

Fruit Producers' Gender Related Needs In Selected States of Southern Nigeria

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ABSTRACT

Diversified needs of fruit growers in the horticultural value chain when identified specifically along gender lines and addressed can give desired boost in the fruit industry. The study assessed gender needs of selected fruit producers in Southern Nigeria. Multi stage sampling technique was used. This involves purposive selection of the three geopolitical zones in Southern Nigeria and selection of five States based on the abundance of selected fruits (pineapple, Citrus and mango) in focus. Data was collected from 87 respondents through structured interview schedule and analyzed with descriptive statistics. Majority are males (79.3%), married (92% and have one form of education or the other (74.6%). The most pressing need identified by adult females (47.1%) and female children (27.6%) was provision of water. Prioritized needs of adult males include credit facilities (80.5%), good road network (79.3%), farm inputs and information (75.9%). Male children (14.9%) have education and INFORMATION as their most pressing needs. Pest and disease infestation (75.9%), availability of affordable transport (74.7%) and inadequate storage facilities (70.1%) were major production challenges. Gender based policy approach through government intervention to create enabling environment for optimum productivity is recommended.

Keywords: Horticulture, gender, fruit producers, value chain.

INTRODUCTION

There is a growing demand for fruits both locally and globally, with a huge market potential for African tropical fruits. This demand is being fuelled by a growing consciousness in Western countries for fruit-rich diets. A huge potential to produce fruits for the entire world exists in Africa as a result of favourable climate. Nigeria has an immense comparative advantage and potentials to lead in world trade in the different horticultural crop production with her diverse ecologies and favourable weather conditions (NIHORT, 2008). Based on production quantities, the most popular fresh fruits worldwide in order are bananas, apples and grapes, with bananas having 115.74 million metric tons, apples 86.14 million metric tons and grapes 79.19 million metric tons. China produces 275 million metric tons of fruit annually (Shahbandeh, 2020 and Statista Research Department, 2020). Mangoes are the most consumed tropical fruit in the world and Nigeria remains Africa's top producer of the fruit followed by Kenya, Egypt and Madagascar. Major fruits produced in Nigeria include mango, pineapple, citrus, and plantain/banana which possess an enormous industrial potential. Although Nigeria is a big producer of pineapples on the African continent, a lot of harvested pineapples are

eaten locally or wasted, with very little for exports. The country is trailing behind Ghana and Ivory Coast who are leading exporters. Fruits have been described as one of the most sustainable and affordable sources of micro-nutrients in diets which can play a vital role in solving global micro nutrient crisis (Small starter, 2019, Ibeawuchi *et al*, 2015 and UN, 2004).

Gender refers to the roles and responsibilities of men and women that are created in our families, societies, and cultures. It also includes the expectations held about the characteristics, aptitudes and likely behaviors of both women and men (UNESCO, 2003). Gender needs are either practical or strategic. Practical gender needs are needs that reflect what interest women or men have from their present gender role. They refer to what women or men perceive as immediate necessities such as water, shelter and food. Practical needs are immediate and material and relate to what people need in order to perform their current roles more easily and so must be met first. Strategic gender needs on the other hand are needs that are derived from gender interests whose attainment substantially alters gender roles and can therefore generate conflicts in relationships (Sayadi and Calatrava-Requena, 2008; UNESCO 2003).

Women and men play different roles in the society whether at household, community and societal levels and therefore often have different needs.

Studies in Mali and Madagascar revealed women were less involved in identification of needs at local level as a result of which the local development plans did not reflect their practical needs appropriately. Their need for capacity building and credit was downplayed compared to infrastructure such as roads (OECD, 2018). Women and men may not always agree on what their priority gender needs are, but these needs have to be defined. It is expedient that different gender needs of men and women are incorporated into all aspects of programs, and policies for greater effectiveness. Thus, the study was designed to find out needs of male and female fruit producers in Southern Nigeria. Specific objectives were to:

- Identify personal characteristics of fruit producers
- Identify needs of fruit producers
- Identify production constraints of fruit producers
- Ascertain sources of information of fruit producers

METHODOLOGY

The study area was the Southern part of Nigeria. A multistage purposive sampling procedure was used for this study. The first stage involved purposive selection of the South South, South West and South East geo-political zones. The second stage was selection of Edo, Imo, Abia, Oyo and Osun states based on abundance of the crops of focus which were citrus, mango and pineapple. Based on expert advice from Agricultural Development Programmes (ADPs) in the sampled States, the core fruit producing zones were selected in the third stage. In the fourth stage, villages/communities were randomly selected. A total of 87 respondents were used for the study. The sampling procedure is shown on Table 1. All the States selected had a favourable climate for fruit production and had two distinct seasons - the dry and rainy seasons. Main languages spoken in States are Igbo, Yoruba and Bini. The primary data was collected through administration of structured interview schedule. Descriptive statistics of frequencies and percentages were used to analyze data collected.

Table 1
Selected states involved in fruit production

Geo-political zone	Selected States	Fruit Production Zones	Villages/Communities
South East	Imo Abia	Okigwe North Ngwa Bende	Umueze, Umudi, Okpala Umuokpeyi, Ogboko, Ozuitem
South West	Oyo	Ogbomoso Oyo	Iresaapa, Fiditi, Ogbomoso, Lagbedu-Orile
	Osun	Ife/Ijesha	Erin-Oke
South South	Edo	Edo South	Ehor, Ekpan

RESULTS AND DISCUSSION

Personal characteristics of respondents

Table 2 shows that 79.3 per cent of respondents were males. Many rural women lack access to land or have insecure land tenure. In Kenya, Muriithi (2015) reported that women farmers had limited access to land for production

and this posed as barrier to them for acquisition of credit through the formal channels. This is further corroborated by Oyedele (2006) who affirmed that rural women in Nigeria have no direct access to land ownership and inheritance. As such, more males are involved in fruit production than their female counterpart. Thus, gender differentiation exists in respect of land ownership in most communities

where women do not have ownership rights over land, although they may have right of use. Similarly, Fakayode *et al.* 2012 reported male dominance in fruit production on family farms which are usually inherited. Such fruits are produced on sizeable proportion of land in combination with other permanent tree crops.

Findings from Table 2 also revealed that 92 per cent of the fruit producers are married. Onu (2003) adduced that married individuals may increase productivity and innovativeness through commitment to tasks. It could also serve as an

avenue to providing farm labour thus reducing production costs. More than half of the respondents had between 1-10 children. A high level of literacy exists among majority of the respondents spanning through primary (31%), secondary (19.5%) and tertiary (19.5%). Studies by Adebisi-Adelani (2013), Ogunleye (2012) and Oladeji (2011) affirmed that majority of farmers in Southwestern states are literates. Okunmadewa (2002) also opined that farmers' literacy levels usually influence their decision making and adoption of innovation by farmers which may bring about increase in productivity.

Table 2
Personal characteristics of fruit producers

Characteristics	Frequency	Percentage
Gender		
Male	69	79.3
Female	18	20.6
Marital status		
Married	80	92.0
Single	7	8.0
Number of children		
1-5	33	37.9
6-10	30	34.5
>10	7	8.0
No response	17	19.5
Educational qualification		
None	12	25.3
Primary education	27	31.0
Secondary education	17	19.5
OND/NCE/HND	12	13.8
B.Sc	4	4.6
M.Sc	1	1.1
Others(Grade II, Modern school)	4	4.6

Gender needs

As shown on Table 3 majority of adult male producers (80.5%) indicated credit as a top priority need followed by good road network (79.3%). On the other hand, prioritized needs of women are in the order: marketing facilities (49.4%), water provision (47.1%) and health (34.5%). Male and female children (24.1%, 27.6%, respectively) however identified water provision as a prime need. Other needs identified by men included production

inputs and information (75.9%), and land for production (73.6%). Two major factors of production in agriculture which are capital and land were considered priority needs by the male fruit producers. This implies that without these two needs being met, production cannot take place. Inadequate credit facilities for financing agricultural activities have been identified as one of the major obstacles facing agricultural development. However, its availability provides the basis for

increased production efficiency and promotes standard of living (Salau *et al.* 2015, Miller 2006). Good road network is germane for the movement and transportation of horticultural produce from the farm gate to various markets. Horticultural produce such as fruits are highly perishable because of its water content and must be transported to various market outlets immediately after harvest. The role of women in marketing of agricultural produce has been documented with women undertaking 60 – 90% of the rural marketing and this underscores the need for marketing facilities (Fabiya *et al.* 2007, Agro Nigeria, 2016).

An estimated 1.1 billion people as described by World Health Organisation lack access to safe drinking water and adequate sanitation. In Nigeria too, access to safe water is a serious challenge. Urban and rural dwellers struggle daily with this problem particularly women who spend a large proportion of their time in search of potable water for drinking and other household requirements. (UNDP, 2015, WHO, 2006). Graham *et al.* (2016) in a study of 24 sub-Saharan African countries reported that among households spending more than 30 minutes collecting water, adult females were the primary collectors of water. Also, female children were more likely to be responsible for water collection than

male children. Nigeria ranked 2nd out of six countries where households were sampled, with a total of 1,045,647 households where children were reported to be responsible for water collection. The burden of water provision rests largely on the women and children, thus the indication of it as a gender need. Similarly, the several hours dedicated to the provision of water puts this gender category at risk for a variety of negative health outcomes. Poor water supply impacts health by causing acute infectious diarrhea, repeat or chronic diarrhea episodes. It can also affect health by limiting productivity and the maintenance of personal hygiene (Hunter *et al.* 2010)

Inputs for production such as fertilizers and chemicals was another identified need by majority of the male fruit producers. Muriithi (2015) affirmed the leadership role of men in accessing agricultural inputs. They typically determine the type and amount of fertilizers, pesticides and other farm inputs to be purchased. The result further showed the need for information by the male fruit producers. Aker (2011) opines access to information can play major role in improving small holder agricultural production and linkages to remunerative markets, thus improved rural livelihoods, food security and national economies.

Table 3
Gender needs of fruit producers

Needs	Adult male	Adult female	Male children	Female children
Health facilities	62(71.3)	30(34.5)	7(8.0)	8(9.2)
Credit facilities in terms of capital	70(80.5)	20(23.0)	1(1.1)	2(2.3)
Land for production	64(73.6)	10(11.5)	-	-
Water provision	26(29.9)	41(47.1)	21(24.1)	24(27.6)
Inputs (fertilizer, chemicals)	66(75.9)	12(13.8)	1(1.1)	1(1.1)
Good roads	69(79.3)	12(13.8)	7(8.0)	3(3.4)
Marketing facilities	49(56.3)	43(49.4)	4(4.6)	3(3.4)
Educational needs	65(74.7)	28(32.2)	13(14.9)	11(12.6)
Information needs	66(75.9)	24(27.6)	13(14.9)	10(11.5)

*Figures in parentheses are percentages

Production constraints

Findings from Table 4 revealed major production constraints for male fruit producers to be market competition (90%), limited productive land (89.7%), inadequate post-harvest handling (87.9%), pest and disease infestation (87.8%) as well as pilfering (87.9%). However, procurement of farm chemicals (69.2%), extension service (22.9%) and inadequate market information (20%) were production constraints highlighted by women fruit producers. The concern for market competition and post-harvest issues could be borne out of the high perishability of fruits because of its high water content. Fruits are also very vulnerable to rough handling (Aiyelaagbe, 2013). Prompt disposal of harvested fruits is necessary before natural deterioration sets in. Intensification of competition

on fruit markets which is posing a big challenge to markets has been documented (Nicolae and Corina, 2011). Poor post-harvest handling practices result into considerable losses of fruits amounting to 35-40% of the annual production, thus reducing their contribution to food security (Oduntan *et al.* 2015, FAO, 2004). The issue of availability of productive land has been described as a challenge with more than 90% of agricultural output accounted for by smallholder's production each with less than 2 hectares of land (Olufolaji, 2014). A study carried out by Oyewole *et al.* 2015 revealed some of the severe production constraints encountered by youths involved in watermelon cultivation included land acquisition, inadequate visitation by extension agents, pests and diseases as well as inadequate farm inputs.

Table 4:
Production constraints of fruit producers

Constraints	Male	Female	Total
Availability of affordable transport	55(84.6)	10(15.4)	65(100.0)
Pest and disease infestation	58(87.9)	8(12.1)	66(100.0)
Bad road network	48(84.2)	9(15.8)	57(100.0)
Inadequate postharvest handling practices	51(87.9)	7(12.1)	58(100.0)
Inadequate storage facilities	52(85.3)	9(14.8)	61(100.0)
Fertilizer procurement	47(82.5)	10(17.5)	57(100.0)
Farm chemical procurement	4(30.8)	9(69.2)	53(100.0)
Inadequate marketing information	24(80.0)	6(20.0)	30(100.0)
High labour cost	52(86.7)	8(13.3)	60(100.0)
Market competition	36(90.0)	4(10.0)	40(100.0)
Limited productive land	26(89.7)	3(10.3)	29(100.0)
Ready availability of improved planting materials	31(83.8)	6(16.2)	37(100.0)
Cost of planting materials	33(86.8)	5(13.2)	38(100.0)
Pilfering	29(87.9)	4(12.1)	33(100.0)
Extension services	27(77.1)	8(22.9)	35(100.0)

**Figures in parentheses are percentages*

Information sources on production

Information sources of production explored by a sizeable proportion of respondents (78.1%) as shown in Table 5. It comprises a combination of television, radio, extension agents, telephone,

agricultural magazine and newspaper (46.6%) and radio, television, Newspaper, telephone, agricultural magazine and telephone (31.5%). However, the use of internet (1.4%) was very low among the respondents. Print and electronic media

are traditional media channels employed to reach a large number of people with information. According to Tyabo *et al.* 2015, mobile phones have been found useful in agricultural industry to access market information and agricultural inputs. They were used for consultation with experts for advice and solution to field agricultural problems as well as weather information. Mobile phones have diffused rapidly into the rural countryside of Nigeria providing new opportunities for communicating information that will be useful to limited resource farmers and small agricultural businesses. Hassan *et al.* 2015 has also described adaptability of radio to

local conditions as it can be used without electricity. The level of literacy of the farmers could be a factor responsible for their exploring newspapers and agricultural magazines for agricultural information. The use of internet may be hindered by poor network service, time factor needed for sourcing for information and additional finance needed to purchase air time for browsing. Access and use of different sources of information is an opportunity that could build their capacity and improve their knowledge base for effectiveness and efficiency in production.

Table 5
Information sources on production

Sources	Frequency	Percentage
Television, Radio, Extension agents, Telephone, Agricultural Magazine	34	46.6
Relatives, Radio, Television, Extension agents, Agricultural Magazine	3	4.1
Radio, Television, Newspaper, Agricultural Magazine, Telephone	23	31.5
Newspaper, Extension agents	2	2.7
Extension agents, Agricultural Magazine	10	13.7
Internet	1	1.4
Total	73	100.0

CONCLUSION AND RECOMMENDATIONS

The study revealed male dominance of fruit production in Southern Nigeria. Most of the fruit producers were married with some form of literacy. Top priority gender needs of males were access to credit, good road network, production inputs, information and productive land. Female gender needs however were provision of market facilities, water provision and health. Male and female children identified water provision as a major need. Production constraints highlighted by male fruit producers were market competition, inadequate post-harvest handling, pest and disease infestation. However, female fruit producers identified procurement of farm chemicals, extension service delivery and inadequate market information as major production constraints. Different sources of information utilized by the fruit producers included telephone, radio, television, agricultural magazine and newspaper.

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

1. The Growth Enhancement Scheme initiative of the Federal Government should be strengthened further so that farmers can continue to have subsidized farm inputs.
2. Revitalization of the public extension sector to facilitate delivery of extension messages and innovation to rural families with a keen inclusion of female farmers.
3. Government should expedite further action towards reaching the target set for the fulfillment of the sixth Sustainable Development Goal of ensuring availability and sustainable management of water and sanitation for all.

Paper received on 28.09.20

Accepted on 19.10.20

REFERENCES

- Adebisi-Adelani, O. (2013). Farmers' perception of the effect of climate change on production of citrus and tomato in Nigeria, *unpublished Ph.D thesis* submitted to the Department of Agricultural Extension and Rural Development, University of Ibadan, Ibadan Nigeria. 266.
- Agro Nigeria (2016). The role of women in agriculture. *AgroNigeria News*, June 23, 2016 <https://agronigeria.com.ng/role-women> accessed 21 August 2020.
- Aiyelaagbe I.O.O. (2013). Fruits: Food for the Birds? 39th Inaugural Lecture. Federal University of Agriculture, Abeokuta, Nigeria. 95.
- Aker, J.C (2011). "Dial "A" for Agriculture: A review of information and communication technologies for agricultural extension in developing countries. *Agricultural Economics*. 42:631 – 647.
- Fabiyi E.F,B.B.Danladi,K.E.Akande and Y.Mahmoud (2007). Role of women in agricultural development and their constraints: Acase study of Biliri Local Government Area, Gombe State,Nigeria. *Pakistan Journal of Nutrition* 6:676-680.
- Fakayode, S.B., M.A.Y. Rahji and S.T. Adeniyi (2012). Economic analysis of risks in fruit and vegetable farming in Osun State, Nigeria. *Bangladesh J. Agril. Res.* 37(3): 473 – 491 September 2012.
- FAO, (2004): Food loss prevention in perishable crops. Corporate Document Repository 122-231.
- Graham J.P, Hiram, S.S. Kim (2016). An analysis of water collection labor among women and children in 24 Sub-Saharan African countries. *PLOS ONE* 11(6):ee0155981. Doi:10.1371/journal.pone.0155981.
- Hassan, A.A., H.J. Ahmadu, H.J. Kagbu and O.O. Ugbagbe (2015). Information and communication technology and family farming in Nigeria: A review. In Proc: 20th Annual Conference of the Agricultural Extension Society of Nigeria held at the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria from 15th-17th May, 2015. ISN: 1595-1421 285-295.
- Hunter, P.R, A.M MacDonald, R.C. Carter (2010). Water supply and health. *PLOS Med*7(11):e1000361.doi:10.1371/journal.pmed.1000361.
- Ibeawuchi, I.I, N.A. Okoli, R.A. Alagba, M.O., Ofor, L.C. Emma-Okafor, Peter-Onoh, C.A. and J.C. Obiefuna, (2015). Fruit and vegetable crop production in Nigeria: The gains, challenges and the way forward. *Journal of Biology, Agriculture and Healthcare*. 5(2): 194-208.
- Miller, L.F (2006). Problem of agriculture credits and finance in Africa. The Rockefeller Foundation.
- Muriithi,B.W (2015). Smallholder Horticultural Commercialization: Gender roles and implication for household well-being in Kenya. Being paper presented at 29th International Conference of Agricultural Economists held in Universta Degli Studi Di Milano, Milan, Italy from 8-14 August 2015. 36
- Nicolae, I. and P.Corina (2011). Consumer behaviour on the fruits and vegetables market retrieved from www.researchgate.net/.../2274629.....
- NIHORT (2008). Annual Research Review Report. National Horticultural Research Institute, Ibadan, Nigeria.
- Oduntan, O., O. Babalola, I. Adeoye and F. Adeboyejo (2015): Effect of dehydration time on the Vitamin C, colour and consumer studies of pineapple (*Ananas comosus*) chips. In Proc: 33rd Annual Conference of Horticultural Society of Nigeria (HORTSON) held at the Agricultural Research House, Agricultural Research Council of Nigeria, Mabushi, Abuja, Nigeria between 30th November – 4th December, 2015. 2-8.
- OECD (2018):<https://www.oecd.org/.../gender> accessed 21 August 2020.
- Ogunleye, K.Y. (2012). Production and marketing performance of farmers participating in Cassava Initiative in Nigeria. *An unpublished Ph.D thesis* in the Department of Agricultural Extension and Rural Development. Faculty of Agriculture University of Ibadan 191.
- Okunmadewa, F.Y (2002). Poverty reduction and the Nigeria Agricultural Sector. Published by Elshaddai Global Ventures Ltd, Mokola, Ibadan.
- Oladeji, J. O. (2011). Farmers' perception of agricultural advertisements in Nigerian Newspapers in Ibadan municipality,

- Oyo State, Nigeria. *Journal of Media and Communication Studies*. 3(3): 97-101, March 2011 Available online <http://www.academicjournals.org/jmcs> ISSN 2141-2545 ©2011 Academic Journals.
- Olufolaji A.O. (2014). Horticulture for a healthy and wealthy nation. Paper presented at the 32nd Annual Conference of the Horticultural Society of Nigeria (HORTSON) held between 19-23 October, 2014 at the Federal University of Agriculture, Abeokuta, Ogun State, Nigeria.
- Onu M.O. (2003). Factors affecting job satisfaction of frontline extension workers in Enugu state ADP. Pre-Ph.D. Seminar presented in the Department of Agricultural Extension, University of Nigeria, Nsukka.
- Oyedele, O.O. (2006). Information and Training Needs for Improved Techniques of Citrus Production among Farmers in Southwestern Nigeria. *An unpublished Ph.D. thesis* submitted to the Department of Agricultural Extension and Rural Development University of Ibadan:211.
- Oyewole M.F., M.J. Olujide and J.A Oyedeji (2015). Youth participation in watermelon production in Ado-Odo-Ota Local Government Area of Ogun State Nigeria. In Proc. 20th Annual Conference of the Agricultural Extension Society of Nigeria, held at the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria from 15th-17th May, 2015. ISN: 1595-1421 132-142.
- Salau, E.S., E.G. Onuk and D.S. Jacho (2015). Use of agricultural credit by sesame farmers in Southern Agricultural zone of Nassarawa State, Nigeria. In Proc; 20th Annual National Conference of the Agricultural Extension Society of Nigeria held at the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria from 15th – 17th May, 2015.
- Sayadi, S. and J., Calatrava-Requena,. (2008). Gender needs awareness and gender asymmetry: an analysis of a rural women survey in mountainous areas of south-eastern Spain. *Spanish Journal of Agricultural Research* 6(3) 453-468.
- Shahbandeh, M (2020). Global production of fruit by variety selected 2018. www.statista.com. accessed 20 August 2020.
- Smallstarter (2019). Tropical fruits -Africa's real diamonds are not hidden in the ground, they are hanging in the trees. www.smallstarter.com. accessed 20 August 2020.
- Statista Research Department (2020). Fruit Production- Statistics and Facts. www.statista.com. accessed 20 August 2020.
- Tyabo, I.S. G.B. Adesiji, M. Ibrahim, I.S. Umar and M.A. Ndanista (2015). Perceived effects for mobile phones on the livelihood of rural dwellers in Niger state, Nigeria. In Proc: 20th Annual Conference of the Agricultural Extension Society of Nigeria, held at the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria from 15th-17th May, 2015. ISN: 1595-1421 200-211.
- UNDP (2015). Millennium Development Goals. End-point report 2015, Nigeria. 180
- UNESCO (2003). UNESCO's Gender Mainstreaming Implementation Framework 3.
- UN (2004). Billions suffer from lack of vitamins and minerals in diets <http://www.avrdc.org/new/04> UN report. html
- World Health Organization/United Nations International Children Education Fund(WHO/UNICEF) (2006). Meeting the MDG drinking water and sanitation target. The urban and rural challenge of the decade. WHO Press, World Health Organization, Switzerland.

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