INTERNATIONAL JOURNAL OF PLANT, ANIMAL AND ENVIRONMENTAL SCIENCES

IJPAES

Volume-4, Issue-1, Jan-Mar-2014

ISSN 2231-4490

Coden : IJPAES www.ijpaes.com

Received: 05th Jan-2014 *Revised: 07th Jan-2014* *Accepted: 10th Jan-2014*

Research article

ASSESSING THE SOCIO-CULTURAL FACTORS THAT AFFECT WOMEN'S CONTRIBUTION TO FOOD SECURITY IN THE KASENA NANKANA MUNICIPALITY, UPPER-EAST REGION, GHANA

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ABSTRACT: Women play a very vital role in household food security in most developing countries including Ghana. However, they are constrained by a variety of socio-cultural and economic as well as institutional barriers. This study therefore seeks to assess women's contribution to household food security in the Kasena-Nankana Municipality. Descriptive survey design was adopted, employing both qualitative and quantitative research methodologies. Observations, focus group discussions, interviews, key informant interviews and questionnaires were used as primary data, and other relevant data, as secondary sources, were used to gather relevant information for analysis and discussions. Purposive sampling was used to select 160 participants from 2,049 women in six communities for the study. The findings of the study revealed57.3% reacted positively towards contribution to household food security while 84.4% were into agricultural production. Almost all (83.8%) of the respondents indicated that they undertake crop production. A little more than eighty percent (81.25%) mentioned that they cultivate groundnut. More than three-quarters (75.63%) indicated that they cultivate rice. The study further revealed that 76.25% and 65.63% of the respondents were into beans and maize production respectively. Eighty-two(82%) were engaged in animal production. Respondents (43%) indicated they engaged in food processing, 37% engaged in farm labor and 20% in trading of farm produce. The main methods of processing of food crops, from the study, were threshing, winnowing, milling and drying. Constraints facing women were found to include their non- involvement in traditional rituals, non-inclusion in the decision- making process. The women however were successful in their quest to achieve food security. About 93% were aware of government policies in place to enhance women participation in food security.Therefore, in order to improve the household food security and up-grade women's roles in this regard, the prevailing problems in the Kasena Nankana Municipality need concerted efforts from all concerned bodies.

Keywords: Household, food security, Women, socio-cultural, Qualitative, Quantitative, Interview, Questionnaire

INTRODUCTION

The debate on the role of women in societies and their participation in economic activity has sparked a lot of controversy for a considerable time. Different groups of people-women groups, government, development partners, and civil society groups have forwarded many arguments to support their stand on access by all people at all times to adequate food of good quality for active and healthier life. Even though different women from different communities play different roles at home and outside the home, yet, the contribution of women to household food security in the Kassena-Nankana East District needed investigation. All over the world women's contributions to household food security is enormous. In Asia, women account for more than two thirds of food production and some 45 percent in Latin America and the Caribbean [8]. Women farmers in Sub-Sahara Africa produce more than three-quarters of the region's basic food, manage some two-thirds of marketing of farm produce and at least one half the activities required for storing food and raising animals [9, 15].

In addition, they are now cultivating crops and taking on tasks traditionally undertaken by men, and the women are also increasingly making decisions on the daily management of farms and households. With few exceptions, women fulfill these multiple jobs with little or no access to productivity enhancing resources and services such as credits and health care. A study on credit used in five technical assistance found that women received less than10 percent of the credit forwarded in male smallholders, and only 15 percent of the world's agricultural extension agents are women [8]. Women compose the poorest segment of rural population and make up to more than70% of all people living in absolute rural poverty [20]. Food security can be explained as an access by all people at all times to adequate food of good quality for active and healthy life [20]. However, not all people have access to adequate food at all times for active and healthy life. Hunger and food insecurity are widespread in our world today, especially in the developing countries including Ghana [12].There is a growing recognition that men and women often have very different rights and responsibilities with respect to resource use and decision making in the process of agricultural production. This recognition has resulted in a number of studies documenting the roles of women and men in various farm, non-farm, food preparation, household maintenance and child care activities [2, 19].The rural sector in many developing countries is increasingly characterized by the prevalence of poverty and food insecurity [7]. In Sub-Sahara Africa, women head 31 percent of the households [8]. The traditional gender division of labour, intra-household rights and obligations is weakening, the gender-based division of labor breaking down and farm women are increasingly undertaking tasks which were hitherto said to be undertaken by men. In order to ensure food security, provide adequate nutrition for the population and impact positively on poverty, education and human development, investment is needed. Those living in the rural areas, especially, women must have access to productive resources such as land, credit and inputs to grow enough food for their households. Research evidences show that empowering rural women– increasing economic assets that women control has a positive impact on the family, particularly on food and nutrition security, health and education [8]. Despite the economic gains that Ghana has made over the decade, poverty and household food insecurity remain a persistent and pressing social concern. An estimated millions of Ghanaian households experience food related hardships, most of them chronic (31st DWM,1999).Most rural Ghanaian women have less access to economic and productive resources, and are generally discriminated against in personal and social relationships and all these combine to making their households more food insecure [6].The current study therefore sought, among other things, to establish the underlying relationship between household food security and the role of women as regards the socio-cultural factors affecting women's contribution in providing household food security in the Kasena-Nankana Municipality.

The study also launched an investigation in to the approach of women towards their contribution in household food security along six dimensions of Spouse/family expectations; to measure the beliefs and expectations, Value of food security; to measure women's beliefs on the usefulness, relevance and worth of providing food security in their life now and in the future, Enjoyment; to measure the degree to which women enjoy providing household food security, Confidence and self-concept of providing food security in other agriculture supportive resources, Motivation; to measure interest in providing food security and the desire to work harder in the provision of food security, anxiety in governmental and non-governmental interventions in ensuring food security.

MATERIALS AND METHODS

Research Methodology

Study Area

The Kassena-Nankana Municipality is in the Upper East Region of Ghana and shares boundaries, to the north with Kassena-Nankana West and Burkina Faso, to the east with Kassena-Nankana West and Bolgatanga districts, west with the Builsa district and South with West Mamprusi district in the Northern Region. The district recorded a population density of 91 persons per sq. km. The climatic conditions of the District are characterized by the dry and wet seasons, which are influenced mainly by two (2) air masses – The Harmattan air mass (North-East Trade winds) and the Tropical Maritime (South-West Monsoon wind). The Harmattan air mass (North-East Trade Winds) is usually dry and dusty as it originates from the Sahara Desert. During such periods, rainfall is virtually absent (November to April) due to low relative humidity. Day temperatures are high recording 42° Celsius (especially February and March) and night temperatures are as low as 18° Celsius. Average rainfall is 950mm per annum. Two main types of soil are present within the District namely the Savannah ochrosols and groundwater laterite.

The northern and eastern parts of the district are covered by the Savannah ochrosols, while the rest of the District has groundwater laterite. The Savannah ochrosols soil type is suitable for cultivation and hence accounts for the arable land sites including most parts of the Tono Irrigation Project sites where both wet and dry season farming activities are concentrated. The district consists of 216 communities – majority of which are rural, only 13 per cent of the population live in towns. At least three out of four people in the district reside in a rural area.

Data Collection and Analysis

Both primary and secondary data sources were used to gather relevant information for analysis and discussions. Purposive sampling was used to select six communities in the Kasena-Nankana Municipality. Considering the nature of the communities in which the study was carried out, a hybrid sampling method was used to arrive at the sample population. Close and open ended questionnaires were used to collect data from the interviewees. In addition to the questionnaire, empirical verification was done via observation on attitudes and behaviors of farmers. Women and Men farmers of all ages were interviewed from the dry season farmers and livestock producers. Focused group discussions were held with various groups; it involved opinion leaders, farmer-based organizations, agric extension officers, the 31st December Women's Movement (DWM) from the study areas.

Data obtained was analyzed using Statistical Package for Social Scientist (SPSS) and Microsoft Excel.

RESULTS AND DISCUSSION.

The Social-Cultural Factors that Affect Women's Contribution to Food Security

Many issues were pointed out by the respondents as factors that affect women's contribution to food security. Results from the women at the focused group discussion revealed that, there was no involvement of women in traditional rituals among others. No inclusion of women in the decision- making process, for example, the distribution of farm lands and the sale of family lands. In addition to that, was the issue of widowhood rites from some families' members where property of the deceased was taken by immediate brothers at the expense of their wives thereby depriving them from contributing effectively to food security situation in the area. A similar finding was found by Obasi [14] that until recently, the general trend across the globe had been to relegate women in the scheme of things. In traditional societies, for example women had no value beyond child bearing and other domestic services. Their contribution to household food security and other spheres of community development attracted inadequate recognition. This situation is still true of women in many contemporary societies particularly in the rural enclaves of developing world.

Responses from the questionnaires indicated various factors. A list consisting of eleven statements with respect to socio-cultural factors that affect women roles in household food security were presented to respondents. They were to strongly agree, agree, strongly disagree, disagree and no opinion. A mean score between 2.2 and 2.3 shows that, respondents had neutral views about the statement (Table 1).

Table 1: Social-Cultural factors that affect Women's Contribution to food security

Statement	Number	Mean	Standard deviation
Decision making	160	2.73	1.21
Widowhood rites	160	2.35	1.13
Subordinated roles played by women	160	2.48	1.25
Access to education	160	3.27	1.11
Access to health care	160	3.37	1.08
Access to credit facility	160	3.17	1.12
Access to land	160	3.04	1.24
Female household headship	160	2.08	1.22
Insufficient purchasing power to buy food	160	2.26	1.31
No recognition for women's actual roles and responsibilities	160	2.37	1.45
Lack of data on female's contribution to food security in the community	160	3.01	1.15
Total	**160**	**2.74**	**1.21**

Source: Field work (2012)

It was agreed that decision making role of women in the area affected their contribution to household food security. A mean score of 2.73 (standard deviation of 1.210) was obtained out of 160 respondents. This means respondents agreed that decision making affected the contribution of women to food security in the district. Moreover, a mean score of 2.35 was obtained from the respondents indicating that the respondents agreed to the statement that the performance of widowhood rites affects women's contribution to food security in the district. Another statement was that women subordinated roles in the families affect their contribution to food security in the district. The respondents with a mean score of 2.48 agreed to the statement. In addition, respondents agreed that access to education, health care, credit facility and land affected women contribution to food security in the study area. Mean scores of 3.27, 3.37, 3.17 and 3.04 respectively were obtained from 160 respondents. However, respondents disagreed that female headship in the family affected women contribution to food security in the area while respondents were neutral to the view that insufficient purchasing power to buy food affected women's contribution to food security in the study area. On the statement that no recognition for women's actual roles and responsibilities affect their contribution to food security in the area, respondents with a mean score of 2.37 agreed to the statement.

Challenges women face towards household food production in Kasena-Nankana Municipality.

The participants in the focused group discussion, who were mostly women explained how the women in the study area had limited access to resources, and their insufficient purchasing power were the products of a series of inter-related social, economic and cultural factors that force them into a subordinate role, to the detriment of their own development and that of society as a whole, which, in the long run affected them in their quest of attaining food productivity. According to the results of the study, there was a general difficulty for women in accessing productive farm land, just because of a deliberate denial by landlords. Again, lack of technology among female farmers, poor access to farm inputs, such as improved seeds, fertilizers and pesticides, late land preparation and abject poverty for example, lack of credit facility, but to mention a few, were some of the challenges they were faced with over the years. There was also a biggest constraint to the effective recognition of women's actual roles and responsibilities in agriculture and this was blamed on the scarcity of gender-disaggregated data available to technicians, planners and policy-makers in the Kasena–Nankana Municipality.

Women's Attitudes toward Contribution in Household Food Security in the Kasena-Nankana Municipality

Table 2 shows the percentage of women selecting positive (strongly agree or agree) responses on the attitude scale by settlement. From the table, over half of the participants, constituting 57.3% of the women in this study reacted positively towards contribution in household food security in the Kasena-Nankana Municipality. [13].

The three highest expression of positive attitude to the variables was in 'interest in contributing to household', 'understanding of food security' and 'socio-economic development and cultural factors' with 73.6%, 71.9% and 63.5% respectively responding to them.

Table 2: Percentage of Women Selecting Positive Responses for Various Attitudinal Dimensions in all Settlements

Attitude Variables	Percentage Positive Responses						
	Bonia	**Kwarania**	**Gaani**	**Vunania**	**Biu**	**Naaga**	**All**
Understanding of food security	72.2	68.3	80.5	68.0	70.2	69.4	**71.9**
Spouse/family expectations	39.0	40.4	40.3	33.2	30.6	42.4	**7.7**
Interest in contributing to household	70.2	72.0	78.2	68.8	82.2	70.0	**73.6**
Confidence in other agriculture supportive resources	52.3	60.7	44.1	53.0	59.4	68.6	**56.4**
Anxiety in governmental and nongovernmental interventions	57.3	48.2	55.5	47.0	48.2	40.1	**49.4**
Socio-economic development and cultural factors	68.4	69.0	50.4	63.5	68.0	61.7	**63.5**
All items	**59.9**	**51.2**	**58.2**	**55.9**	**59.8**	**58.7**	**57.3**

Results from Table 3 shows that the three most positive attitude of women towards household food security were in Bonia, Biu and Naaga with percentages being 59.9, 59.8 and 58.7 respectively. The least percentage positive response was recorded in Kwarania with 51.2% response to the statements. Table 3again shows the mean scores and standard deviations of the six attitudes dimensions by sex. The table shows that the mean scores for both sexes in the sample population were above average for all attitude variables. This is consistent with the results in tables 2 and 3 and shows that the women selected more positive items of the attitude dimensions.

Table 3: Mean scores and standard deviations of Attitude variable by settlements

Variables		Bonia	Kwarania	Gaani	Vunania	Biu	Naaga	All
Understanding of food security	χ	3.92	3.87	3.90	3.95	3.88	3.88	3.90
	s	0.75	0.67	0.71	0.68	0.63	0.76	0.70
Spouse/family expectations	χ	3.52	3.45	3.49	3.45	3.54	3.48	3.49
	s	0.61	0.70	0.66	0.56	0.56	0.64	0.62
Interest in contributing to household	χ	3.59	3.57	3.58	3.57	3.60	3.54	3.58
	s	0.55	0.51	0.53	0.84	0.98	0.50	0.65
Confidence in other agriculture supportive resources	χ	3.65	3.59	3.62	3.60	3.61	3.56	3.61
	s	0.74	0.52	0.74	0.50	0.49	0.60	0.60
Anxiety in governmental and nongovernmental interventions	χ	3.64	3.56	3.60	3.65	3.66	3.54	3.61
	s	0.36	0.32	0.34	0.74	0.76	0.69	0.54
Socio-economic development and cultural factors	χ	3.42	3.44	3.43	3.41	3.42	3.45	3.43
	s	0.86	0.87	0.92	0.67	0.74	0.64	0.78
All Items	χ	3.63	3.58	3.61	3.61	3.62	3.59	3.01
	s	0. 66	0.64	0.65	0.61	0.62	0.59	0.63

The standard deviation of 0.63 for all the variables shows that for all the communities' women's attitude towards household food security were homogeneous. That implies women at the sample settlements think and behave at about the same level. The total mean value of 3.01 was slightly above average. The most positive responses by settlements were for understanding of food security, confidence in other agriculture supportive resources and anxiety in governmental and non-governmental interventions. There were slight differences in the mean values of the various settlements. The one way Analysis of variance (ANOVA) was conducted to find out whether the mean differences in attitude among the settlements were statistically significant.

The null-hypotheses of non-significant difference in attitude among the settlements were tested using the ANOVA on women' scores at 0.05 alpha levels.

Table 4: shows the result of the one-way Analysis of variance (ANOVA).

The outcome of this analysis shows that, there were no significant differences in attitude towards household food security among women in the six settlements with ($F < 3.00$, $p > 0.05$, in all settlements). It was hypothesized that: There is no correlation between the scores of the various attitudinal variables for all the settlements.

Table 5 shows the Correlation Coefficients between scores of the various attitudinal variables for women in all settlements. The results of the current study showed that, apart from anxiety in contributing to household food security, all the other variables correlated positively with 'understanding of food security' and significantly at 0.05 levels (2-tailed), except male domain and anxiety contributing household food security. The results again indicated that there was very weak or no correlation between anxiety contributing household food security and the other variables except Interest in contributing to household. The most positive and significant correlation coefficients were between 'Understanding of food security and the variables 'expectations in household food security', 'Interest in contributing to household' and 'usefulness of household food security' and also between 'usefulness of household food security' and the variables 'male domain' and 'Interest in contributing to household'. Only six pairs (confidence and usefulness; confidence and understanding; confidence and expectation; at one side and also between usefulness and male domain; usefulness and understanding; and usefulness and expectation house whole food security, on the other side) had their correlation coefficient being significant at 0.05 levels

Table 4: ANOVA Results for the Difference of Women' Attitude towards Contribution in Household Food Security

Dimension		Sum of sq.	df	Mean Square	F	P
Understanding	Between groups	0.112	2	0.056	0.110	0.896
	Within groups	80.195	157	0.511		
Total	**80.305**	**159**				
Expectations	Between groups	1.704	2	0.852	1.939	0.147
	Within groups	69.00	157	0.439		
Total	**70.704**	**159**				
Interest	Between groups	3.828	2	1.914	2.270	0.107
	Within groups	132.344	157	0.843		
Total	**136.171**	**159**				
Confidence	Between groups	0.046	2	0.023	0.081	0.923
	Within groups	44.451	157	0.283		
Total	**44.496**	**159**				
Anxiety	Between groups	0.519	2	0.259	0.306	0.737
	Within groups	86.121	157	0.549		
Total	**86.600**	**159**				
Socio-economic	Between groups	0.073	2	0.037	0.306	0.737
	Within groups	18.195	157	0.120		
Total	**18.869**	**159**				

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There was a low but positive (r=0.16) correlation between understanding and expectations in household food security and a low (r=-0.14) but significant (p<0.05) negative correlation between household food security anxiety and understanding.

The strongest(r = 0.50) and significant (p< 0.05) correlation coefficient was found between the variables; expectations household food security and confidence contributing household food security. Only five pairs had their correlation coefficient significant at 0.01 levels. Also, a pair of variables had their correlation coefficients significant at 0.05 levels (Table 5).

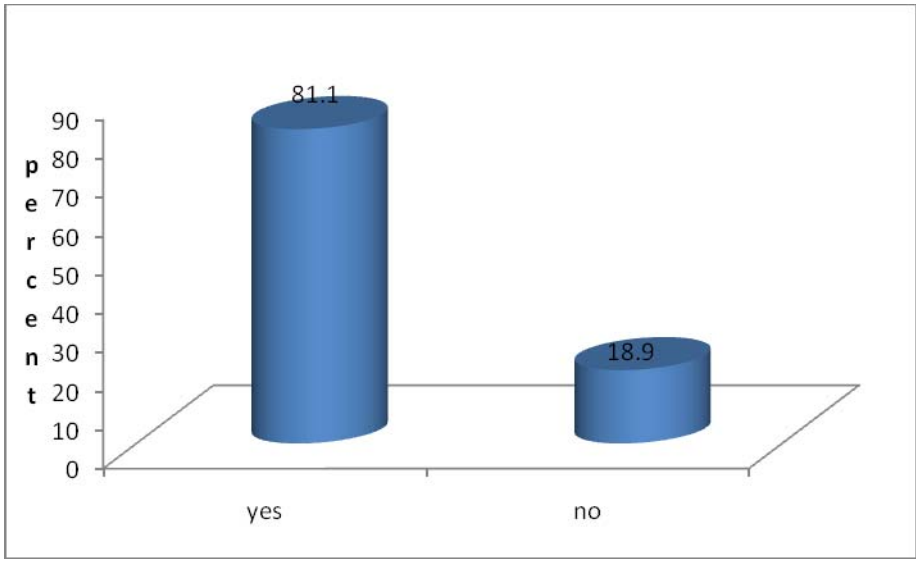
Table: 5Correlation Coefficients between Attitudinal Variables for Women in all Settlements

Attitude variable	Con	EXP	MD	UN	SE	A
Confidence (Con)	1					
Expectations (exp)	0.30**	1				
Male domain (MD)	0.06	0.42**	1			
Understanding (UN)	0.30**	0.31**	0.01	1		
Socio-economic (SE)	0.50**	0.28**	0.14	0.16**	1	
Anxiety (A)	-0.04	0.09	-0.04	-0.12*	-0.01	1

**Correlation is significant at 0.05 levels (2-tailed)

Access to agricultural supportive resources

With regard to whether women have access to agricultural supportive resources, eighty one percent (81%) of the respondents reported in the positive whereas 19 percent indicated otherwise, signifying that majority of women hadaccess to agricultural supportive resources to ensure household food security. This is consistent with the research findings of Adeniji [1] where Majority (63%) of the respondents owned personal farms. These points to the fact that majority of them contributed in one way or the other in ensuring household food security. This is shown in Figure 1;



Source: Field work, (2012)

Figure 1: Women Access to Agricultural Supportive Resources

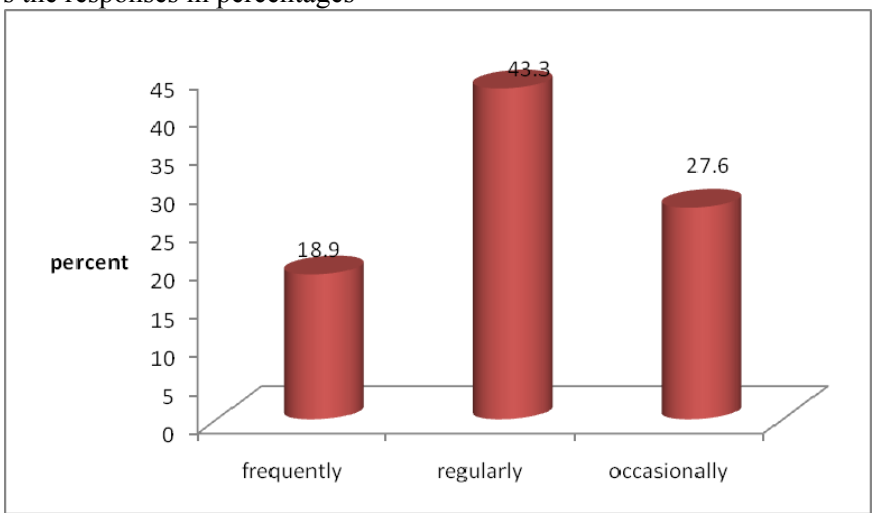
Table 6. shows various kinds of agricultural supportive resourcesindicated by the respondents. 45.5% mentioned new technology while 26.3% indicated landas agricultural supportive resources in the district..

Table 6: Agricultural supportive resources in the district

Agricultural supportive resource	Frequency	Percent
not applicable	10	6.3
extension services	15	9.3
new technology	73	45.5
credit facility	10	6.3
acquisition of land	42	26.3
farm inputs	10	6.3
Total	160	100

Source: Field work (2012)

On how often do respondents received or had access to these agricultural supportive resources, views of women were sorted. Figure 2; shows the responses in percentages



Source: Field work (2012)

Figure 2: Access to Agricultural Supportive Resources by Women

From Figure 2, 43.3% of the respondents stated that they regularly had access to these resources while about 28% indicated that they occasionaly had these resources. The implication of this to the women is that the inability to secure land poses a challenge, contributing to household food security.

Other Economic Activities in Support of Household Food Security

Respondents were asked to indicate other economic activities they undertake to support household food security. They indicated farm labour, food processing and trading. About 43 percent (68) indicated food processing, 37 percent (59) mentioned farm labour and 20 percent (32) stated trading. This is shown in figure 3 below.

Fig. 3: Other economic activities undertaken by women to support household for security Source: Field Data (2012)

On the part of food processing, results from study showed that the main methods of processing of food crops (for the women) included; threshing, winnowing, milling and drying. Results also revealed boiling and frying as the main methods used for extracting oil from groundnuts and Shea butter**.**

Crop Production in the Municipality

The results indicated that about 97 percent of the women cultivated groundnut whereas 90 percent indicated that they cultivated rice. The study further revealed that between 91 and 78 percent of the women were into beans and maize production respectively, as shown in the Table 7;

Table 7: Crop production in the Municipality

Crop cultivated	Frequency	Percent
Rice	121	90
Beans	122	91
Maize	105	78
Millet	73	54
Groundnut	130	97
Pepper	55	41
Others	32	24

The Major Livestock Production by Women in the Municipality

About 82 percent of the respondents mentioned that they reared livestock to support the household food security as against 18 percent who indicated otherwise. The livestock included; rearing of cattle, sheep, pigs, goats and poultry. The response is shown in figure 4;

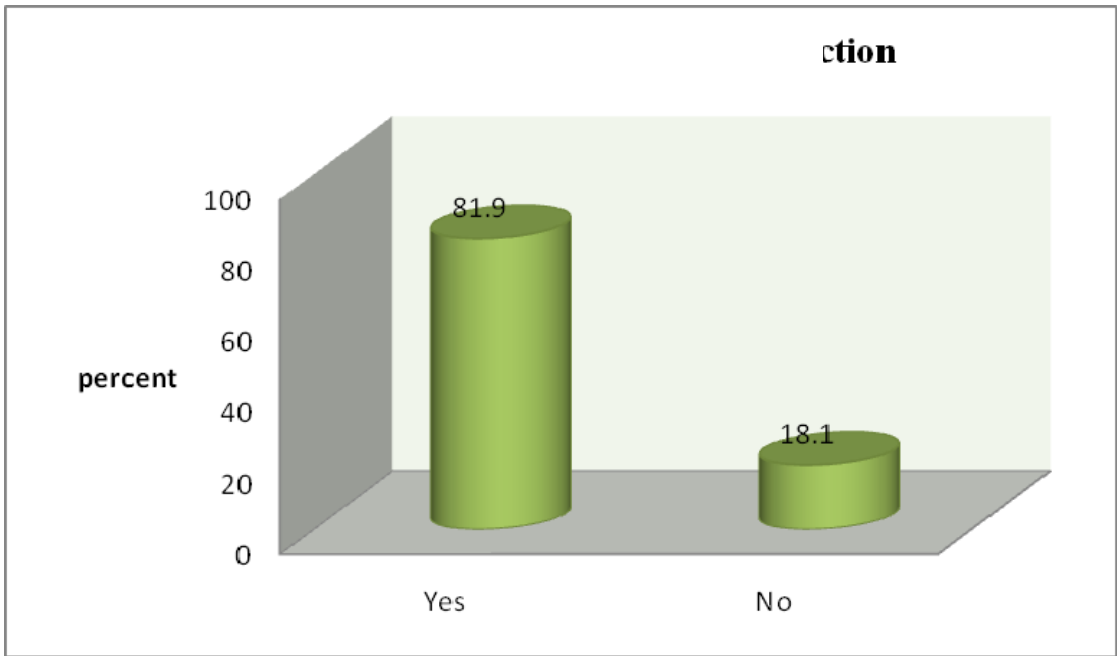


Fig 4: Women into Livestock Production *Source: Field Data (2012)*

Table 8: Animal Production in the District
Source: Field Data (2012)

Animal	Frequency	Percent
Sheep	115	88
Goat	129	98
Poultry (fowl)	125	95
Pig	11	8
Cow	45	34
Donkey	3	2
Others	6	5

CONCLUSION

Women usually conducted income-generating activities of one kind or another during both raining and the off season. The large majority of these women usually used traditional, low-capital input and labour-intensive activities. They covered a fairly typical range, including charcoal-selling, household-based food processing, crafts such as basket-weaving and petty trading among others. Women switch from one activity to another according to what is most likely to be profitable at a given time. Women with childcare or other heavy domestic obligations (such as the care of the sick or elderly) selected a less profitable off-farm productive activity in order to combine domestic and productive responsibilities. The study reveals that, income generated by women in the Kassena-Nankana Municipality may be small, but it plays a significant role in meeting family food needs. Women in the sample settlements showed positive attitude towards contributing to household food security particularly when a harvest is poor. In carrying out micro and small-scale activities, women are hampered by lack of time, lack of literacy skills and poor marketing opportunities. It is therefore recommended that that women should be provided with; support lending programs with other forms of business support that are essential for the effective development of women's participation in food security, labour and time saving machinery through the setting up of plant pools within reach for women in agriculture. Women farmers must be educated on new variety of crops that are being introduced as well as on other new and improved methods of farming through extension services.

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