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Effectiveness of agricultural extension workers on women participation in agricultural practices in the North East zone of Nigeria

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Abstract
This study determined the perception of women farmers on effectiveness of agricultural extension workers on women participations in agricultural practices. Multistage sampling techniques was used to obtained a sample size of 726 respondents which were randomly chosen from the population of 5363 women farmers. Structured questionnaire was used to collect data from the respondents Data collected were analysed using mean, and correlation. Findings indicated that women farmers participate in crop production practices (x=2.50), livestock production practices (x=2.53) and poultry production practices (x=2.77). Meanwhile they do not participate in horticultural production practices (x=2.45) and fish/aquaculture production practices (x=2.17). The findings also indicated that, AEWs were effective in conducting research (x=2.95), farm visit (x=2.97) and meeting (x=2.91) for women farmers. However, they are ineffective in conducting farm lectures (x=2.24) for women farmers in North eastern Nigeria. The study recommended the need of training for AEWs to enhance their effectiveness in organizing and conducting farm lectures for women farmers. AEWs should also ensure transmission of relevant information and knowledge of horticultural and fish production practices among women farmers for increase participation and profit generation.

Keywords: agricultural, women participation, Effectiveness

Introduction

Agricultural extension is a process of disseminating agricultural information, ideas, knowledge and skills among individuals that mainly constitutes the rural farming households. Thus, extension includes the transfer of technical information and innovation from its source (research institute) to the farmers through the effort of agricultural extension workers. Agricultural extension workers serve as a link between the farmers and the research institutes in the diffusion of innovation, they help in the dissemination of useful information about advanced technologies that aid rural farmers in enhancing their source of livelihood. Agricultural extension workers as influential factors enhance and promote the adoption of improved technologies and innovation. However, their effectiveness depends largely on their competence in the transfer and decoding of information from extension organization or institutes to the clienteles (Agbarevo & Benjamin 2013; Aldosari, Al Shunaifi, Ullah, Muddassir, & Noor 2019) [3].
The effectiveness of agricultural extension workers may be determined by the level of adoption and awareness of extension services created within the farmers, number of extension visits paid by the village extension worker, percentage of scheduled meetings held between farmers and extension workers, number of field meetings held, regularity of meetings held by village extension worker, number of field days organized by village extension worker monthly or quarterly, etc., number of demonstrations organized by the village extension worker within specified time frame (monthly, quarterly, annually), number of supervisory visits, number and regularity of research-extension linkage workshops and farmer training sessions/farmers trained (Agbarevo & Benjamin, 2013; Kundhlande, Franzel, Simpson, & Gausi, 2014) [3, 19]. Similarly, agricultural extension workers effectiveness in carrying out their activities can be used to assess success of extension programme.

This is due to the fact that, if appropriate agricultural teaching and learning environment is created or provided, it results in relatively permanent and positive change in the farmer's farming behavior (Agbarevo & Benjamin, 2013; Buehren, Goldstein, Molina, & Vaillant, 2019) [3].

Women have been making prominent and important contributions to agriculture they actually constitute the bulk of the world's food producers (Fresco, 2008; Aldosari, Al Shunaifi, Ullah, Muddassir, & Noor, 2019) [14]. Rural women participation in agricultural production at the household level is higher and they spend more time than men in agricultural related activities, their work has not been acknowledged and documented both at the national and international levels Food and Agricultural Organization (FAO 2011; Buehren, Goldstein, Molina, & Vaillant, 2019). Rural women farmers play a significant role in food production and food security (Fabiyi, Danladi, Akande & Mahmood 2007; Khan, & Akram, 2012)) [15, 18]. They account for 70% of agricultural workers, 80% of food producers, and 100% of those who process basic food stuffs and they undertake from 60% to 90% of the marketing (Dagmar, 2013) [10].

The contribution of women in agricultural production ranges from such responsibilities as land clearing, land tilling, weeding, fertilizer application to harvesting, food processing, threshing, winnowing, milling, transportation, and marketing along with the management of livestock (Damisa, Samndi & Yohanna, 2007) [9]. In spite of the dominant and significant role played by women in agricultural production in Nigeria, they are hardly given any attention in the area of training and visit by extension agents with improved technologies (Damisa, Samndi & Yohanna, 2007; Abbas, Khan, Shahbaz, & Siddiqui, 2021) [9]. It is against this premise that the study will determine the effectiveness of agricultural extension workers on participation of women in agricultural practices in North east zone of Nigeria

Statement of the problems

Rural women farmers are constrained with lack of access to agricultural information/extension services as most of the extension activities always target male household heads. This could be attributed to the problem of gender issues among people and policy makers. Damisa, Samndi &Yohanna, 2007 [9] asserted that policy makers who are mostly men assumed that women play a second fiddle in economic and resource importance. He further buttressed that, the negative perception ascends as a result of the ignorance of the policy makers to the huge contribution of women to the food production in the country particularly and the economy as a whole (Damisa 2007).

The agricultural extension services have been largely designed, crafted and implemented with the male household head as the intended clientele, and failed to recognize that women are active, productive engaged economic agents with their own financial needs and constraints (Alex & Zijp, 2002). Although millions of women throughout the world contribute to national agricultural output and family food security, detailed studies from Latin America, South Asia, and Sub-Saharan Africa consistently indicate that rural women are more liable constraints in accessing agricultural extension services than men of equivalent socio-economic conditions (Birner, Davis, Pender, Nkonya, Ponniah Ekboir, Mbabu, Spielman, Horna, Benin, & Cohen, 2009). Thus, Women tend to have less contact with extension services than men and generally use lower levels of technology because of problems of access, cultural and religious restrictions. (Olive & Charles 2016).

Such bias in the provision of assets and services in favor of men has institutional and cultural underpinnings. Much has been written about the past failures of government extension services to reach women farmers and the cultural bias which has, in many countries, prevented women from active participation in group training, extension meetings and, most importantly, access to inputs such as fertilizer and credit (Haile, 2016).

In spite of the undisputable evidences of women's positive roles in the agricultural sector and growing awareness of the need to reach out to women farmers, agricultural extension services are generally geared toward male farmers (Godad, 2010). Unfairness toward male farmers is evident in the delivery of extension services which is generally provided by male extension agents to men on the postulation that extension message will ''trickle across'' to women. Regrettably, the evidences clearly show that it often does not (Tbom, 2011).

Arising from the above, it's established that extension workers do not extensively deals with women farmers. The reason for this may be as result of their ineffectiveness in conducting their services. It's therefore based on this the researcher is interested in investigating the effectiveness of agricultural extension workers on participation of women in agricultural practices in North east zone of Nigeria.

Objectives of the study

The broad objective of the study is to determine the effectiveness of Agricultural extension workers on participation of women in Agricultural practices in North east zone of Nigeria. The specific objectives are to:

1. Determine the level of women participation in Agricultural practices.
2. Determine the effectiveness of Agricultural extension workers in conducting research for women farmers.
3. Determine the effectiveness of Agricultural extension workers in farm visit for women farmers.
4. Determine the effectiveness of Agricultural extension workers on the farm lectures for women farmers.
5. Determine the effectiveness of Agricultural extension workers on the meeting conducted with women farmers.

Research Questions

1. What is the level of women participation in Agricultural practices in North east zone of Nigeria?
2. How effective Agricultural extension workers are in conducting research for women farmers?
3. How effective Agricultural extension workers are in farm visit for women farmer?
4. How effective Agricultural extension workers are on the farm lecture for women farmers?
5. How effective Agricultural extension workers are on the meeting conducted with women farmers?

Research Hypothesis

Ho_1: There is significance relationship between the effectiveness of Agricultural extension workers in conducting research and level of women participation in Agricultural practices.

Ho_2: There is significance relationship between effectiveness of Agricultural extension workers in farm visit and level of women participation in Agricultural practice.

Ho_3: There is significance relationship between effectiveness of Agricultural extension workers on farm lecture and level of women participation in Agricultural practice.
Ho_4: There is significance relationship between effectiveness of Agricultural extension workers on meeting conducted and level of women participation in Agricultural practice.

Significance of the study
The result of this study would be of importance to Agricultural extension workers by providing them with information on women participation in agricultural practices, it will also enable them identify potential predictors related to the women farmers that may result in higher productivity in Agriculture.
The study would provide information to women farmers on their level of participations and proper ways in dealing with extension workers in a manner that will improve their reasoning and thinking ability without having negative effect on their farming activities. Universities will also benefit from the study by providing empirical evidence that could serve as a guide to administrators in Universities especially in determining the availability and adequacy of extension workers to be provided to Agricultural extension students.
Policy makers would also benefit from the study which is expected to serve as feedback to various agencies and policy making bodies like Federal ministry of Agriculture in their effort to help in improving Agricultural productivity

Methodology
The design of this study was perception base evaluation of a project, it uses questionnaire to survey the effectiveness of extension workers from the perspectives of women farmers. The study deals with gatherings information about a larger number of people or object by studying a representative sample of the entire group (Yalams & Ndomi, 2000) [22]. The area of research study is north eastern Nigeria, consisting of Adamawa, Bauchi, Borno, Gombe and Yobe state of Nigeria. The target population of the study comprised of registered women farmers in Gombe, Bauchi and Adamawa state with an estimate population of 5363 women farmers. Out of this population a sample size of 726 respondents was used for the study, the sample was obtained through multistage sampling and proportionate sampling. The procedure adopted for multistage sampling was based on 4 stages. Stage 1 require random selection of 3 out of 6 state in the north east zone of Nigeria namely Gombe, Bauchi and Adamawa. Stage 2 deal with random selection of 4 local government areas (LGAs) from each of the state of Gombe, Bauchi and Adamawa. Stage 3 deal with random selection of 2 communities from each of the selected LGAs, while stage 4 deal with proportionate selection women farmers based on the population size of each community, making the population size of 726 women farmers. The sample size was determined based on the scientific formula (Yaro Yamane) for determining finite population (Uzuaghulu, 2011)
The instrument used for collecting data was structured questionnaire titled Questionnaire for Effectiveness of Extension Workers on Women Participation (QEEWOP)). The instrument consists of parts A, B, C, D & E and organized in respect of the research question 1,2,3,4 & 5. The questionnaire items for part A of the instrument which deal with participations of women farmers was adopted and modified from the work of (Abdulmumini, Man, Kamarulzaman & Mohd Haris, 2021) [2], it allowed the respondent to tick based on the level of women participation in Agricultural practices as follows:

Highly participated	(HP) = 4 point
Participated	(P) = 3 point
Moderately participated	(MP) = 2 point
Not participated	(NP) = 1 point

Part B, C, D & E of the instrument was developed by the researcher, it deals with research question 2, 3, 4 & 5 which allowed the respondent to tick based on the level of effectiveness of AEW as follows:

Highly Effective	(HE) = 4 point
Effective	(E) = 3 point
Moderately effective	(ME) = 2 point
Not effective	(NE) =1 point

The Instrument was subjected to content and face validity by three experts from the Department of Vocational Education Modibbo Adama University of Technology (MAUTECH) Yola and Abubakar \Tafawa Balewa University (ATBU) Bauchi; they are requested to check for clarity, relevancy, and adequacy in relation to specific objectives and make necessary recommendation for correction on the items. Based on the observation of the experts the instrument was modified and a valid copy was produced for the study.
The reliability of the instrument was established by trial testing using twenty Agricultural extension workers in Kaduna State. Split halves method of determining reliability was employed, the group was divided in to odd number and even number group and the scores obtained from each group was correlated using Spearman Rank Order Correlation Coefficient and obtained the reliability coefficient of the halve test (which is the r - value), the reliability of the whole test was then computed using Spearman Brown Step up (prophecy) formula
Data collected for this study was analyzed using mean and correlations. The mean was used to answer research questions 1 to 5, using the class limit of real numbers of the assigned value of the respond categories which was used for taking decision while correlation used to test the 4 null hypotheses at 0.01 level of significance.

Result and Discussion

Table 1: Level of women participation in Agricultural practices

Agricultural Practices	Items	Mean	SD
Crop Production	Land clearing	1.30	.3784
	Tillage practices	1.24	.0811
	Sowing	3.80	.5946
	Fertilizer application	3.00	.6577
	Application of herbicide	2.00	.2523
	Application of insecticide	2.30	.2153

	Weeding	2.56	.2162
	Thinning	3.00	.2973
	Harvesting	1.00	.0901
	Postharvest	3.00	.1532
	Processing	3.67	.1552
	Marketing	3.04	.1261
	Mean Average	**2.50**	**.2681**
Livestock Production	Grazing	2.70	.0450
	Feeding	3.68	.0270
	Milking	3.00	.0160
	Tagging	1.20	.0360
	Castration	1.00	.0631
	Watering	3.50	.0811
	Housing management	4.00	.1827
	Disinfection	1.24	.0811
	Quarantine	1.44	.0611
	Weaning	3.67	.1552
	Slaughtering	1.08	.0560
	Marketing	3.80	.0450
	Mean Average	**2.53**	**.0639**
Horticultural Production	Raisin seedlings	2.50	.0500
	Transplanting	2.00	.0472
	Mulching	2.80	.0536
	Maturing	2.68	.0537
	Pruning	1.96	.0063
	Grafting	2.00	.0045
	Budding	3.00	.1000
	Layering	2.19.	.0036
	Planting	3.00	.1091
	Preparing nursery bed	2.53	.0636
	Harvesting	2.00	.0455
	Marketing	2.74	.0545
	Mean Average	**2.45**	**.0493**
Poultry Production	Housing management	3.84	.0728
	Feeding	4.00	.0636
	Watering	4.50	.0627
	Brooding	2.50	.0727
	Egg collection	4.60	.0636
	Record keeping	2.50	.0645
	Management of health condition	1.00	.0700
	Debeaking	2.00	.0600
	Vaccination	1.80	.0790
	Isolation	2.30	.0724
	Slaughtering	1.80	.0372
	Marketing	2.50	.0545
	Mean Average	**2.77**	**.0565**
Fish/Aquaculture Production	Fish pond management	2.09	.0455
	Water control	2.40	.0409
	Stacking finger lines	2.00	.0455
	Feeding	2.60	.0454
	Record keeping	2.48	.0263
	Harvesting	2.49	.0727
	Liming	2.06	.0455
	Eradication of predators	1.80	.0345
	Control of aquatic weeds	1.03	.0182
	Pond cleaning	1.40	.0091
	Postharvest handling	2.80	.0091
	Marketing	2.92	.0182
	Mean Average	**2.17**	.0335

Crop Production Practices

Table 1 reveals the participation of women in crop production practices which was measure using 12 items. Decision rule of 2.50 was used which indicates that, mean value above 2.50 means participated while mean value less than 2.50 indicates not participated The table therefore revealed that, women farmers in north eastern Nigeria participates in sowing (x=3.80), processing (x=3.67), marketing (x=3.04), fertilizer application (x= 3.00), postharvest activities (x=3.00), thinning (x=3.00) and wedding (x=2.56). Meanwhile, women farmers do not participate in the application of insecticide (x=2.30), land clearing (x=1.30), tillage practices (x= 1.24), application of herbicide (x=2.00) and harvesting (x = 1.00). Table 1 with mean average of (x=2.50) conclude that women

farmers participate in crop production practices in north eastern Nigeria.

Livestock Management and Production Practices

Table 1 reveals the participation of women in livestock management and production practices which was measure using 12 items. The table indicates that, women farmers in north eastern Nigeria participated in housing management (x=4.00), weaning (x=3.67), feeding (x=3.68), marketing (x=3.80), watering (x= 3.50), milking (x=3.00) and grazing (x= 2.70). However, they do not participate in quarantine (x=1.44), disinfection (x=1.24), tagging (x=1.20), slaughtering (x=1.08) and castration (x=1.00). Table 1 with mean average of (x=2.53) conclude that women farmers participate in livestock management and production practices in north eastern Nigeria

Horticultural/Fruit and Vegetable Production Practice

Table 1 reveals the participation of women in horticultural/fruit and vegetable production practices which was measure using 12 items. The table indicates that, women farmers in north eastern Nigeria participates in planting (x=3.00), budding (x=3.00), mulching (x=2.80), manuring (x=2.68), marketing (x=2.74), preparing of nursery bed (x=2.53) and raising seedlings (x=2.50). But they do not participate in layering (x=2.19.), translating (x=2.00), grafting (x=2.00), harvesting (x=2.00) and pruning (x= 1.96). Table 1 with mean average of (x=2.45) conclude that women farmers do not participates in horticultural/fruit and vegetable production practices practice in north eastern Nigeria

Poultry Production Practices

Table 1 reveals the participation of women in poultry production practices which was measure using 12 items. The table indicates that, women farmers in north eastern Nigeria participates in watering (x=4.50), egg collection (x=4.60), housing management (x=3.84), feeding (x=4.00), brooding (x=2.50), record keeping (x=2.50) and marketing (x=2.50). However, they do not participate in isolation of chickens (x=2.30), debeaking (x=2.00), vaccination (x=1.80), slaughtering (x=1.80) and management of health condition (x=1.00). Table 1 with mean average of (x=2.77) conclude that women farmers participates in poultry production practices in north eastern Nigeria

Fish/Aquaculture Production Practices

Table 1 reveals the participation of women in fish/ aquaculture production practices which was measure using 12 items. The table indicates that, women farmers in north eastern Nigeria participates in fish marketing (x=2.92), postharvest handling (x=2.80) and feeding (x=2.60). But they do not participate in harvesting of fish (x=2.49), record keeping (2.48), water control (x=2.40), pond management (x=2.09), liming (x=2.06), stocking of finger lines (x=2.00), eradication of predators (x=1.80), pond cleaning (x=1.40) and control of aquatic weed (x= 1.03). Table 1 with mean average of (x=2.17) conclude that women farmers do not participates in fish/aquaculture production practices practice in north eastern Nigeria

Findings from table 1 is in line with that of Abdulmumini, Man, Kamarulzaman, & Mohd Haris (2021) [2], that women farmers participate in crop production, animal production and poultry production but in contrast with participation in horticultural and fish production practices where women were found not participated in this study. Simalrly Aldosari, Al Shunaifi, Ullah, Muddassir, & Noor (2019) [14] and Buehren, Goldstein, Molina, & Vaillant (2019) reveals that women contribute significantly in enhancing economic and social wellbeing of individuals due to their participation in agriculture.

Table 2: Effectiveness of AEW in conducting research for women farmers

Items	Mean	SD
Identification of research problem for women farmers	3.70	.0350
Planning on how to carryout research for women farmers	3.78	.0170
Development of research proposal	2.98	.0240
Development of research instruments	2.12	.0120
Administrations of research instrument	3.00	.0131
Data collection and procedure	3.50	.0712
Data organisation	3.90	.1727
Data analyses	2.24	.0843
Interpretation of data	2.44	.0652
Findings and generalisations	2.67	.1622
Utilization of research findings on women farmers	2.08	.0360
Mean Average	**2.95**	**.0629**

Table 2 reveals the effectiveness of AEWs in conducting research for women farmers which was measure using 11 items. The table shows that, AEWs are effective in organizing research data (x=3.90), planning how to carry out research for women farmers (x=3.78), identification of research problem for women farmers (x=3.70), data collection and procedure(x=3.50), administration of research instrument (x=3.00), development of research proposal (x=2.98) and generalization of research findings (x=2.67). However, AEWs are ineffective in interpretation of data (x=2.44), data analyses (x=2.24), development of research instrument (x=2.12) and utilization of research findings on women farmers (x=2.08). Table 2 with mean average of (x=2.95) conclude that AEWs are effective in conducting research for women farmers in north eastern Nigeria. This finding is related to the finding of Kassem, Aldosari, Baig, Muneer, & Elmajem, (2018) [17] who's find out that extension workers were effective in research and information linkage among their client in the kingdom of Saudi Arabia.

Table 3: Effectiveness of AEW in farm visit for women farmers

Items	Mean	SD
Planning farm visit	3.09	.0355
Scheduling farm visit	2.80	.0309
Assisting women farmers during farm visit	3.60	.0345
Friendship and understanding during farm visit	2.70	.0254
Information delivery in farm visit	3.48	.0163
Teaching skills and practice during farm visit	3.40	.0426
Practical demonstration during farm visit	2.06	.0455
Encouragement and motivating farmers	2.40	.0148
Observation and analyses of farm performance	3.03	.0114
Observing improve practice	3.12	.0064
Mean Average	2.97	.0263

Table 3 reveals the effectiveness of AEWs in farm visit for women farmers which was measure using 10 items. The table indicated that, AEWs are effective in assisting women farmers during farm visit (x=3.60), information delivery (x=3.48), teaching skills and practice during farm visit (3.40), observing improve practices (x=3.12), planning farm visit

(x=3.09), observation and analyses of farm performance (x=3.03), scheduling farm visit (x=2.80), friendship and understanding during farm visit (x=2.70). Meanwhile AEWs were ineffective in encouragement and motivation for women farmers (x=2.40) as well as in conducting practical demonstration during farm visit (x=2.06). Table 3 with mean average of (x=2.97) conclude that AEWs are effective in farm visit for women farmers in north eastern Nigeria. This is in contrast with findings of Khan, & Akram (2012) [18] that AEWs were in effective in farm visit for women farmers due to the religious and cultural believed that prevent men from having conversation with women.

Table 4: Effectiveness of AEWs on the farm lectures for women farmers

Items	Mean	SD
Scheduling lecture for women farmers	2.30	.0480
Designing lecture to suit the need of women farmers	2.46	.0470
Use of illustration in farm lecture	1.18	.0560
Explanation skills	3.12	.0110
Use of varieties of teaching method	3.10	.0151
Questioning and answer	2.50	.0822
Evaluation of lesson for women farmers	2.90	.1800
Use of reinforcement	2.24	.0843
Stimulation and interest	2.29	.0762
Clarity of presentations	2.54	.1812
Feedback and interaction	1.08	.0690
Mean Average	2.24	.0772

Table 4 reveals the effectiveness of AEWs in farm lectures for women farmers which was measure using 11 items. The table indicated that, AEWs are effective in explanation skills (x=3.12), use of varieties of teaching method (x=3.10), evaluation of lesson for women farmers (x=2.90), clarity of presentation (x=2.54), questioning and answer (x=2.50). However, the result shows that, AEWs are ineffective in designing lectures to suit the need of women farmers (x=2.46), scheduling lectures for women farmers (x=2.30), stimulation and interest (x=2.29), use of reinforcement (x=2.24), use of illustrations in farm lectures (x=1.18) as well as feedback and interactions (x=1.08). Table 4 with mean average of (x=2.24) conclude that AEWs are ineffective in farm lectures for women farmers in north eastern Nigeria. This is supported by Abbas, Khan, Shahbaz, & Siddiqui, (2021) that AEWs does not utilized good method in teaching women farmers especially at their respective farms. This may be as a result of cultural barriers that prevents direct contact with the female farmers.

Table 5: Effectiveness of AEW on the meeting conducted for women farmers

Items	Mean	SD
Organising meeting	2.62	.0520
Scheduling meeting	3.46	.0760
Information shearing	3.18	.0720
Problem solving	2.52	.0256
Questioning and answer	3.10	.0151
Presiding and deliberation	3.50	.0942
Record keeping	2.70	.0804
Information retrieval	2.24	.0843
Leadership and democratization	3.29	.0622
Resourcefulness	2.41	.0912
Mean Average	**2.91**	**.0653**

Table 5 reveals the effectiveness of AEWs in conducting meeting for women farmers which was measure using 10 items. The table indicated that, AEWs are effective in presiding and deliberation (x=3.50), scheduling meeting (x=3.46), leadership and democratization(x=3.29), information shearing (x=3.18), questioning and answer (x3.10), record keeping (x=2.70), organising meeting (x=2.62) and problem solving (x=2.52). Meanwhile, they are ineffective in resourcefulness (x=2.41) and information retrieval (x=2.24). Table 5 with mean average of (x=2.91) conclude that AEWs are effective in conducting meeting for women farmers in north eastern Nigeria. This is also supported by Kundhlande, Franzel, Simpson, & Gausi, (2014) [19] that AEWs approach in conducting meeting with farmers group was very encouraging.

Hypotheses Testing

Table 6: Correlation between Independent and Dependent Variable (Participation)

Independent Variables	Pearson Coefficient	P - Value
Research	.112**	.000
Farm visit	.109**	.000
Farm lecture	.120**	.006
Meeting	.138**	.000

**. Correlation is significant at the 0.01 level.

Relationship between Researches conducted for farmers and level of women participation

The result from Table 6 shows the analysis of correlation between research conducted for farmers and level of participations in agricultural practices. The result revealed a significant linear relationship between competencies and participation at 0.01 level of significance (r = .112, p = .000). This means that AEWs effectiveness in conducting research for farmers have an evident relationship on women farmers participation in agricultural practice in North eastern Nigeria. In addition, the correlation coefficient (r= .112) indicated that the strength of relationship is low at positive direction. This means that, as research conducted by AEWs increase, so also participation of women farmers.

Relationship between farm visit for farmers and level of women participation

The result from Table 6 revealed a significant linear relationship between farm visit and participation at 0.01 level of significance (r = .109, p = .000). This means that AEWs effectiveness in farm visit for farmers have an evident relationship on women farmers participation in agricultural practice in North eastern Nigeria. In addition, the correlation coefficient (r= .109) indicated that the strength of relationship is low at positive direction. This means that, as farm visit by AEWs increase, so also participation of women farmers.

Relationship between farm lecture for farmers and level of women participation

The result from Table 6 revealed a significant linear relationship between farm lecture and participation at 0.01 level of significance (r = .120, p = .000). This means that AEWs effectiveness in farm lecture for farmers have an evident relationship on women farmers participation in agricultural practice in North eastern Nigeria.

In addition, the correlation coefficient (r= .120) indicated that the strength of relationship is low at positive direction. This means that, as research conducted by AEWs increase, so also participation of women farmers.

Relationship between meetings conducted for farmers and level of women participation

The result from Table 6 revealed a significant linear relationship between competencies and participation at 0.01 level of significance (r = .138, p = .000). This means that AEWs effectiveness in conducting meeting for farmers have an evident relationship on women farmers participation in agricultural practice in North eastern Nigeria. In addition, the correlation coefficient (r= .138) indicated that the strength of relationship is low at positive direction. This means that, as meeting conducted by AEWs increase, so also participation of women farmers.

Conclusion and Recommendations

Due to lack of knowledge women farmers in North eastern Nigeria do not participate in horticultural and fish production practices but participate actively in crop production practices, livestock production practices and poultry production practices. Meanwhile, AEWs were in ineffective in conducting farm lectures for women farmers. However, they are effective in conducting research, farm visit and meeting for women farmers.

The study recommended the need of training for AEWs to enhance their effectiveness in organizing and conducting farm lectures for women farmers. AEWs should also ensure transmission of relevant information and knowledge of horticultural and fish production practices among women farmers for increase participation and profit generation.

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