2
Age		
25-34	12	7.3
35-44	77	47.0
45-54	67	40.9
>54	8	4.9
Marital Status		
Single	5	3.0
Married	159	97.0
Education		
ND	12	7.3
HND	75	45.7
B.SC	62	37.8
M.SC	15	9.1
Working Experience		
1-10	91	55.5
11-20	34	20.1
21-30	39	23.8
Training		
Yes	159	97.0
No	5	3.0
Frequency of Training		
Fortnightly	108	65.9
Farmers' Supervised		
<50	6	3.7
50-99	17	10.4
100-149	25	15.2
150-199	15	9.1
>199	101	61.6
Frequency of Visit		
Daily	20	12.2
Weekly	62	37.8
Fortnightly	81	49.4
Monthly	1	0.6
Membership in Union		
Yes	109	66.5
No	55	33.5

Source: Field Survey, 2016

3.3 Types of farm management extension services performed by respondents

The extension agents were required to indicate the farm management extension services they deliver to their clients (farmers) in the study area. The results are represented in Table 3. Out of the five tasks examined under land preparation, majority of the respondents performed four which are site selection (57.3%), land measurement (51.8%), use of mechanization (82.9%) and site spraying before tilling (51.8%). However, only few (37.8%) teach their clients about zero burning. This might be as a result of the adequate supply of fertilizer in the study areas as an alternative to replenishing depleted nutrients in the soil.

Under production tasks, most of the respondents performed seven out of the nine tasks examined. The least performed tasks were labour usage (43.9%) and nursery raising (45.1%). These two areas are very important as effective labour use reduces production cost while adequate nursery raising ensures good plant population and optimum plant growth.

Post harvest handling of crops is very important in determining both the quantity and quality of the final product. The respondents teach their clients all three activities examined which include processing methods (72.0%), seed dressing before bagging (53.7%) and storage methods (61.0%).

Under marketing strategies, most of the respondents only performed two out of the seven tasks examined. These are linkage to market outlet (53.7%) and forming farmers' group for group marketing (67.1%). The least performed tasks were branding (14.6%), price fixing (17.7%) and appropriate farm enterprise (34.1%). Branding and price fixing are two major strategies in marketing a produce profitably. Understanding appropriate ways of improving the farm profit is also important in keeping the farm business going. Thus, agricultural extension agents in the study area still have enormous tasks in helping business-oriented farmers get high profit from their farm business.

The results in Table III also depict that only half (50.0%) of the respondents link farmers to bank loans while the remaining tasks such as forming thrifts and cooperatives, linkage to support from NGOs and seeking government support and intervention are least performed with percentages of 39.6%, 34.1% and 47.0% respectively. These results clearly show that the agricultural extension targets (farmers) in the study areas are not adequately enlightened on ways to access finance for their farm work which may lead to low capital and hence low production scale.

3.4 Respondents' perception on benefits of farm management extension services

The perceived benefit of a task is an important requisite to perform such task. The results from this study indicate strong benefit perception in all the variables examined under categories land preparation, production, post harvest handling and marketing (Table 4). However, through close observation, the respondents' benefit perception on the tasks under marketing have the least means of 3.09, 3.06, 3.25 and 3.15 for branding, assured

market, pricing and group marketing respectively. This might be one of the respondents' reasons for not being fully participatory in the performance of marketing related tasks in the study area. However, the fact that majority of the respondents acknowledged the various potential benefits accruing to the farm management extension services rendered in crop production, will invariably impact positively on their clients' use of such services.

3.5 Constraints to farm management extension services delivery by respondents

The study revealed some of the constraints to effective delivery of farm management extension services in the study area as reported by the respondents (Table 5). The results show that the important constraints were: lack of incentives (91.5%), farmers' illiteracy (79.9%), inadequate training (72.6%), inadequate mobility (68.3%), high extension-farmer ratio (65.9%) and lack of credit facilities (61.0%). However, the most prevalent constraints by ranking were lack of incentives, farmers' illiteracy and lack of adequate training ranking first, second and third respectively. This finding corroborates Auta and Dafwang (2010) who posited that lack of incentives/motivation for extension agents was a major constraint in effective extension services delivery by the State ADPs in Nigeria.

Table2 . Percentage distribution of respondents' level of awareness on farm management extension services

Variable	VH	H	N	L	VL	mean	SD
Land Preparation							
Site selection	55(33.5)	96(58.5)	2(1.2)	9(5.5)	2(1.2)	4.18	0.806
Land measurement	42(25.6)	56(34.1)	14(8.5)	45(27.4)	7(4.3)	3.49	1.256
Zero burning	48(29.3)	69(42.1)	13(7.9)	32(19.5)	2(1.2)	3.79	1.106
Use of mechanization	77(47.0)	68(41.5)	7(4.3)	9(5.5)	3(1.8)	4.26	0.913
Site spraying before tilling	44(26.8)	44(26.8)	23(14.0)	38(23.2)	15(9.1)	3.39	1.341
Production							
Use of improved varieties	116(70.7)	42(25.6)	2(1.2)	4(2.4)	0(0)	4.65	0.634
Seed dressing	60(36.6)	76(46.3)	4(2.4)	21(12.8)	3(1.8)	4.03	1.036
Timely planting	86(52.4)	71(43.3)	1(0.6)	5(3.0)	1(0.6)	4.44	0.720
Labour usage	35(21.3)	89(54.3)	12(7.3)	25(15.2)	3(1.8)	3.78	1.009
Optimum plant population	90(54.9)	58(35.4)	6(3.7)	10(6.1)	0(0)	4.39	0.825
Nursery raising	37(22.6)	74(45.1)	13(7.9)	33(20.1)	7(4.3)	3.62	1.164
Fertilizer application	91(55.5)	55(33.5)	5(3.0)	11(6.7)	2(1.2)	4.35	0.918
Pest and disease control	88(53.7)	63(38.4)	2(1.2)	11(6.7)	0(0)	4.39	0.818
Timely harvesting	80(48.8)	69(42.1)	5(3.0)	9(5.5)	1(0.6)	4.33	0.830
Post harvest handling							
Processing methods	40(24.4)	97(59.1)	6(3.7)	21(12.8)	0(0)	3.95	0.892
Seed dressing before bagging	34(20.7)	87(53.0)	12(7.3)	29(17.7)	2(1.2)	3.74	1.019
Storage methods	33(20.1)	107(65.2)	3(1.8)	19(1.6)	2(1.2)	3.91	0.889
Marketing							
Packaging	27(16.5)	65(39.6)	20(12.2)	12(7.3)		3.34	1.220
Branding	19(11.6)	51(31.1)	35(21.3)	20(12.2)	39(23.8)	2.96	1.187
Linkage to market outlet	23(14.0)	77(47.0)	36(22.0)	20(12.2)	8(4.9)	3.43	1.125
Linkage to assured market	16(9.8)	71(43.3)	51(31.1)	18(11.0)	8(4.9)	3.22	1.135
Price fixing/negotiation	12(7.3)	48(29.3)	36(22.0)	17(10.4)	51(31.1)	2.85	1.105
Forming farmers' groups for group marketing	35(21.3)	84(51.2)	33(20.1)	9(5.5)	3(1.8)	3.70	1.075
Appropriate farm enterprise	31(18.9)	14(8.5)	78(47.6)	5(3.0)	36(22.0)	3.57	1.119

Likert scale: 5-very high (VH), 4-high (H), 3-none (N), 2-low (L) and 1-very low (VL)
Mean score ≥ 3.0 indicated high level; mean score < 3.0 indicated low level
Source: Field Survey, 2016

Table 3. Percentage distribution of respondents on farm management extension services performed

Variable	Yes	No
Land Preparation		
Site selection	94 (57.3)	70 (42.7)
Land measurement	85 (51.8)	79 (48.2)
Zero burning	62 (37.8)	102 (62.2)
Use of mechanization	136 (82.9)	28 (17.1)
Site spraying (with herbicides) before tilling	85 (51.8)	79 (48.2)
Production		
Use of improved varieties	146 (89.0)	18 (11.0)
Seed dressing	101 (61.6)	63 (38.4)
Timely planting	122 (74.4)	42 (25.6)
Labour usage	72 (43.9)	92 (56.1)
Optimum plant population	136 (82.9)	28 (17.1)
Nursery raising	74 (45.1)	90 (54.9)
Fertilizer application	134 (81.7)	30 (18.3)
Pest and disease control	129 (78.7)	35 (21.3)
Timely harvesting	130 (79.3)	34 (20.7)
Post harvest handling		
Processing methods	118 (72.0)	46 (28.0)
Seed dressing before bagging	88 (53.7)	76 (46.3)
Storage methods	100 (61.0)	64 (39.0)
Marketing		
Packaging	70 (42.7)	94 (57.3)
Branding	24 (14.6)	140 (85.4)
Linkage to market outlet	94 (57.3)	70 (42.7)
Linkage to assured market	63 (38.4)	101 (61.6)
Price fixing/negotiation	29 (17.7)	135 (82.3)
Forming farmers' groups for Group marketing	110 (67.1)	54 (32.9)
Appropriate farm enterprise	56 (34.1)	108 (65.9)
Access to finance		
Forming thrifts and cooperatives	65 (39.6)	98 (59.8)
Linkage to bank loans	82 (50.0)	81 (49.4)
Linkage to support from NGOs	56 (34.1)	108 (65.9)
Government support and Intervention	77 (47.0)	87 (53.0)

Source: Field Survey, 2016

Table 4. Percentage distribution of the respondents' perception on the benefits of farm management extension services

Variable	SA	A	D	STD	M	SD
Land Preparation						
Preservation of soil structure	82(50.0)	80(48,8)	2(1.2)	0(0)	3.49	0.525
Maintenance of soil fertility	79(48.2)	83(50.6)	2(1.2)	0(0)	3.47	0.525
Retention of soil aeration	66(40.2)	82(50.0)	14(8.5)	2(1.2)	3.29	0.674
Retention of soil water	65(39.6)	87(53.0)	11(6.7)	1(0.6)	3.32	0.624
Timeliness of operation	67(40.9)	88(53.7)	9(5.5)	0(0)	3.35	0.583
Erosion and water logging control	60(36.6)	97(59.1)	5(3.0)	2(1.2)	3.31	0.592
Production						
Double cropping due to early maturity of improved variety	55(33.5)	104(63.4)	4(2.4)	1(0.6)	3.30	0.545
Increased yield due to Planting of improved variety	92(56.1)	72(43.9)	0(0)	0(0)	3.56	0.498

Table 4. Percentage distribution of the respondents' perception on the benefits of farm management extension services

Variable	SA	A	D	STD	M	SD
Improved variety planted meet consumers' needs	72(43.9)	88(53.7)	4(2.4)	0(0)	3.41	0.542
Viable seed due to seed dressing	50(30.5)	103(62.8)	11(6.7)	0(0)	3.24	0.563
Early maturity due to timely planting	49(29.9)	93(56.7)	19(11.6)	3(1.8)	3.15	0.685
Healthy plant growth due to optimum plant population	50(30.5)	96(58.5)	15(9.1)	3(1.8)	3.18	0.664
Improved soil fertility due to adequate fertilizer application	58(35.4)	100(61.0)	4(2.4)	2(1.2)	3.30	0.580
Healthy plant growth due to pest and disease control	71(43.3)	88(53.7)	5(3.0)	0(0)	3.40	0.551
Reduction in loss at harvest due to timely harvesting	68(41.5)	90(54.9)	5(3.0)	1(0.6)	3.37	0.577
Post harvest handling						
Extension of storage products	45(27.4)	111(67.7)	7(4.3)	1(0.6)	3.22	0.543
Healthy plant products while in storage due to pest treatment	42(25.6)	112(68.3)	9(5.5)	1(0.6)	3.19	0.549
Increased food supply during out-season period	40(24.4)	106(64.6)	14(8.5)	4(2.4)	3.11	0.646
Reduction in crop wastage	41(25.0)	120(73.2)	3(1.8)	0(0)	3.23	0.465
Marketing						
Sellable products due to branding and packaging	33(20.1)	116(70.7)	12(7.3)	3(1.8)	3.09	0.584
Reduction in spoilage due to linkage to assured market	35(21.3)	107(65.2)	19(11.6)	3(1.8)	3.06	0.633
Higher profitability due to correct pricing	59(36.0)	89(54.3)	14(8.5)	2(1.2)	3.15	0.659
Group marketing counters imbalances of commercial interests	41(25.0)	108(65.9)	14(8.5)	1(0.6)	3.15	0.582

Likert scale: 4-strongly agree (SA), 3-agree (A), 2-disagreed (D) and 1-strongly disagreed (STD)
Mean score ≥ 2.5 indicated strong perception; mean score < 2.5 indicated weak perception, Source: Field Survey, 20

Table 5. Percentage distribution of extension agents' constraints to farm management extension services delivery

Variable	Frequency*	Percentage*	Ranking
Inadequate training	119	72.6	3rd
Lack of incentives	150	91.5	1st
Inadequate infrastructures	85	51.8	11th
Farmers' unwillingness	92	56.1	8th
High cost of inputs	86	52.4	10th
Lack of machineries/implements	82	50.0	12th
Lack of chemicals (herbicides and insecticides)	42	25.6	16th
Problem of weather forecast	89	54.3	9th
Inadequate marketing system	103	62.8	6th
Influence of the community culture/tradition	74	45.1	13th
Lack of improved varieties	59	36.0	14th
Lack of credit facilities for farmers	100	61.0	7th
High extension-farmer ratio	108	65.9	5th
Inadequate mobility	112	68.3	4th
Language barrier	59	36.0	14th
Lack of specialization	34	20.7	17th
Farmers' illiteracy	131	79.9	2nd

*Multiple Responses, Source: Field Survey, 2016

4.Conclusion and recommendations

The study analyzed farm management extension services (FMESs) performed by the extension agents of the ADPs in South West Nigeria. The analysis showed that men were more involved in FMESs delivery than women in the study area. This finding is in line with the results of some case studies in African agricultural extension system which shows that there is an increasing male dominance in the agricultural extension services delivery (Adisa and Balogun, 2012). The results of this study also show that most of the respondents were relatively new in agricultural extension profession. The study respondents were not fully involved in the core aspects of FMESs which include linkage to finance and marketing. This can affect the farmers' productivity and profitability. However, the major constraints faced by the respondents in the effective delivery of FMESs in the study area are lack of incentives, farmers' illiteracy and inadequate training.

In view of the above, the following recommendations are made for policy implication:

i. This study suggests the employment of more female agricultural extension agents so that the women farmers' agricultural needs can be adequately taken care of. This is necessary at a time that more women are now being involved in agricultural activities in the country.

ii. Agricultural extension agents should be trained and re-trained in the delivery of FMESs, especially in the core aspects, which include agricultural finance and marketing. This will help to enhance the farmers' productivity and profitability.

iii. The extension institutions (government and private) should try to motivate the extension agents in terms of incentives and other forms of remuneration in order to discharge their FMESs as required.

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