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ASSESSMENT OF WOMEN INVOLVEMENT IN RICE PROCESSING ACTIVITIES IN JIGAWA STATE, NIGERIA

[1]Oladipo F.O., [2]Bello O.G., [1]Daudu A.K. and [1]Aliyu A.S
[1]Department of Agricultural Extension and Rural Development,
University of Ilorin, Ilorin, Nigeria
[2]Department of Agricultural Economics and Extension,
Federal University Dutse, Jigawa State, Nigeria
Correspondences E-mail: felixoladipo5@gmail.com/bellogafaro@gmail.com

Abstract

The study assessed the women involvement in rice processing activities in Jigawa State, Nigeria. A multistage sampling technique was used to get information froma total of 120 respondents through a well structured questionnaire using interview schedule approach. The study revealed that majority (74.2%) were between 31-50 years, (66.7%) were married with average monthly income of N5500.00 (62.5%). Islam predominates amongst the respondents (87.4%) with majority of them (71.0%) having Islamic education and household size of 7-9 (62.5%). Also, more than average of the respondents (56.7%) claimed to have farming experience of above 10 years and 91.7% used family labour. The study revealed further that majority (84.2%) of the respondents involved in the rice processing while 79.2% claimed to be involved in the activities on a daily basis The major source of awareness was through neighbours as claimed by majority (73.3%) and 73.3% of them processed manually. Major constraints of the farmers to rice processing were inadequate capital (96.7%), poor marketing of products (95.0%), inadequate processing (93.3%) and storage facilities (90.0%) and poor contact with extension agents (85.0%). Based on the findings, it was therefore recommended that government at all levels should institute empowerment initiatives, provide loan or credit facilities to women rice processors, and ensure more extension service delivery on awareness campaign on rice processing, food shelf life as well as efficient and effective new rice processing technologies.

Keywords: Assessment, Women, Involvement, Processing, Activities

INTRODUCTION

Growth and development of rural economy are essential pre-conditions to the development of a nation as a whole. This, according to Onwurafor and Enwelu (2013), for the developing nation to rise, there is the dire need of the development of rural economy, which of course hinge on Agriculture. And Nigerian economy which is still predominantly agrarian has women as a key player especially within rural communities. Women contribute between 40 and 65% of all hours spent in agricultural production and processing and also undertake 60 to 90% of the rural agricultural product marketing, thus providing more than

two thirds of the workforce in agriculture (FAO, 1985 cited in Sabo, 2006). In Nigeria, the involvement of women in agricultural activities especially processing have attracted greater attention in recent years. The need to develop a suitable extension service that is gender specific and tailored to women farmers cannot therefore be overemphasized. This is in recognition that women play very significant roles in Nigeria agricultural production, processing and utilization (Nnadozie and Ibe, 2000). Nevertheless, women are constrained under the unified Extension System by socio-cultural barriers, and by the current approach that rely almost exclusively on a network of contact farmers that over 95% male farmers do not involve in products processing of fruits, vegetables, small livestock and as such being the responsibility of women farmers (Odurukwu *et al*, 2006).

According to Adesope *et al.,* (2010), the credence of women vital roles in agricultural production in all parts of the world can also be viewed in Nigeria, where women constitute about 60-80% of the labour used for farming activities like planting, weeding, transportation, processing, marketing and storage of products and they also account for two-thirds of food crops produced in the country (United Nation, 1991). The notion that "women are the weaker sex" is no longer tenable as women form the backbone of agricultural labour and it is estimated that, they produce 40% of the gross domestic product (G.D.P) and 50% of developing nations' food (African Farmers, 1994). Women play a major role in the production, processing and marketing of food crops, yet women and households headed solely by women are often the most chronically poor members of rural communities (IFAD, 2012). Ekong (2013) asserted that not only are women majority in rural communities, they are responsible for well over 50% of all productive activities, (80% of food production – Africa and 60% of food production in Latin America) yet they received only one-tenth of the world's total income and for any meaningful development in the rural communities. He conceded that rural women would have to be highly motivated and encouraged to become actively involved in agriculture and its related activities, since women form the bulk of the rural populace (69.6%) in most cases and as observed by Anikpo (2000), being the most intimate with the home and the entire environment according to Annabel (1994), they are in a better position to articulate the most pressing needs of the community. Most often women's views have been trampled upon with severe consequences for the welfare of the womenfolk. Women, therefore, formed themselves into groups thus for the sole goal of initiating and executing their own development projects without the necessary domineering intervention of the men. Furthermore, Onwurafor *et.al* (2013), buttressed that Nigerian women form an indispensable part of human resources for development because without their contribution, the economy will be difficult to advance to a better level even though that FAO (2003); Onyene and Bakare (2011) lamented their efforts remaining largely unrecognised. According to them, women's activities in manufacturing and food

processing remain underestimated because most of their activities are undertaken as secondary activities generally hidden behind subsistence agriculture, post harvest production, trading (buying and selling) of consumer crops.

Women's contribution in creating value-added products through enterprise establishment need to be estimated properly in order to design more appropriate measures to help their empowerment. Food processing aids in extending the shelf life and storage time, to change the colour, flavour and texture to make food more attractive and palatable. Food processing brings wide range of benefits to enterprising people in developing countries which include: the potential for adding value to basic agricultural produce thereby promoting access to wider markets, improving small-scale producers and entrepreneurs income-earning ability, allowing improved use and control of local resources and helping to create employment for poor people, particularly in the rural areas (Ihekoronye and Uzomah, 2011). Moreover, it is assumed that if the world produces more or enough food than is consumed, women's input in effecting reduction or eradication of post harvest food losses in the rural setting will lead to rural transformation and livelihood engagement (Onwurafor and Anwelu, 2013).

Value chain actors in rice processing include farm inputs suppliers, farmers, threshers, transporters, millers, polishers and markets (RMRDC, 2013). According to Rusell and Hanoomanjee (2012), reasons for promoting value added production includes: higher profits, more stable market conditions, as price for consumer products show less variation than commodity prices, job creation in form of agro-processing, diversification of products and markets, downstream economic benefits through industry support sectors becoming more involved, strategically maximising overall value.

It is however worthy of note that in the recent decade there have been establishment of special agencies and organisations by government and individuals to stimulate rural agricultural development and invariably on women development and empowerment holistically. These policies of government have emanated the establishment of women commissions, ministries, etc and specialised agencies for women and rural development (Ekong, 2013). However, these agencies and organisations have not bettered the lot of the Nigerian rural women significantly because much of such projects have political undertone, allowing funds to be channelled into different but sometimes private projects. Instead, as Agboola (1996) noted, there have been distrust, disdain and outright indifference by the women to government projects to survive, as the rural women take their “destiny” into their own hands and solve their problems by themselves through constant and continuous involvement in agriculture especially agro-processing. It is on this premise that this study examined women involvement in rice processing activities in Jigawa State, Nigeria and sought to provide insights to the following research questions;

Objectives of the study

The general objective of the study is to assess the women involvement in rice processing activities in Jigawa state, Nigeria. The specific objectives of the study are to:

- Describe the socio-economic characteristics of the women rice processors;
- Dssess the level of involvement of the respondents in rice processing;
- Dxamine the awareness of improved rice processing technology;
- Identify the respondents' source of information on rice processing activities;
- Identify the constraints encountered by the women rice processors in processing in the study area.

Hypothesis of the study:

Ho 1: There is no significant relationship between the socio-economic characteristics of women rice processors and their level of involvement in agro-processing.

METHODOLOGY

Study Area;

The study was conducted in Jigawa State Nigeria. The State is situated in the north-western part of the country between latitudes 11.00°N to 13.00°N and longitudes 8.00°E to 10.15°E. The state has a total land area of approximately 22,410 square kilometers with twenty-seven (27) Local Government (Jigawa Wikipidia, 2014 and National Population Commission, NPC, 2006). The topography is characterized by high land areas which is almost 750meters. Soil tends to be fertile ranging from sandy-loamy with many pockets of fadama and alluvial plains suitable for the cultivation of rice, sugar-cane, millet, vegetables and sorghum etc. The state shares common boundaries with three (3) states and Niger Republic. There are usually two seasons in the state viz the rainy season lasting from June through October and dry season spanning from November to May. The mean temperature ranges from 35◦c in October to about 50^0c in May, while mean annual rainfall varies from 700mm to over 1000mm and can last up to 200days in some lowland parts of the state. The months of November to March are particularly cold due to dry harmattan wind. Jigawa state is predominantly an Agrarian state with over 80% of the population involved in Agriculture. The major rain fed crops grown in the state includes millet, sorghum, cowpea, groundnut, cocoyam, soya beans. Dry crops include sugarcane, Hot pepper, okra, tomatoes, onions and spinach. The major live stocks kept in the state includes, small ruminants (sheep and goat), poultry, cattle etc. The major rivers in the state that provide water for irrigation activities are the Hadejia and Katagum rivers. The Hadejia-Nguru river has the largest fadama area in Nigeria (IFAD-CBARDP, 2004). Jigawa state is divided into four ADP Zones 1, 2, 3 and 4

- Zone 1. The headquarters in Brinin kudu comprises of Dutse, Kiyawa, Jahun, Buji, Brinikudu, Gwaram, and Miga.
- Zone 2. The headquarters in Gumel comprises of Gumel, Maigatari, Ringim, Taura, Gagarawa.

- Zone 3. The headquarters in Hadejia comprises of Briniuwa, Kirikasamma, Kafin-Hause, Auyo, Guri, Malamadori, Kaugama, Hadejia.
- Zone 4. The headquarter in Kazaure comprises of Kazaure, Yankwashi, Gwiwa, Roni, Suletankarkar, Babura, Garki. (Jigawa State Diary, 2015).

Data Collection:

A multistage procedure was employed for the study. The first stage was a purposive selection of ADP Zone 1 out of the 4 zones because of high concentration of women rice processors. The second stage involved a random selection of two local governments within the zone while the third stage involved random selection of two communities from each local government selected. The final stage was a random selection of 30 respondents from each community to make a sample size of 120 used for the study. Data were collected through a well-structured questionnaire using interview schedule approach and were analyzed using descriptive statistics such as percentages, mean, frequency counts. Hypotheses were tested using Chi-square and Pearson Correlation analysis.

RESULTS AND DISCUSSION

Table 1 shows that majority (74.2%) were in the age range of 31-50 years who could be considered to be within the active and productive age, about 14.2% were young in the age range of below 30 years and the rest were above 50 years of age. This is in accordance to the assertion of Idris *et al* (2008) who said that at this age range, people are expected to be more active and involved in economic activities like agriculture. The table also shows that majority (66.7%) were married, only 12.5% were single and 11.7% ,2.5% and 6.7% were divorced, widowed and separated respectively with majority (62.5%) having average monthly income of #4,000.00-7,000.00. This implies that these processors were poor with low level of income earners considering the number of dependents. Only 2.5% of the respondents claimed to be earning average monthly income equal or above or #12,000.00. Islam is the most practiced religion (87.4%) while only 8.3% and 3.3% practiced Christianity and Traditional religion respectively. The table 1 also shows that majority (62.5%) has household size of between 7-9 and 16.7% have above 10 persons a household. In addition, 6.7% had 3 years of rice processing experience. From the table 1, it is also shown that majority (82.5%), use communal labour for rice processing. 75.0%, and 16.7% of the respondents claimed to engaged in farming, artisan and trading respectively as secondary occupation. About 61.7% of the respondents claimed to belong to Cooperatives society while 30.0%, 8.3% claimed to belong to Islamic and Christian religion groups respectively.

Result in Table 2 shows that majority (79.2%) involved in daily rice processing activities, meaning that the respondents work every day in the processing site, while only 4.2% do so seasonally and 16.7% of them got involved just seldomly. Also, a good number (84.2%) of the processors

claimed to be completely involved in the rice processing while the rest (15.8%) are not involve completely in the processing activities.

From Table 3, it is revealed that the major source of information for rice processing technology was through their fellow processors. That is (73.3%) while only 8.3% had information through radio, television and film shows and only (1.7%) sourced information through extension agents. This implies that these rice processors have very poor extension contact in the study area. As per the years of awareness, it is seen that majority (64.2%) of the respondents claimed to have aware of rice processing technologies for equal 10 years and above while 25% aware for about 4 to 9 years ago and only few (10.8%) claimed to aware in less than 3 years. This implies that there was high level of awareness of the rice processing technologies in the area.

Table 4 shows a very low level of use of new technological awareness as only 5.0% of the respondents claimed highly use of new technologies aware while about 29.2% did use fairly and majority (65.8%) never use the new technologies aware. On the other hand, majority (73.3%) of them highly use the manual or local methods, while 25% use manual methods fairly and just a few (1.7%) claimed of not using the manual methods at all. This means that in spite of greater awareness, the processors still stick to the manual or traditional methods of rice processing. This might be due to their inadequate knowledge of the technologies, fear of risk and probably inadequate capital to enable them adopt the technologies effectively.

As also shown in Table 4, it was discovered that majority (81.7%) had interest in the use of new technologies already aware while only 22% indicated no interest of use of the aware technologies. As per the continuity of local or manual methods, greater above average (57.5%) of the respondents indicated no further interest whereas about 42.5% still indicated their interest to continue the use. This implies that unless these latter categories have effective and efficient extension service delivery to them as well as issues to convince them of the dire needs of using new technologies, they were not ready to discard the manual methods.

Table 5 shows the common constraints reportedly faced by women rice processors.The data indicated that inadequate capital to run the processing business activities ranked first and as such constituted the major constraint affecting them. Other major constraints as revealed in Table 5 were poor marketing of products, resulting in low profit, inadequate processing facilities, inadequate storage facilities, poor contact with government officers or extension agents to guide on adoption of new technologies, Inadequate training and re-training of new technologies and inadequate raw materials for timely processing.

Table 6 shows that there was a significant relationshipbetween the family labour,average monthly income and years of processing experience of respondents and their involvement in rice processing activities ($p<0.05$). Other characteristics

such as age, educational status and household size of the respondents were not significantly related with their involvement in rice processing activities. This implies that the more the family labour, the more will the respondents becomes actively involved in the rice processing activities since they are not paying for the labour in terms of wages on work done. Also the higher the monthly income of the respondents or proceeds accrued from sales of processed rice, the more the involvement of the respondents in the rice processing activities since more income means better living standard and better productive energy. In this same vein, the more the years of experience, the more the understanding of the nitty gritty of rice processing activities.

CONCLUSION

From the findings of the study, it could be concluded that extension service delivery to rice women processors was poor as majority sourced for information on their processing activities through neighbours and in spite of their greater awareness of new technologies through neighbours, radio and television, they were predominantly using manual or traditional methods probably due the constraints of inadequate capital, poor marketing of products, inadequate processing and storage facilities.

RECOMMENDATIONS:

Based on the findings of the study, the following recommendations were made:

I. Provision of empowerment initiative by the three tiers of government, through the Central Bank to the Community Banks at the local level, for providing credit facilities to help the women rice processors to improve their purchasing and processing capacity;
II. Provision of more extension personnel, particularly female extension agents who are highly motivated to aid women rice processors on the improved technologies, and
III. Continuous awareness campaign and organisation of training workshops should be given a priority both by ADPs, NGOs and other Philanthropists as a kind of advisory service to boost the capacity of the women rice processors.

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Table 1: Socio-economic characteristics of the respondents

Variables	**Frequency**	**Percentage**
Age categories (years)		
<20	05	4.2
21-30	10	10.0
31-40	68	56.7
41-50	21	17.5
51-60	12	6.7
>61	04	3.3
Marital Status		
Single	15	12.5
Married	80	66.7
Divorced	14	11.7
Widowed	03	2.5
Separated	08	6.7
Educational Level		
Primary	11	9.2
WAEC/ NECO	04	3.3

Tertiary	00	0.0
Islamic Education	71	59.2
Adult Education	14	11.7
No Formal Education	20	16.7
Household Size		
< 3	10	8.3
4 – 6	15	12.5
7 – 9	75	62.5
> 10	20	16.7
Religion		
Islamic	105	87.4
Christianity	10	8.3
Traditional	05	3.3
Farming Experience		
< 3	08	6.7
4-6	16	13.3
7-9	24	20.0
> 10	72	60.0
Source of Labour		
Family	99	82.5
Hired	13	10.8
Communal	08	6.7
Secondary Occupation		
Farming	90	75.0
Trading	20	16.7
Artisan	10	8.3
Average monthly income (N)		
Below 3,000	17	14.2
4,000-7,000	75	62.5
8,000-11,000	30	25.0
12,000-15,000	3	2.5
Above 16,000	0	0.0
Member of Social Group		
Cooperative	70	58.3
Islamic Society	36	30.0
Christian Society	10	8.3

Source: Field Survey: 2016

Table 2: **Levelof Involvement of Respondents in Rice processing**

Level of Involvement	Frequency	Percentage
Daily	95	79.2
Seasonally	05	4.2
Seldom	20	16.7
Type of Involvement		
Complete	101	84.2
Partial (Not complete)	19	15.8

Source: Field Survey, 2016

Table 3: Awareness of Rice Processing Technologies

Sources of Awareness	**Frequency**	**Percentage**
Radio	10	8.3
Television	10	8.3
Newspaper	00	0.0
Film show	10	8.3
Extension Agent	02	1.7
Neighbour	88	73.3
Year of Awareness		
<3	13	10.8
4-9	30	25
>10	77	64.2

Source: Field survey, 2016

Table 4: Level of use of Rice Processing Technologies and future Interest to use

Level of Use of Technological awareness	**Frequency**	**Percentage**	**Level of Use of Local/ manual Methods**	**Frequency**	**Percentage**
Highly use	06	5.0	**Highly use**	88	73.3
Low use	35	29.2	**Low use**	30	25.0
Never use	79	65.8	**Never use**	02	1.7
Have interest to continue the use					
Yes	98	81.7	**Yes**	51	42.5
No	22	18.3	**No**	69	57.5

Source: Field Survey, 2016

Table 5: Distribution of Constraints faced by Women Rice Processors

Constraints	Frequency	Percentage	Rank
Inadequate raw materials for timely processing	68	56.7	7th
Inadequate processing facilities	112	93.3	3rd
Inadequate capital to run the processing business activities	116	96.7	1st
Inadequate storage facilities	108	90.0	4th
Poor contact with government officers or extension agents to guide on adoption of new technologies	102	85.0	5th
Inadequate training and re-training of new technologies	88	73.3	6th
Poor marketing of products resulting in low profit	114	95.0	2nd

Source: Field Survey, 2016

Table 6: Pearson correlation test of relationship between some selected socio economic characteristics of the rice processors and their involvement in rice processing activities

Selected Characteristic	R	Level of Significance
Age	- 0.133	0.05
Family Labour	0.151	0.05
Average monthly Income	0.210	0.05
Educational Status	-0.117	0.05
Years of processing experience	0.173	0.05
Household size	-0.226	0.05

Source: Field Survey, 2016