

Improving Productivity Of rural Women Participating In Agriculture through Extension

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Abstract: This study was carryout to determinethe strategies for improving the productivity of rural women participating in agriculture through Extension in Bauchi local government area of Bauchi state, Nigeria. Three objectives were formulated to guide the study. A survey research design was adopted for the study. Eighty (80) respondents were randomly selected as the sample and data was collected using structured questionnaires. The data was analysed using simple descriptive statistics. The findings revealed that majority of rural women participating in agriculture are in their youthful and productive age, which indicate that they can participate in agricultural practices. The average farms size of the respondents ranges from 1-3 hectare, with mono-cropping as the commonest farming system practices in the area. The main source of labour is communal and the most common type of farm power used by rural women participating in agriculture is combination of hand tool and animal traction, which revealed that most of women in the area participate in small scale farming. The areas of improvement by Extension agents include awareness creation on new agricultural technology, women empowerment/credit facilities, formation of Cooperative societies among others. It therefore recommended that the local government should create literacy classes for women to improve their adoption of innovation; extension agent should encouraged rural women to form Cooperative societies which will help them in securing credit facilities.

Keywords: Improvement, Productivity, Rural Women, Participation, Agriculture

I. Introduction

Agriculture is the mainstay of economic growth and development of many developing countries including Nigeria (Ofoegbu, 2015). Today, about 60 percent of the Nigerian population is employed in agriculture in one form or the other in order to bring about self-sufficiency in agricultural productivity. (Alkali, 2010). The majority of the world's food producers are women. The United Nations estimates indicated that they provide 60 to 80 percent of the agricultural labour in Africa and Asia and 40 percent in Latin America. It was estimated that half of the world's food as grown by women. In Africa they produce most of the food their families consume, while in Asia and Latin America women carry out key stages of production and processing of crops and are the main producers of vegetables, poultry and livestock for the household (Adisa and Akinkunmi, 2012).

Rural women play a very significant role in agriculture. Yet, throughout the world, the poorest people are predominantly women and their dependent children (Gashaw & Alemayehu, 2015). A large portion of rural women perform unpaid work in agriculture. However, women's role differs according to geographical zones. Along the coast, women work as agricultural labors in the cultivation of export crops as well as in food production for the household. In the mountain zone, women participate in all the agricultural tasks, especially in land preparation, sowing, banking, weeding, harvesting and irrigation and are responsible for small scale marketing (Zahoor, Fakher, Ali and Sarwar, 2013).

As women have the major responsibility for post-harvest activities such as processing and storage, they play a key role in household food security. Women also perform a major role in livestock, especially in regard to shepherding, feeding, milking and calving. Women farmers do not have equal access to resources and this significantly limits their potential in enhancing productivity. They are often at a severe disadvantage when it comes to securing land tenure rights, owning livestock, accessing financial services, receiving the kind of extension services and resources (Amin et al, 2009).

The prosperity and growth of a nation depends on the position and development of its females, as they not only constitute nearly half of its population but also positively influence the growth of remaining half of the population. Rural women play momentous role in many agricultural activities in many countries (Amin, Ali, Ahmad, and Zafar, 2010). They perform almost all types of activities in agriculture and livestock sector. The major constraint for the involvement of women in agricultural activities is the household activities which takes much time to perform it. Majority of population live in rural areas whose source of revenue depends directly or

indirectly on agriculture sector. Rural women in Pakistan are among the millions of landless and small farmers (Sadaf et al, 2006).

Rural women rely on crop production and livestock sector to fulfil their basic needs of food, clothing and shelter. These women play a key role in agriculture growth, livestock raising, cottage industry and stay busy from sunrise to sunset to provide food to men in the fields, fetching water, collecting fuel wood and management of livestock. While working shoulder to shoulder with men, they really supplement their efforts in the cultivation of the crops right from the preparation of soil to the post-harvest operations.

There is a close connection between agricultural growth and economic development. Agriculture is main sector which can contribute to general economic growth in the entire world. Agriculture performs a key role in the economic growth of developing countries and it is the key source of raw materials, income and employment to the pastoral population of these countries. Moreover the growth of other sectors is also dependent on the agricultural growth in many countries especially in developing countries. Agricultural development is a key to food security, poverty alleviation and overall sustainable development (Afzal et al, 2009).

Despite the technological improvement in agriculture, the level of rural women participation is faced with a lot of problems ranging from lack of educational awareness, lack of capitals and insufficient extension education to create awareness and training on how to fully participate in agriculture. Insufficient of farms inputs which are very expensive and lack of loan, credit facilities to support the women (Adisa, 2013).

II. Purpose of the Study

The main purpose of the study is to develop strategies for improving rural women participation in agriculture through extensive education in Bauchi local government. The specific objectives include:

- (1) determine the socio-economic characteristics of rural women participating in agriculture
- (2) determine theLevel of rural women participation in agriculture
- (3) determine the Extension needs for improving rural women participation in agriculture

III. Methodology

The survey research design was used for this study.The area of the study isBauchilocal government area of Bauchistate.The population comprisedof rural women participation in agriculture in Bauchilocal governmentwith the following districts, Bauchi,Galambi, Birshi and Miri. Simple random sampling technique was used to select 20 rural women participating in Agriculture from each of the district, totaling 80 respondents as the sample size for the study.The instrument for data collection was a 5 points liker type structured questionnaire. The questionnaire was validated by experts from AbubakarTafawaBalewaUniversity Bauchi. It pilot tested on respondents outside the study to get a reliability coefficient of 8.92 using Cronbach Alpha. The questionnaire was administered to the respondents by the researchers. The data collected was analyzed using descriptive statistics.

IV. Result and Discussion

Rural women in Bauchi perform an important role in agricultural growth. Their socio-economic background has a vast impact on their participation. The socio-economic conditions of women in the study area are such as below:

Table 1: Socio –economic Characteristic of Rural Women Participating in Agriculture

| S/N | Characteristics | Frequency | Percentage |
|-----|---------------------------|-----------|------------|
| 1. | Age | | |
| | < 20 Years | 14 | 17.5 |
| | 20-29 years | 34 | 42.5 |
| | 30-39 years | 25 | 31.25 |
| | 40-49 years | 7 | 8.75 |
| | Total | 80 | 100 |
| 2. | Marital status | | |
| | Single | 14 | 17.5 |
| | Married | 66 | 82.5 |
| | Total | 80 | 100 |
| 3. | Level of education | | |
| | None | 9 | 11.25 |
| | Qur'anicEducation | 26 | 32.5 |
| | Primary education | 9 | 11.25 |
| | Secondary school | 32 | 40 |
| | Total | 80 | 100 |
| 4. | Household size | | |
| | 1-5people | 53 | 66.25 |
| | 6-10 | 17 | 21.25 |

| | | | |
|-----------|--|-----------|------------|
| | 11-15 | 10 | 12.5 |
| | Total | 80 | 100 |
| 5 | Participation in agriculture | | |
| | Full time | 59 | 73.75 |
| | Part time | 21 | 26.25 |
| | Total | 80 | 100 |
| 6 | Farming experience | | |
| | 1-5years | 29 | 36.25 |
| | 6-10years | 45 | 56.25 |
| | 11-15years | 6 | 7.5 |
| | Total | 80 | 100 |
| 7 | Membership of Cooperative Society | | |
| | Yes | 16 | 20 |
| | No | 64 | 80 |
| | Total | 80 | 100 |
| 8 | Source of finance | | |
| | Personal saving | 53 | 66.25 |
| | Bank loan | 1 | 1.25 |
| | Friends and relative | 25 | 31.25 |
| | Salaries | 1 | 1.25 |
| | Total | 80 | 100 |
| 9 | Previous-years expenditure (₦) | | |
| | Below 10,000 | 6 | 7.5 |
| | 10,000-20,000 | 14 | 17.5 |
| | 20,000-30,000 | 32 | 40 |
| | 30,000-40,000 | 23 | 28.75 |
| | 40,000-50,000 | 5 | 6.25 |
| | Total | 80 | 100 |
| 10 | Previous years gross income (₦) | | |
| | Below 20,000 | 5 | 6.25 |
| | 20,000-40,000 | 31 | 38.75 |
| | 40,000-60,000 | 41 | 51.25 |
| | 60,000 above | 3 | 3.75 |
| | Total | 80 | 100 |

The table 1 shows the socio- economic characteristic of rural women in the study area. Majority of the rural women are in their youthful and active age of less than 30 years (50%) which indicates that they can participate in agricultural production. These outcomes also agree with that of Amin et al. (2009) that majority of respondents related to agriculture sector were of middle age categories. The findings also shows that best part of rural women (82percent) were married. This agrees with that of Ayoada et al. (2009) that majority of women related to livestock production were married. This finding was supported by Chizari (1997) who reported that majority of the women were middle aged, married, and illiterate and had household income less than 20 million naira annually.

About 66% of the respondent had family size of 1-5 people which shows that respondent had large family and this indicate they will participate more in agriculture. This finding was supported by Zahoor, Fakher, Ali and Sarwar (2013) who reported that majority of respondents 53 had had 6 to 10 family members and 23 percent had 1 to 5 family members and 24 percent had above 11 members in family. This finding also agrees to that of Onuekwusi and Chukwu (2014) who found in his study that 52 percent of respondents had 5 to 10 children. This finding reveals that rural women have relatively large families.

Majority of the respondents have low level of educational, with 60% of rural women attended not more than primary school. This indicate that there is low level of education which affects their overall agricultural productivity. About 73.75% are fully participating in agriculture, which indicate that almost all the rural are participating in agriculture. This finding was supported by Parveen and Leonhauser (2004) who reported that majority of women had no any formal and non-formal education, had low media exposure and low spatial mobility. Moreover results shows that most of the rural women (57 percent) were illiterate and (19.8 percent) had only primary education. This result was also in line with that of Iftikhar (2009) who found that 56.5 percent of rural women in agriculture sector were illiterate and only 17.5 percent had primary education.

Majority of rural women (56 percent) had 6-10 years of farm experience. This finding was supported by Zahoor, Fakher, Ali and Sarwar (2013) who reported that a majority of rural women (25 percent) had 6-10 years of farm experience and 24 percent had above 20 years of farm experience.

About 80% are not member in cooperative society. This finding was not supported by Adisa (2013) who said majority of rural women in Agricultural production in the study area were members of one or more social groups. About 66.25% of the respondents getting their funds through personal saving. This indicates that there is low financial intervention in the area; hence there is need for fund assistance. While about 40% had high previous years expenditure of more than ₦30,000 and previous gross income of more than ₦40,000. This indicated that both the previous expenditure and the gross incomes of the respondent were very low for active

participating in agricultural practices. Zahoor, Fakher, Ali and Sarwar (2013) on the other reported that majority of women (38 percent) had low annual farm income as below Rs. 31,000 and 38 percent had moderate annual farm income as Rs. 31000-80000 and only 4 percent had high level of annual farm income as above Rs. 100,000, accordingly, Normatha et al. (2009) found in his study that 68 percent of farm women had low level of annual income.

Table 2: Level of rural women participation in agriculture

| S/No. | Level of Participation | Frequency | Percentage |
|----------|--|-----------|------------|
| 1 | Farm size | | |
| | <1 hectare | 3 | 3.75 |
| | 1-2hectare | 29 | 36.25 |
| | 2-3hectare | 47 | 58.75 |
| | 4-5hectare | 1 | 1.25 |
| | Total | 80 | 100 |
| 2 | Main Source of Labour | | |
| | Selflabour | 8 | 10 |
| | Family | 29 | 36.25 |
| | Hired labour | 8 | 10 |
| | Communal labour | 35 | 43.75 |
| | Total | 80 | 100 |
| 3 | Type of farm power use | | |
| | Single farm hand tools only | 9 | 11.25 |
| | Animal traction only | 16 | 20 |
| | Hand tool and animal traction combined | 52 | 65 |
| | Tractor | 3 | 3.75 |
| | Total | 80 | 100 |
| 4 | Type of farm ownership | | |
| | Purchase | 8 | 10 |
| | hired | 41 | 51.25 |
| | Inherited | 29 | 36.25 |
| | Borrowed | 2 | 2.5 |
| | Total | 80 | 100 |
| 5 | Types of fertilizer use | | |
| | Organic | 9 | 11.25 |
| | Inorganic | 24 | 30 |
| | Inorganic /organic | 41 | 51.25 |
| | none | 6 | 7.5 |
| | Total | 80 | 100 |
| 6 | Types of farming system | | |
| | Mono cropping | 44 | 55 |
| | Mixed cropping | 27 | 33.75 |
| | Mixed farming | 9 | 11.25 |
| | Total | 80 | 100 |

The table 2 shows the level of women participating in the study area. Farm size of the respondents, the majority of the respondents are using farms size of not more than 3-4 hectare 58.75%, and the lowest sized of 4-6 hectare which has 1 frequency and (1.25%). This indicates that the farms size of the respondents are relatively small in practicing agricultural activities. This finding was supported by Chizari (1997) who reported that most of them had land less than three hectares. Only 46% respondents had participation in rice extension and education programs. Their highest level of participation was in the land preparation program.

The main source of labour rural women in Agricultural production in the study area are communal labour (43.75%), followed by family labour (36.25%) and lowest is self labour (10%). This indicates that source of labour in the area is basically communal. The commonest type of farm power use by rural women in Agricultural production in the study area is about (65%) combination of hand tools and animal traction, while the least (3.75%) was tractor, this indicates that most of the farming activities of rural women in Agricultural production in the study area is small scale farming.

About 51.25% of the respondents had owned the land through hired (2.5%) through borrowing and 29 (36.25%) inherited the land. This indicates that the women in the area lack their personal farm for agricultural practices which reduce their level of participation in agriculture. Zahoor, Fakher, Ali and Sarwar (2013) reveal that the ownership of family land was mostly in the hands of husbands (28 percent), only 4.5 percent wives had the ownership of land and 41.8 percent respondents had no any kind of landholdings. So results reveal that women had lesser hold over the family land than males.

The types of fertilizer use by the respondents are organic and inorganic. This has about 51.25% with frequency of 41 and the lower of 6 (7.5%), which reveals that the type of the fertilizer use by the respondent is mainly organic /inorganic.

The types of the farming system using in the area by the respondents are mono cropping (55%), mixed cropping(33.75%) followed by mixed farming (11.25%).This reveals that mono cropping is mostcommon farming systems practices by the respondents in the area.

Table 3:Improvingrural women participation in agriculture through Extension

| S/N | Questionnaire items | Mean | Remark | Ranking |
|-----|---|------|-----------|-----------------|
| 1 | Awareness creation on new agricultural technology | 4.73 | Agreed | 1 st |
| 2 | Women empowerment /credit facilities | 4.03 | Agreed | 2 nd |
| 3 | Skill acquisition programme | 3.85 | Agreed | 3 rd |
| 4 | Cooperative organization | 3.82 | Agreed | 4 th |
| 5 | Improvement in literacy level of women | 3.64 | Agreed | 5 th |
| 6 | Primary health care delivery in farm settlement | 3.63 | Agreed | 6 th |
| 7 | Sourcing for agricultural technology | 3.52 | Agreed | 7 th |
| 8 | Participatory decision making in Agriculture | 3.02 | Disagreed | 8 th |

From table 3 the respondents have agreed with all the item having their mean ranging from 4.73 to 3.52 as the various areas of extension needs for improving rural women participation in agriculture, except item (8) with a mean of 3.02 which was disagreed by the respondents, which shows that participatory decision making in Agriculture is not an important extension needs for improving rural women participation in agriculture.Okwu and Umoru (2009) reported that 50.8% of the respondents in thestudy indicated high need for agricultural information onimproved agricultural technologies while 40 and 9.2%had moderate and low agricultural information needs.

Recent research shows that, despite producing the majority of agricultural output, women farmers receive far less extension services than men. In addition Agricultural technology development and extension have also largely been orientated towards men (World Bank & IBRD, 2009). Fewer women than men are therefore in contact with agricultural extension agents, and even fewer are the contactpoint for extension agents, responsible for passing information on to other farmers (Njuki, Kihyo, O'kingati& Place, 2004). This finding was supported by Onuekwusi and Chukwu (2014) who reported that majority of the respondents indicated lack of credit facilities, followed by lack of incentive and land tenure system as the three most important problems hindering their active participation in agricultural production.

The rating of lack of credit facilities as a challenges was supported by World Bank (2001) and FAO. (2006) who reported that women farmers have no access to the credit and capital required to increase the production. The result also supported the report by Chukwu and Asawalam (2001) that women farmers in Abia ranked lack of fund highest among the seven production constraints they identified to hinder agricultural development. The common constraints that women in poultry sector faces are the following: Time, lack of education, limited access to credit and inputs, land availability and tenure, lack of suitable farm and household technology, training centres, job availability etc (Mohammed et al, 2012).

V. Conclusion

The study revealed that developing the agricultural sector is a central concern which can no longer be ignored because of its role in the developing every society.It is clear that the participation of rural women in agriculturalactivities will suffer a serious setback, withoutgovernment intervention to improve the participation of rural women in agricultural activities. There problems will continued to grow if the governments did not take effective measures to combat the situation.

VI. Recommendations

Base on the findings of the study the following recommendation are made:

1. Agricultural extension agents should intensify effort in sourcing for agricultural technology to the rural women in Agricultural production.
2. Bauchi local government should emphasized opening literacy classes for the rural women in Agriculture to improve their literacy level which will in turn increased their adoption of innovation.
3. The rural women in Agriculture should be encouraged by the extension agent to open cooperative societies to improve their chances of obtaining credit facilities to increase their agricultural productivity.

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