

Full Length Research Paper

Training Needs of Women Vegetable Farmers in the University of Calabar Farm, Nigeria

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A two stage sampling technique was employed to select 60 respondents (women vegetable farmers). A well structured questionnaire was used to obtain primary data while the data obtained were analyzed with the use of simple frequencies and percentages while the relationship between their socioeconomic status and training needs were analyzed with Chi-square statistics. The socio-economic characteristics of the respondents shows that 48.3% of the respondents were in the age bracket of 41-50 years, 50% of the respondents attained secondary education and 75% had between 5-10 children meaning that labor supply might be adequate. Farm size showed that 41.7% of the respondents had between 0.5 and 0.6 hectares of farmland and income earning showed that 26.7% of the respondents earn between ₦ 75,000- ₦ 99,000 per annum which is grossly

inadequate. However, majority 82.10% of the respondents indicated not having access to extension services while areas of training needs identified include pest and diseases control methods, fertilizer application, fertilizer selection/rate, storage methods and procedure. Preference given to progressive farmers was one of the major factors affecting training needs while age, farm income and farming experience all show significant relationship with training needs. Recommendation was made that extension services should be made available to respondents to improve their farming knowledge and skills through necessary training as well as provision of credit facilities.

Keywords: Training needs, University of Calabar, vegetable farmers, women

INTRODUCTION

The importance of training women farmers cannot be over-emphasized. Women generally have been in the forefront of the fight against food crisis in the entire world. In Africa and Nigeria in particular, women produce about 78 percent of the continent's food, vegetables including meat from livestock on subsistence and small land holdings with very limited access to training and other production resources Rural women are engaged in a wide range of farming activities and are responsible in most cases for food production, processing, distribution, home consumption and for sale. Women now make up the majority of the agricultural sector in developing countries, but recent evidence suggests that their productivity is constrained by lack of appropriate training skills (Collet and Gale, 2009). Doss, (2011) stated that women account for more than half (between 60% and 80%) of the labour required to produce the food

consumed in Africa. According to Aguilar, (2009), women are particularly vulnerable to environmental changes due to so many factors that confront their situations in developing countries including appropriate training.

Training need is the difference between the required level of individual competence and his/her present level of competence. Training therefore, plays a significant role in assisting women vegetable farmers in identifying their own challenges, initiating change and understanding of how training could impact on their lives and activities because vegetable farming is an aspect of food production which several scholars have tried to analyze. Vegetable farming involves two processes: on-farm tasks and off-farm tasks. The on-farm tasks include bush clearing, land preparation, planting, weeding; pests control measures, fertilizers application and harvesting. The off-farm tasks include storage, processing and

marketing. But no matter how the activities of farming are classified or described, the farmer can enhance their execution if they have adequate training and access to information about improved growing techniques and food handling/processing strategies. According to Jacob and George, (2013), "training is an organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him/her attain a require level of knowledge or skills". Training plays an important role in the advancement of human performance in a given situation through acquisition of systematic knowledge, skills, competencies and practices as result of teaching vocational or practical skills and knowledge that leads to improving ones productivity in a given situation. Women farmers had low knowledge and skills in performing the following farm operations: chemical weeding and pest control, preparation and utilization of organic fertilizer, livestock and poultry breed selection and construction of livestock houses. Other areas of training needs are identification and treatment of sick animals, slaughtering and dressing of animals and marketing of livestock (Ajayi *et al.*, 2003).

However, vegetables play crucial roles in alleviating hunger and food security and it is considered a very important diet for many people because of its valuable sources of nutrients (Badmus and Yekini, 2011). Mayowa and Meludu, (2014) opined that women vegetable farmers expressed low need for information, moderate need for training and high need for agricultural- support service on organic agriculture. They went further to state that the most expressed need by the women vegetable farmers was training. But unequal ownership of land is also a critical factor that creates and maintains differences between women and men with consequences for the coming generation (Ndifon *et al.*, 2012). Yekinni and Oguntade, (2014) enumerated factors such as education, illiteracy and lack of awareness of training programmes as the critical factors that affect training needs of women vegetable farmers. Thus, addressing these challenges to improve women smallholders' access to advanced and relevant training is an important step in increasing agricultural productivity (Collett and Gale, 2009). In the same vein, Iwuchukwu and Uzoho, (2009), Imonikebe, (2010) identified financial and agronomic/incentives, poverty, illiteracy, lack of storage facilities and poor health status as challenges confronting women farmers. In other words, women have less access to training, information, technology, inputs and credit than men (Ifenkwe, 2012). It is against this background that this study was conducted to investigate specifically on women vegetable producers so as to ascertain their general and peculiar situations as well as the constraints they encounter in terms of access to adequate training in their enterprises. The general objective of the study was to assess the training needs of women vegetable farmers in the University of Calabar farm while specifically, it was to examine the socio-economic characteristics of the

respondents, identify the areas of training needs of the respondents, ascertain the factors affecting the training needs of women vegetable farmers, identify the constraints faced by women vegetable farmers and determine the relationship between the socioeconomic characteristics and their training needs of respondents.

MATERIALS AND METHODS

The study was conducted at the University of Calabar Teaching and Research Farm lying between Latitude 4°56' and 4°56' N and Longitude: 8°20' and 8°21' E. The University of Calabar Teaching and Research Farm is located on an undulating coastal plain parent material overlying the tertiary coastal plain sand geological formation usually referred to as 'acid sand' and the soil type is classified as Kandiodults according to USDA soil Taxonomy. The agro-climate of the area is typical of tropical humid region marked by excess rainfall over evapo-transpiration for more than six months of the year. It was a survey design with a population of all women vegetable farmers in the University of Calabar Farm. Prominent vegetable crops cultivated include water leaf (*Talinum triangulare*), fluted pumpkin (*Telfairia occidentalis*), Cucumber (*Cucumis sativus*), green (*Amaranthus spp*) and okra (*Abelmoschus esculentus*). The crops are cultivated on upland during rainy season and in wetland or Fadama area during dry season. It is the most preferred homestead crop among the Ibibios and Efiks in the region. The green succulent leaves are used to prepare the most popular traditional delicacy of the Ibibios and Efiks called "Edikan Ikong". A two stage sampling technique was used in selecting the respondents (women vegetable farmers). First, selection of three locations where vegetable farms are predominantly located namely: Unical staff quarters, Unical practical year demonstration farm and plots close to Unical livestock farm. Secondly, quota (equal number) random sampling technique was used to select 20 women vegetable farmers from each of the three locations to give a total of 60 respondents. A well structured questionnaire was used to obtained primary data from respondents while the data obtained were analyzed with use of simple frequencies and percentages while the relationship between their socioeconomic status and training needs was analyzed with Chi-square statistics.

RESULTS AND DISCUSSION

The result of the socio-economic characteristics of the respondents as presented in (Table 1) shows that 48.3% of the respondents were in the age bracket of between 41-50 years meaning that most of them were young and activesupportingthefindingsofYekin.andOguntade,(2014).

Table 1. Socio-economic characteristic of the respondents.

	Frequency	Percentage
Age		
<31	4	6.7
31-40	13	21.7
41-50	29	48.3
51-60	10	16.7
>60	46.7	6.7
Total	60	100
Marital status		
Single	3	5
Married	39	65
Divorced	8	13.3
Widowed	10	16.7
Total	60	100
Education		
No Formal Education	10	16.7
Primary	15	25
Secondary	30	50
Tertiary	5	8.3
Total	60	100
Farm Size		
0.1-0.2	6	10
0.3-0.4	17	28.3
0.5-0.6	25	41.7
>0.6	12	20
Total	60	100
Number of plots		
1-5	51	85
6-10	8	13.3
11-15	1	1.7
Total	60	100
Household Size		
<5	15	25
5-10	45	75
Total	60	100
Primary occupation		
Farming	23	38.3
Trading	27	45
Fishing	-	-
Civil Servant	7	11.7
None	3	5
Total	60	100
Annual Income		
<N 25000	1	1.7
N 25000-N 49000	7	11.7
N 50000-N 74000	21	35
N 75000-N 99000	16	26.6
>99000	15	25
Total	60	100
Membership to association		
Yes	36	60
No	24	40
Total	60	100
Farming experience		
<10	33	55
10-20	24	40
21-30	3	5
Total	60	100
Extension service		
Yes	18	30
No	42	70
Total	60	100
Labour		
Family labour	25	30

Table 1 Contd.

Hired labour	35	70
Total	60	100
Labour Cost		
<300		
300-400	48	80
>400	12	20
Total	60	100
Purpose of production		
Sales	50	83.3
Consumption	10	16.7
Total	60	100

Source: Field survey 2018.

The socioeconomic characteristics of respondents shows that 48.3% of the respondents were in the age bracket of between 41-50 years meaning that most of them were young and active supporting the findings of Yekini and Oguntade, (2014). It also revealed that 50% of the respondents attained secondary education implying that they were literate. In terms of household size, 25% of the respondents had less than 5 and 75% had between 5-10 children meaning that labour supply might be adequate. The result of farm size showed that 41.7% of the respondents had between 0.5 and 0.6 hectares of farmland. This implies that majority of the respondents were small scale vegetable farmers. More so, income earning showed that 1.7% of the respondents earn less N 25,000, 11.7% earn between N 25,000- N49,000, 35% of the respondents earn between N50,000 -N74,000; 26.7% of the respondents earn between N75,000 -N99,000 while 25.7% of the respondents earn above N99,000 per annum which is grossly inadequate. Also, majority of the respondents 74.4% were members of an association, while 25.6% did not belong to any association. Farm experience indicated that 55% have spent less than 10 years in vegetable farming in Calabar and 5% between 21-30 years. However, majority 82.10% of the respondents indicated not having access to extension services and the major purpose of their production was for sales 83.3% while consumption was 16.7%.

In terms of areas of training needs required by the respondents, the result as shown in (Table 2) using a weighted mean value of 3.91 revealed that the areas in which most of the respondents require training in order of preferences are compost manure preparation (4.4), pest and disease control methods (4.37), fertilizer selection and application use (4.13), harvesting time and techniques (4.00), storage methods and procedures (4.00) and agricultural support services (3.92). The result corroborates with Yekini and Oguntade, (2014) that pests and diseases control methods, fertilizer application, fertilizer selection/rate, storage methods and procedure were identified as the area which vegetable farmers require further training.

The factors affecting the training needs of women vegetable farmers are presented in (Table 3) and there showed that, preference given to progressive farmers

Table 2. Areas of training needs.

Mobile Facilities	Mean	Rank
Pest/disease control method	4.37*	2 nd
Fertilizers selection and application rate	4.13*	3 rd
Storage methods & procedures	4.00*	4 th
Harvesting time & techniques	4.00*	4 th
Nursery operations	3.73	8 th
Planting and Transplanting operations	3.87	6 th
Chemical weed control	3.73	10 th
Compost manure preparation	4.40*	1 st
Land Management	3.82	7 th
Agric-support services	3.92*	5 th
Irrigation methods	3.75	9 th
Crop diversification	3.23	11 th

Source: Field survey (2018). Cut off score, 3.91, ($X \geq 3.91$ = severe areas of training, $X < 3.91$ = areas of less training need), * areas in which training need is required.

Table 3. Factors affecting training needs of women vegetable farmers.

Statement	SA(5)	A(A)	D(3)	SD(2)	N(1)	Total	Mean	Rank
Preference given to progressive farmers	34(170)	10(40)	13(39)	2(4)	1(1)	60	4.23*	1 st
Preference given to literate farmers	7(35)	29(116)	21(63)	2(4)	1(1)	60	3.65*	4 th
Lack of co-ordination with each grower	9(45)	17(68)	26(78)	6(12)	2(2)	60	3.42	9 th
Time consuming	16(80)	25(100)	9(27)	6(12)	4(4)	60	3.72*	3 rd
Lack of interest on the part of farmers	18(90)	10(40)	21(63)	6(12)	5(5)	60	3.50	6 th
Communication skills	15(75)	16(64)	20(60)	8(16)	1(1)	60	3.60	7 th
Training methods	15(75)	21(63)	19(38)	5(10)	-	60	3.10	10 th
Marital status	10(50)	16(64)	21(63)	13(26)	-	60	3.38	8 th
Source of farmland	26(130)	20(80)	5(15)	8(16)	1(1)	60	4.03*	2 nd
Lack of awareness of training programme	22(110)	16(64)	9(27)	2(4)	11(11)	60	3.60	5 th

Source: Field survey, 2018. Weighted mean =3.62, ($X \geq 3.62$ = critical factors affecting training need, $X < 3.6$, 2= not severe factors), * areas in which training need is required. Note: SA= Strongly Agree, A= Agree, D= Disagree, SD= strongly disagree, N = Neutral.

Table 4. Constraints faced by women vegetable farmers.

Statement	Very serious	Serious	Not serious	Cum	Mean	Rank
Land Availability	50(150)	9(18)	1(1)	169	2.82*	2 nd
High cost of inputs	27(81)	32(64)	1(1)	146	2.43	7 th
Insufficient Capital	44(132)	14(28)	2(2)	162	2.70*	3 rd
Inadequate water Availability	35(105)	21(42)	4(4)	151	2.52	4 th
Lack of credit facility	33(165)	23(46)	4(4)	215	3.58*	1 st
Markets for Vegetable	36(108)	16(32)	8(8)	148	2.47	6 th
Pests and diseases	36(108)	16(32)	8(8)	148	2.47	6 th
unstable market price	33(99)	23(46)	4(4)	149	2.48	5 th
Education level farmers	18(54)	17(34)	25(25)	113	1.88	9 th
Poor soil	17(51)	29(58)	14(14)	123	2.05	8 th

Source: Field survey (2018). Weighted mean, 2.54, ($X \geq 2.54$ = constraint, $X < 2.54$ = not a constraint), *= areas in which training need is required, Cum = cumulative frequency.

(4.23), source of farmland (4.03), time consuming (3.72) and preference given to literate farmers were the factors affecting training needs of women vegetable farmers in the study area. On the other hand, other factors such as lack of awareness of training programme, lack of interest on the part of farmers, lack of co-ordination with each, training methods, and marital status among others were

not serious factors affecting training needs of women vegetable farmers. This result confirms the works of Collect and Gale, 2009 and Ndifon *et al.*, 2012).

Result in (Table 4) shows constraints in order of their severity, militating against women vegetable farmers during vegetable production. A weighted mean value of 2.54 was used as the critical value for comparing the

Table 5. Relationship between Socio-economic characteristics of respondents and their training needs.

Training Needs	Age	Farm Size	Farm Income	Farm Experience
Pest/disease control method	12.679	13.248	8.131	5.606
Fertilizers selection and application rate	24.612*	14.267	15.884	9.501
Storage methods & procedures	23.134	10.280	17.919	11.641
Harvesting time & techniques	11.916	15.677	17.922	13.740*
Nursery operations	16.261	13.598	24.031*	10.877
Planting and Transplanting operations	19.949	6.115	15.902	9.043
Chemical weed control	14.913	13.018	10.115	27.398***
Compost manure preparation	10.583	10.267	7.248	3.369
Land Management	13.167	5.469	9.546	11.616
Agric-support services	12.789	9.133	14.565	5.067
Irrigation methods	30.018**	3.702	20.910	19.044**
Crop diversification	16.307	9.234	9.656	11.729

Source: Field survey, (2018). Values in the table are the chi-square value, *, **, *** represents significant level at 10%, 5% and 1% respectively.

order of severity. Therefore, lack of credit facility ranked first with 3.58, land availability with 2.82 and insufficient capital with 2.70 were the serious constraints faced by women vegetable farmers in the study area. On the other hand, the result of the relationship between socio-economic characteristics of women vegetable farmers and their training needs as shown in (Table 5), indicate that there is a significant relationship in terms of age, farm income and farming experience and training needs (fertilizer selection and application rate, and irrigation methods), this result is in line with report of Ajayi et al., (2003).

Conclusion

Based on the findings from the study, it could be concluded that women vegetable farmers in the study area were mostly literate having less years of farming experience. However, compost manure preparation and pest/disease control method were the most crucial areas in which training were required. Lack of access to extension agents who are the main drivers of innovations might be responsible for poor knowledge on improved methods of vegetable farming. It can be concluded from the study that training needs of the farmers is significantly related to their socio-economic characteristics.

Recommendations

Based on the finding of the study, the following are recommended:

- Extension agent should be mobilized to the study area to educate farmers on innovative practices available for vegetable farming and to provide adequate training needs required is required by the respondents.
- Training should be geared towards the different aspects of activities involved in vegetable production in

which the farmers indicated incompetence.

- Credit facilities should be made available to respondents to expand their farming activities for more income earning opportunities.

Authors' Declaration

I declared that this study is an original research that was carried out by me and I agree to publish it in the journal.

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