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ASSESSMENT OF WOMEN INVOLVEMENT IN WATERMELON PRODUCTION ACTIVITIES IN OYO STATE, NIGERIA

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Abstract

The study assessed women involvement in watermelon production activities in Oyo State, Nigeria. Interview schedule was used to collect primary data from the respondents. Multi-stage sampling technique was used to draw 140 respondents across the study areas. Findings revealed that Mean age of respondents was 38 years and average household size was 7 persons. Majority (90.7%) of the respondents were married. Average household size was 7 persons. Majority of the respondents (86.4%) had between primary and tertiary education while minority (13.6%) had no formal education. Average year of farming experience was 15 years. Average farm size was 1.1 hectares. Respondents were fully involved in the activities such as harvesting (95.7%), marketing (97.9%), watering (96.4%), fertilizer application (88.6%), seeds treatment (67.9%), pre-nursery activities (61.4%), hole digging (64.3%) while they were partially involved in weeding (62.1%) and planting (94.3%). Most of them (67.1%) were not involved in land preparation. Inadequate capital ($\bar{x} = 2.93$), Climatic factor ($\bar{x} = 2.92$), Lack of storage facilities ($\bar{x} = 2.88$) were among the major constraints to watermelon production. PPMC revealed significant relationship between age ($r = 0.072$, $p < 0.05$), farm size ($r = 0.512$, $p < 0.05$), farming experience ($r = 0.568$, $p < 0.05$) and involvement of women in watermelon production activities. The study concluded that most women involved themselves in less tedious activities in watermelon production rather than the tedious one which were left for men to do. It was recommended that government should subsidize the cost of equipment to ease watermelon production for women.

Keywords: Women, Watermelon, Production activities and Involvement.

Introduction

Watermelon (*Citrullus lanatus*) belongs to the family Cucurbitaceae which includes Squash, Pumpkins, Cucumber, Musk melons and Gourds (Schippers, 2000). Watermelon is the most popular cucurbits, followed by cucumber and melon. It is an economically important fruit crop and valuable alternative source of water in desert areas. In Nigeria, though there are no official figures recorded for its production, the crop has a wide distribution as a garden crop, while as a commercial vegetable production, its cultivation is confined to the drier Savanna regions of Nigeria (Anon, 2006). In recent times, its cultivation has been extended down to the forest belts of South-Western Nigeria (NIHORT, 2006). Watermelon is cultivated for its fleshy, juicy and sweet fruit which is mostly fresh. The fruit has high lycopene content in the red-flashed cultivars, 60% more than tomato. Lycopene has been classified as useful in the human diet for prevention of heart attacks and certain types of cancer. Watermelon was domesticated as a source of water, a staple food crop and an animal feed. However, women's involvement in Agriculture cannot be overemphasised because men especially youths are migrating to the cities on daily basis thus, increase in number of women in agriculture as Fakoya *et al.* (2011) observed increase in number of women in the management of farms and more importantly that they bring into play their wealth of indigenous knowledge and exert their influence on the decision making pattern on their household nutrition. In this light, major objective of this study was to assess women involvement in watermelon production activities in Oyo State, Nigeria while specific objectives investigated socio-economic characteristics of the respondents, level of women involvement in watermelon production activities and farmers' constraints to watermelon production in the study area.

Methodology

Population of the study comprised all women engaged in watermelon production in Oyo State. Multi-stage which involved purposive and simple random sampling techniques were used in selecting respondents engaged in watermelon production in the study area. The data for the study

was collected through an interview schedule to extract useful information from the watermelon farmers. Respondents were selected from geo-political zones of the thirty-three (33) local Government areas of Oyo State. Stage 1: Oyo state Agricultural Development Programme (OYSADEP) zones were identified and selected (Ibadan/Ibarapa, Ogbomosh, Saki and Oyo zone). Stage 2: 25% of the local governments were randomly selected from each of the agricultural zones (Ibarapa Central, Ibarapa North, Oluyole, Ido, Atiba, Surulere, Iseyin, Saki West and Kajola). Stage 3: Based on sex and predominance in watermelon cultivation, women farmers were purposively used for the study. Stage 4: Simple random sampling technique was used to select 140 respondents from the local governments selected in stage 2.

Results and Discussion

Socio-economic Characteristics of watermelon Farmers

Results in Table 1 revealed the mean age of the respondents to be 38 years. This fell within active age which implies that watermelon farmers have strength, will and energy to farm. Age is an important determinant of socio-economic status of a population since people deteriorate in energy as they advance in age. Thus, many of the farmers were agile and able bodied characterized with strength. Nwaru *et al.* (2006) observed that the older a farmer become, the more his/her efficiency dropped. This implied that watermelon farmers in the study area were male dominated. This corroborated with Food and Agriculture Organization FAO (2015) that noted low participation of women in agriculture. Majority (90.7%) of the respondents were married and 9.3% were single. Average household size was 7 persons. This implied that most of the family heads had family labour that could complement watermelon production activities. Majority of the respondents (86.4%) had between primary and tertiary education while minority (13.6%) had no formal education. Education level attained played major role in the farmer's production potential. This agreed with the finding of Uwagboe *et al.* (2010) that the farmers' level of education could enhance their farming activities, level of awareness and level of receptivity of improved technologies. Average year of farming experience was 15 years. This showed that farmers were experienced, specialized and could achieved greater efficiency. This agreed with Busari *et al.* (2012) that the years of farming experience play vital roles in influencing farmers' production. Average farm size was 1.1 hectares which implied that most of the respondents were cultivating at small scale level.

Table 1: Distribution of respondents by their socio-economic characteristics

Characteristic	Frequency	Percentage	Mean
Age (years)			
1-20	02	1.4	
21-40	77	55.0	38
41-60	45	32.1	
61 and above	16	11.5	
Marital Status			
Single	13	9.3	
Married	127	90.7	
Household Size			
1- 5	39	27.9	
6-10	90	64.3	7
11-15	10	7.1	
16-20	01	0.7	

Educational Level				
Primary Education		57		40.7
Secondary Education	55		39.3	
Tertiary Education	9	6.4		
No formal Education	19		13.6	
Farming experience (years)				
1-10		40		28.6
11-20	91	65.0	15	
21-30	08	5.7		
31 and above	01		0.7	
Source of Labour				
Family Labour	31	22.1		
Hired Labour	109	77.9		
Farm Size (ha)				
<1	52	37.1		
1-5	77	55.0	1.1	
6-10	05	3.6		
11 & above	06	4.3		

Source: Field Survey, 2019

Level of women involvement in watermelon production

Table 2 revealed the various levels of women's involvement in the production of watermelon. Respondents were fully involved in the activities such as harvesting (95.7%), marketing (97.9%), watering (96.4%), fertilizer application (88.6%), seeds treatment (67.9%), pre-nursery activities (61.4%), hole digging (64.3%) while they were partially involved in weeding (62.1%) and planting (94.3%). Most of them (67.1%) were not involved in land preparation. Their full involvement in harvesting, marketing, watering and fertilizer application, seed treatment, pre-nursery activities and hole digging might be due to their less energy requirement. Most of them that were partially involved in weeding, planting and not at all involved in land preparation might be due to tediousness of those operations. The finding corroborated Fakoya *et al.* (2011) that most women engaged in the activities such as harvesting, marketing, watering, Fertilizer application among others.

Table 2: **Distribution of respondents according to their level of involvement in watermelon production activities**

Watermelon cultivation activities	Fully involved	Partially involved	Not involved
Land preparation	20 (14.3)	26 (18.6)	94 (67.1)
Hole digging	90 (64.3)	42 (30.0)	08 (5.7)
Seed treatment	95 (67.9)	38 (27.1)	07 (5.0)
Pre-nursery activities	86 (61.4)	43 (30.7)	11 (7.9)
Planting	08 (5.7)	132 (94.3)	
Watering	135 (96.4)	05 (3.6)	
Weeding	34 (24.3)	87 (62.1)	19 (13.6)
Fertilizer application	124 (88.6)	16 (11.4)	
Harvesting	134 (95.7)	06 (4.3)	
Marketing	137 (97.9)	03 (2.1)	

Source: Field survey, 2019

Constraints to watermelon production in the study area

Table 3 identified constraints to watermelon production in the study area. Inadequate capital ($\bar{x} = 2.93$), Climatic factor ($\bar{x} = 2.92$), Lack of storage facilities ($\bar{x} = 2.88$), shortage of labour ($\bar{x} = 2.73$), high transportation cost ($\bar{x} = 2.28$) and lack of good seeds ($\bar{x} = 1.87$) were among the major constraints to watermelon production. This agreed with the findings of Odebode *et al.*, (2018) that women were faced with many constrains such as lack of access to credit, loans, low level of income, to shortages of input supply and other economic resources.

Table 3: Constraints to watermelon production in the study area

Constraints	SC	MC	NC	Mean	Ranking
Inadequate capital	128(91.4)	12(8.6)	-	2.93	1 st
Climatic factor	129(92.1)	11(7.9)	-	2.92	2 nd
Lack of storage facilities	126(90.0)	14(10.0)	-	2.88	3 rd
Shortage of labour	98(70.0)	42(30.0)	-	2.73	4 th
High Transportation cost	53(37.9)	71(50.7)	16(11.4)	2.28	5 th
Lack of good seeds	13(9.3)	94(67.1)	33(23.6)	1.87	6 th
Bad market structure	-	66(47.1)	74(52.9)	1.47	7 th
Inadequate extension services	-	64(45.7)	76(54.3)	1.45	8 th
Wind disaster	11(7.9)	72(51.4)	57(40.7)	1.28	9 th
Land Slope and topography	14(10.0)	18(12.9)	108(77.1)	1.25	10 th
Fire outbreak	-	19(13.6)	121(86.4)	1.08	11 th

Source: Field Survey, 2019

SC = Severe Constraints

MC = Mild Constraints

NC = Not a Constraint

Relationship between socio-economic characteristics and women involvement in watermelon production activities

Table 4 revealed relationship between socio-economic characteristics and women involvement in watermelon production activities. PPMC results showed that significant relationship existed between age ($r = 0.072$, $p < 0.05$), farm size ($r = 0.512$, $p < 0.05$), farming experience ($r = 0.568$, $p < 0.05$) and involvement of women in watermelon production activities. This implied that aged women might not be able to perform some tedious activities on the farm. Farm size as well, is a function of production activities that could be performed by women farmers. Farming experience of women might also dictate the activities to be involved in, with respect to watermelon production.

Table 4: PPMC results of relationship between socio-economic characteristics and women involvement in watermelon production activities

Variables	R	P	Decision
Age	0.072	0.001	S
Farm size	0.512	0.002	S
Years of farming experience	0.568	0.001	S
Land use	0.458	0.121	NS
Constraints	0.069	0.061	NS

Source: Field survey, 2019 $P \leq 0.05$ S = Significance NS = Not Significance

Conclusion

The study concluded that most of the women involved themselves in less tedious activities in watermelon production rather than the tedious one which were left for men to do. Women were fully involved in the activities such as harvesting, marketing, watering, fertilizer application, seeds treatment, pre-nursery activities, hole digging while they were partially involved in weeding and planting. Most of them were not involved in land preparation

Recommendations

Based on the findings, the following were recommended;

- (i) government should provide subsidized cost equipment that can ease watermelon production women.
- (ii) There should be expansion of rural infrastructures such as roads and market and storage facilities.
- (iii) Extension agents should focus both on small and large scale farmers as that will provide a uniform ground and a sense of belongings among the small scale farmers.

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