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Abstract

This study examined the gender role in Sawah system of rice production in Nigeria. This study was carried out in five states where Sawah is being practiced. The states are Niger, Kaduna, Ondo, Kwara and Ekiti. Data used in this study were collected in all the Sawah sites in Nigeria namely: Ejetti, Etzuzhegi and Nasarafu in Niger state, Nakala Pampaida millennium village in Kaduna state, Elerinjare in Ilorin Kwara state and Aule in Akure Ondo state. A well structured interview guide was used to elicit information from the farmers. Descriptive statistics were used to analyze the socio-economic and farming characteristics of the farmers. The results showed that respondents were predominantly male, married and acquired their land through inheritance. Farm sizes ranged from 1ha and 13ha. Majority of the farmers are members of farmers' association. Farmers got information about Sawah from their friends and Sawah coordinators in their zones.

Q Key Words:



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Gender Roles in Sawah System of Rice Production in Nigeria

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KEYWORDS Gender Roles. Rice. Sawah Technology

ABSTRACT This study examined the gender role in Sawah system of rice production in Nigeria. This study was carried out in five states where Sawah is being practiced. The states are Niger, Kaduna, Ondo, Kwara and Ekiti. Data used in this study were collected in all the Sawah sites in Nigeria namely: Ejetti, Etzuzhegi and Nasarafu in Niger state, Nakala Pampaida millennium village in Kaduna state, Elerinjare in Ilorin Kwara state and Aule in Akure Ondo state. A well structured interview guide was used to elicit information from the farmers. Descriptive statistics were used to analyze the socio-economic and farming characteristics of the farmers. The results showed that respondents were predominantly male, married and acquired their land through inheritance. Farm sizes ranged from 1ha and 13ha. Majority of the farmers are members of farmers' association. Farmers got information about Sawah from their friends and Sawah coordinators in their zones.

INTRODUCTION

Nigeria is the largest country in West Africa with the largest rice producing area (Oladele and Wakatsuki 2010). The rain fed lowland inland valleys that have good potential for intensification and are more robust than the upland system are largely unexploited (WARDA 1989). Inland valley bottoms and hydromorphic fringes cover about 50 million hectares in West Africa (Nigeria inclusive) of which about 10 million hectares have potential for small scale irrigated Sawah based farming. Ten to twenty million ha of Sawah can produce food for 300 million people in future (Oladele and Wakatsuki 2010).

Sawah, a system of rice production practiced in the inland valleys that ushered in the green revolution in the Asian countries has been identified as the pre-requisites for realizing similar feat in Sub-Saharan Africa (Hirose and Wakatsuki 2002). Efforts in the past 30 years particularly in research in rice cultivation has yielded valuable results only at the institutes and experimental station level but have made no great contribution to productivity at the farmers' field (Hirose and Wakatsuki 2002).

The term Sawah refers to a leveled rice field surrounded by bunds with inlets and outlets

connection to irrigation and drainage canals (Wakatsuki and Masunaga 2005). It is adaptable to a lowland ecosystem that require eco-technology skills, including those for minimum changing of topographical and ecological features, such as land leveling, bunding, and irrigation and drainage (Oladele and Wakatsuki 2010). The essence of bunding and puddling and leveling is to ensure that rice plant is supplied with adequate amount of water and soil nutrients (Issaka et al. 2008). Sawah development tasks which include clearing, stumping, canal construction, bunding, puddling, leveling, smoothening and transplanting are labour intensive and masculine in nature, making men to be clearly more active in the Sawah development activities, however this should not masked the gender roles in the production and post harvesting processing in Sawah rice production. Gender is a concept used in social science analysis to look at the role and activities of men and women. Gender plays an important role in influencing technology adoption decisions. Nowadays women are found in every area of development including agricultural and rural development, but sometimes their roles are being overshadowed based on gender differences (Fakoya et al. 2010). Poor rural women

play important roles in rice based farming systems as unpaid family workers, hired labourers, income earners and major caretakers of family health and nutrition.

In Asia, although farm size, social and economic class, production systems and cultural norms varies, women's contribution range from 25-80 percent of the total labour use in rice productions except for land preparation and spraying chemicals, rice operations are dominated by women (Thelma 2007). Their role in agricultural production and national development has become more prominent in terms of undertaking most of the agricultural activities, including decision-making and implementing those decisions independent of men (Squire 2003).

The Nigerian woman has proved to be more than a mere "bench warming" spectator even in the midst of a male dominated professional congregation. Available evidence and statistics show that role of women in agricultural production cannot be trivialized (Ogunlela and Mukhtar 2009). Therefore with the acknowledgement of the role of women in agricultural and particularly in rice production, it is therefore very much in place to analyze the gender roles in Sawah system of rice production. The study aims at identifying the gender roles in Sawah development in Nigeria. The specific objectives are to:

1. Determine the socio-economic characteristics of the respondents
2. Identity major role played by men and women farmers in Sawah rice production

METHODOLOGY

The study was carried out in Nigeria. Nigeria has 36 states and Abuja the federal capital territory (FCT). This study was carried out in five states where Sawah is being practiced. The states are Niger, Kaduna, Ondo, Kwara and Ekiti. Data used in this study were collected in all the Sawah sites in Nigeria namely: Ejetti, Etzuzhegi and Nasarafu in Niger state, Nakala Pampaida millennium village in Kaduna state, Elerinjarc in Ilorin Kwara state and Aule in Akure Ondo state. A well structured interview guide was used to elicit information from the farmers. Descriptive statistics were used to analyze the socio-economic and farming characteristics of the farmers.

RESULTS AND DISCUSSION

Table 1 showing the age distribution of respondents revealed that 42 percent of the farmers fall between age 18 years and 30 years, 16

percent between the age bracket of 31-40, 18 percent are between age 41 and 50 while the remaining 24 percent falls within age 51-60. This implies that the bulk of the farmers that have adopted Sawah are still young and strong to practice the Sawah system of rice production. It implies that Sawah adoption could be sustained for years by this energetic youth who still have long productive years. What attracts the youth may be the dissemination method which inculcates giving of inputs like fertilizer, herbicides on loan to adopting farmers and the mechanization of some of the operations particularly puddling of their field with the aid of the power tiller, which is a clear departure from the old manual tilling they are used to over the years. Also, 98 percent of the respondents are males and 2 percent female farmer. This indicates that women are not only stakeholder in rice farming but a player in the Sawah system of rice farming. Marital status of the farmers revealed that 98 percent of them are married while 2 percent of them are single. It is clear from this that family members, wives and children comes handy in supplying the needed labour, particularly in an agrarian community where hired labour may be scarce and costly during the farming season, since

Table 1: Percentage distribution of socio-economic and farming characteristics of the respondents (n= 50)

Characteristics	Percentage
<i>Age</i>	
18-30	42
31-40	16
41-50	18
51-60	14
Greater than 60	10
<i>Gender</i>	
Male	98
Female	2
<i>Marital Status</i>	
Married	98
Single	2
<i>Educational Level</i>	
No formal education	32
Primary	12
Secondary	34
Tertiary	22
<i>Farm Size (ha)</i>	
Less than 0.50	18
0.50-1.00	26
1.00-2.00	24
Greater than 2.00	32
<i>Land Tenure</i>	
Inheritance	68
Rent	24
Purchase	6
Leasehold	2
<i>Membership of Association</i>	
Rice Farmers Ass.	98
Cooperative Ass.	2

since everybody will be engaged on their farms. As opined by Garba et al. (2011) the significance of the variable could be due to the fact that as family size increases farmers tends to have and use more family labour which invariably reduces cost of production. The result of the study further revealed that all the respondent interviewed have farming as their primary occupation with rice farming as a culture. This implies that those adopting Sawah are not just part time farmers but those who earn their living through farming. This mean that the needed commitment can be guaranteed and the pursuance to achieving food security is thinkable since the real stakeholders are involved. Unlike some national agricultural projects where those involved are farmers by proxy. 32 percent of the respondents have no formal education, about 12 percent have primary education, and 34 percent have secondary school education and about 22 percent with tertiary education. This testifies to the fact that majority of the farmers are literate. This will enhance agricultural development, because improved practices, as they unfold from rescarches will be better disseminated, understood and adopted. This was corroborated Amaza and Tashikalma (2003) that the literacy level of farmers enhances the rate of adoption of improved technology. Finding also revealed that 18 percent of the farmers have less than 1/2ha of their land put under Sawah system of rice production, 26 percent have Sawah farm size between 1/2ha and 1ha and 56 percent put between 1ha to 13ha of their land under Sawah. This trend reveals that farmers committed a sizeable portion of their land to practicing Sawah, however those who committed areas of land less than 1/2ha may be new entrants or those who the tenural system does not give them access to large area of land. Finding shows that 68 percent of the respondents acquired their land through inheritance, while 24 percent got theirs through rent, Two percent of the respondents bought their land and 6 percent of them got his through leasehold. Land tenure by inheritance which is the predominant pattern of land ownership ensures security and sustainable use of land which is essential to maximizing returns for investment in Sawah. As asserted by Oladele and Wakatsuki (2009) that the probability of adopting Sawah technology increases, if the plot is acquired through inheritance, by purchasing and having long tenancy period. The result of the study shows respondents membership of association 92 percent of them belongs to the rice farmers association while 8 percent belong to cooperative association.

Figure 1 indicate that about 46% of the respondents were introduced to Sawah technology by friends that are other famers who are adopters of the technology while the remaining 54% got to know about it from Sawah coordinators in their zones. The multiplier effect as witnessed by the intra dissemination of the technology among farmers is a testimony that the farmers appreciated the gains of the Sawah system.

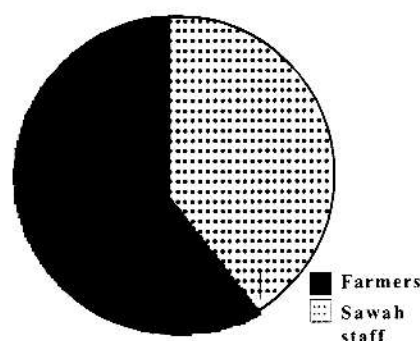


Fig. 1. Sources of information on Sawah technology among farmers

Gender Division of Labour

Clearing of land, nursery preparation, bunding, puddling, canal construction leveling, fertilizer application and harvesting are activities exclusively carried out by men, this may be as a result of the difficult nature, and the belief in these communities that tasks that are energy sapping like bunding are exclusively left for men who are believe to be more energetic than women. Though puddling is mechanized, done with the aid of a power tiller however the manipulation of the semi hand driven machine in the slurry created by its action requires much energy that may be too much for a woman to cope with.

As revealed by the Table 2 weeding, transplanting and threshing are mainly carried out by men, though some of the respondents said there are cases where there wives offer some assistance in transplanting and threshing particularly when there is pressure of work and dearth of labour, however these schedules are entirely men's.. Winnowing is entirely carried out by women; this may be because of the lightness of the task and the belief that winnowing is a traditional role of

women. Therefore these gender roles may not just be product of the tediousness of the task but interplay of the socio-economic factors in these communities. Ademiluyi et al. (2008) reported that gender affects the adoption of some of the activities on the Sawah rice production package.

Table 2: Percentage distribution of gender involvement in Sawah rice production technology (n = 50)

Activities	Male	Female
Clearing	100	0
Nursery bed preparation	100	0
Bunding	100	0
Canal Construction	100	0
Puddling	100	0
Levelling	100	0
Transplanting	77.2	22.8
Fertilizer Application	76	24
Weeding	84	16
Herbicide Application	87	13
Water management	84	16
Harvesting	87.6	12.4
Threshing	82	18
Winnowing	0	100
Marketing	100	0
Bird scaring	20	80

Figure 2 shows the results of the Mann-Whitney U test showing gender analysis of Sawah rice production technology. The figure presents gender involvement in Sawah rice production

activities. The result shows that a significant difference exist in gender involvement in Sawah rice production activities ($Z = -3.79$, $p < 0.05$); with higher mean rank for males (22.69) than females (10.31). This further confirms that male were more involved in Sawah technology activities than female. This may be attributed to the level of labour demand in each of the activities associated with the use of Sawah rice production technology. It is noteworthy however that there is a household spread of the activities and that will not unnecessarily add to the burden of women within the farming households.

CONCLUSION

The findings of this study revealed that the bulk of the activities on Sawah fields are carried out by men because of the nature and energy demand of these tasks which is believed women can not meet up with. However women are completely saddled with winnowing of the threshed paddy. It is therefore important to note that with the burden of the Sawah development task on men there is need to think of widening the scope of technology intervention, not just limiting it to the land preparatory machines like the power tiller but introducing other labour saving, fast and more efficient machines like the thresher, dehuller

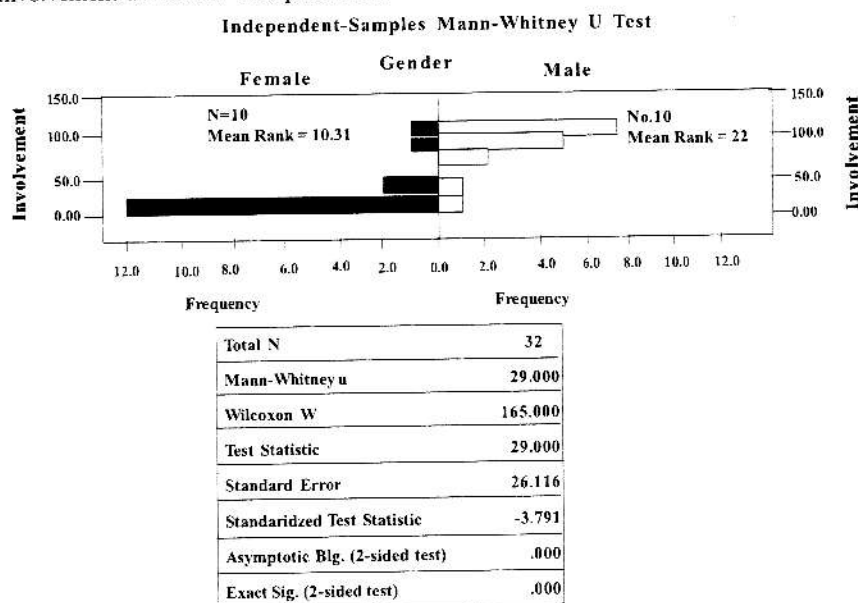


Fig. 2. Mann-Whitney U test showing gender analysis of Sawah rice production technology.

and others along the rice value chain. Including this in the Sawah package may mean educating the farmers on these machines, encouraging them to pooling resources together to get them and bringing in the government to make them available at subsidized rate. Agro centres can be created, particularly at production areas where these machines can be hired by farmers at an affordable rate

RECOMMENDATIONS

It is also pertinent to think of a way of making Sawah technology more gender sensitive, particularly now that women are not only active players in agriculture, but in Sawah technology since findings from the study revealed a female Sawah farmer. Land development programme should be worked in to Sawah with collaboration with Government to put infrastructures like dykes, canal, and bunds in place. This developed land can now be given to women rice farmers who are willing to adopt Sawah. This will not only encourage gender equality and drastically alleviate poverty among rural women but also accelerate pace of achieving food security.

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