

# CHALLENGES OF WOMEN IN SMALL SCALE OIL PALM PRODUCTION

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## ABSTRACT

*Apart from their mothering roles, women in Isalu are contributing heavily to nutritional development, farm employment and food security. Agriculture has continued to play a dominant role in the Nigerian economy. Prior to the oil boom, the Agricultural sector accounted for more than half of the Gross Domestic Product (GDP), and employed about 80 percent of the adult working population. The agricultural industry in many developing countries is underperforming, in part because women, who represent a crucial resource in agriculture and the rural economy through their roles as farmers, labourers and entrepreneurs, almost everywhere, face more severe constraints than men in access to productive resources. Data collection was based on secondary data obtained from text and archival materials.*

*The study investigated the constraints militating against oil palm production in Isalu community in Ado-Odo Ota Ogun State, Nigeria. The study examined the socio-economic characteristics of the women and their effects on palm oil production; examined specific tasks done by women in palm oil processing in the study area; determined the factors which affect women's productive capacity in palm oil production and on the basis of findings made recommendations for improvement.*

*The study made recommendations for the provision of enabling environment for improving the productive capacity of women. This paper re-affirms that women make essential contributions to agriculture and rural enterprises across the developing world.*

**Keywords:** Women, Industry, Agriculture, Oil Palm, Production.

## INTRODUCTION

Women make essential contributions to the agricultural and rural economies in all developing countries. Economic growth and food security will be strengthened and accelerated if national governments and the international community build on the contributions that women make and take steps to alleviate these constraints. It is a well-known fact that agriculture played very important role in the economy of Nigeria before the discovery of crude oil. In the 1960s before oil became the dominant income earner for Nigeria. Isalu community in Ogun State is a community rich in palm trees and involved in palm oil production but using traditional methods. Oil palm is by far the most productive oil crop and alone is capable to fulfill the large and growing world demand for vegetable oils that is estimated to reach 240 million tons by 2050 (Corley, 2009). There is a need to design machines for operations in palm oil production by

reducing production time and increasing output. The fact of the matter is that despite the active role of women to boost agriculture in Nigeria in general and palm oil in particular, they are still facing a lot of challenges facing women in the Isalu community. As in most developing countries of the world, there is high rate of illiteracy among rural women in Nigeria and the Isalu women are not left out. Illiteracy is one of the known hindrances to the adoption of improved agricultural practices by the Isalu women. One of the functions of agricultural cooperatives is to provide credit for the members, but in some societies, culture restricts women's membership in cooperative societies, thereby denying them access to credit (Prakash, 2003).

According to Egunjobi (1987) more than 50% of the total population in Nigeria are women and are uneducated. Mostly, these women are engaged in agricultural production as their sole occupation and source of income for living, and there are some who combine agricultural jobs with other jobs like; sewing, hair plating, and petty trading among others. Research also shows that women participate in direct productive farm works at varying degrees; it also shows that men and women have separate but complementary responsibilities on farm works. Women are found to perform crucial roles in all aspects of crops production but importantly in harvesting and post operations on food crops. On the other hand men are said to feature more in preparation and weeding than women. Oladebo and Fajuyigbe (2007) found that women farmers are more efficient technically than men farmers.

Women participate in planting, collecting and harvesting crops in addition to transporting them home. They also help men to clear grass, weeds and scare birds from grains if the husband has to be away for an extended period. Women cultivate their own small millet fields to be used for additional food (Meek, 1994). Oil palm cultivation alleviates poverty and with right governmental policies could transform livelihood of millions of people (Sayer, et al., 2012).

## **STATEMENT OF THE PROBLEM**

Agriculture can be an important engine of growth and poverty reduction. But the sector is underperforming in many countries in part because women, who are often a crucial resource in agriculture and the rural economy, face constraints that reduce their productivity. The contribution of women to agricultural and food production is significant. Women perform the bulk of work in African agriculture. Systematic data on women's labor contribution to agriculture are hard to come by. As such, it is no surprise that the widely shared notion that women in Sub-Saharan Africa (SSA) are responsible for 60–80% of the agricultural labor supplied, traces back to an undocumented, 1972 quote in a more general study of women's contribution to development. The statistical basis for these numbers has been questioned before (Jackson, 2005; Doss, 2014; Doss et al., 2011)

Women's participation in rural labour markets varies considerably across regions, but invariably women are over represented in unpaid, seasonal and part-time work, and the available evidence suggests that women are often paid less than men, for the same work. In Nigeria where both men and women farmers do not have access to adequate resources, the access of women is even more limited due to cultural, traditional and sociological factors. In most parts of Nigeria, women have restricted access to land and this is a major source of constraint. There is strong evidence to suggest that women have significantly less access to productive assets, such as land, credit, extension services, fertilizer, and agricultural machinery (World Bank, 2012)

Women need credit for the purchase of tools, equipments and other agricultural inputs. But because access to credit is often based on ownership of land and since the customary law do not allow them to share land property rights along with their husband, they cannot provide the collateral required by lending institutions. The lack of education and training also limits the ability of women and youths in Nigeria to gain access to credit from formal financial institutions. Furthermore, there is an emerging debate about the declining interest of African youth in agriculture (Bezu & Holden, 2014; Maiga et al., 2015; Raney et al., 2011).

The labour burden of rural women exceeds that of men, and includes a higher proportion of unpaid household responsibilities related to preparing food and collecting fuel and water. Women's participation in rural labour markets show much heterogeneity at the regional level, but women are over represented in unpaid, seasonal and part-time work, and the available evidence suggests that women are often paid less than men, for the same work. Globally, women contribute remarkably to the rural economy and agricultural activities in many developing countries (FAO, 2010). According to the reports of FAO (2010) the agricultural share of economically active women was 65.0% in Sub-Saharan Africa in 2010. While in Nigeria the agricultural share of economically active women was reported to be 26.8% in 2010.

Gender biases in access to inputs and productivity may exist even when men and women have similar agricultural production functions and use similar techniques due to customs and beliefs that confine women mostly to the domestic sphere, and laws and customs that impede women's access to credit, productive inputs, employment, education, or medical care (Ogunlela and Mukhtar, 2009; Peterman et al., 2014).

## **OBJECTIVES**

1. To examine the socio-economic characteristics of the Isalu women and their effects on palm oil production;
2. To examine specific tasks done by the Isalu women in palm oil processing in the study area
3. To determine the factors that affect Isalu women's productive capacity in palm oil production
4. To recommendations ways to improve oil palm production among the Isalu women.

## **BACKGROUND TO THE STUDY AREA**

Isalu community is located in the Ado-Odo/Ota Local Government Area of Ogun State. Isalu community in Ogun State is a community rich in palm trees and involved in palm oil production but using traditional methods. There is a need to design machines for operations in palm oil production by reducing production time and increasing output. The Ado-Odo/Ota Local Government Area is one of the 19 Local Government Areas of Ogun State, Nigeria. It came into existence on May 19, 1989, following the merging of Ota, part of the defunct Ifo/Ota Local Government with Ado-Odo/Igbesa Areas of the Yewa South Local Government. Ado-Odo/Ota borders on metropolitan Lagos. The Local Government Area is the second largest in Ogun State and it is headquartered at Ota (or Otta). Other towns and cities include Ado-Odo, Agbara, Igbesa, Iju-Ota, Itele, Kooko Ebiye Town, Owode, Sango Ota etc.

It has an area of 878 km<sup>2</sup> and a population of 526,565 at the 2006 census. Being primarily agrarian in nature, the Local Government Area produces cash and food crops especially cocoa, kola nut, palm oil, coffee, cassava, timber, maize, and vegetables. Mineral resources include kaolin, silica sand, gypsum, and glass sand.

## RESEARCH METHODOLOGY

This study followed a qualitative approach to describe the Oil palm production and processing methods adopted by the Isalu woman. Data for this study was based on secondary data obtained from relevant text and archival materials. It also made use of information gotten from a key informant interview to give a clear picture of the Isalu community and their women in Oil palm production. This paper presents key findings from the interview conducted in Ota, Ogun State, with key informant in November 2017. The interview conducted was few face to face interviews.

## REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

Palm oil is a significant and versatile raw material for both food and non-food industries. A cursory look into extant literature shows the significant role that women play in agriculture in general and palm oil sector in particular. Steady (1985) observed that women probably produce 60 – 80% of Africa's agricultural products and recommended the improvement of the resources of women as to increase their participation in the economy. According to Spencer (1976) the women spend several hours breaking up the clusters of palm fruits gathered by their husbands the day before. This painstaking and boring job does not prevent them, however, from carrying on with their domestic tasks. Women still do much of the processing of crops. The garri making, palm oil extraction, the cotton spinning are still done to a great extent by women (Dvorak, 1996). Madeley (2010) women carry out 90% of the work of processing food crops of the demand for raw materials to feed the industry. In fact, women are found in nearly every sector of the economy where they derive income for the survival of their household. They were reported to engage in more multiple income generating activities than men as farm managers and active workers all over the world. No doubt, it will be unrealistic for any country to neglect such a large and important segment of its society and yet hope to make significant strides in economic development (Omiye, 2004). Thus, constraints that impede the productive capacity of these women in the agricultural sector will adversely affect the growth of the national economy. Not minding the fact that crude oil has continued to dominate the nation's economy as source of revenue, the contribution of agriculture to the gross domestic product is still the largest. The contribution of oil palm, despite its enormous potential, remains insignificant.

The Isalu women have little access to the benefits of research and appropriate technology especially in the domain of food crops processing, which have a low priority in research. In addition, women farmers' roles and needs are often ignored when devising technology. Even when the technology is appropriate for their use, lack of financial resources hinders the purchase and use of such technology by women.

The African culture abhors frequent and close association between married women and other men. Such association causes conflicts in the household (Ekong, 2003). As a result of this aspect of African culture, the interaction between male extension agents and rural women is highly limited. Owing to this restricted association with married women, agricultural research programmes have rarely taken into account rural women's knowledge and opinion about crop varieties and cropping systems. This situation has restricted rural women to traditional farming technology. They have very little access to modern technology that could benefit them in their farm and household activities. Also FAO (2007) discovered in their study of agricultural extension in Africa several commonly held beliefs that women are not really significant contributors to agricultural production. They are always tied down with household chores and

Children. According to Federal Office of Statistics (FOS, 1999), about 73% of the female farm holders in Nigeria are poor.

## **OIL PALM INDUSTRY**

Oil palm is one of the world's most traded commodities. Red palm oil comes from oil palms that are traditionally grown in tropical regions of West Africa and are now cultivated on a large-scale commercial basis in Nigeria. Red palm oil is the richest naturally occurring source of beta-carotene, a carotenoid that the human body can convert into usable vitamin A (retinol). Originating in West Africa, the oil palm, has over the last century been an increasingly important driver for the economies of producing countries in South- East Asia, Papua New Guinea, Central and West Africa. Global analysis of oil palm cultivation suggests that the crop may encourage forest reversion and lower global emissions (Villoria et al., 2013), mainly because oil palm plantations store more carbon than alternative agricultural land uses (Sayer et al., 2012). Oil palm is a very important commodity used as food, in pharmaceuticals, for cooking and as biodiesel. Today, palm oil is the most important tropical vegetable oil in the global oils and fats industry, in terms of production and trade. Originally used in its crude form for cooking in its homeland, Oil palm has evolved into an international commodity with many food and non-food application.

The crop is often considered as an industrial crop, but in many areas it is a valuable smallholder crop (Feintrenie, Chong & Levang, 2010). Oil Palm industry plays a major role to development. In the 21st century, agriculture continues to be a fundamental instrument for sustainable development and poverty reduction. Promoting agricultural development is clearly an imperative for meeting the Sustainable Development Goal of halving poverty and continuing to reduce poverty and hunger for several decades thereafter.

Palm oil is a staple part of the national diet in many developing countries, and a central pillar of rural development in some tropical countries as well as a major generator of employment and income. Most crude palm oil is used in foods. In contrast, most palm-kernel oil is used in various non-edible products, such as detergents, cosmetics, plastics, surfactants, herbicides, as well as a broad range of other industrial and agricultural chemicals (Wahid, 2005).

## **OIL PALM PROCESSING METHODS AMONG THE ISALU WOMEN**

The Isalu woman makes use of the Manual/Traditional Palm Oil Processing. Manual/Traditional Palm Oil Processing Pounding (digestion) and oil extraction are the most tedious and essential operations in traditional palm fruit processing; therefore, early efforts concentrated on these tasks. In small-scale processing, digestion, that is, the breaking up of the oil-bearing cells of the palm fruits' mesocarp, is the most labour intensive activity (Kwasi, 2002). Two methods of fruit maceration are common in traditional processing: pounding cooked/soaked fruits in large wooden or concrete mortars with a wooden pestle and foot trampling the cooked but cold fruits in canoes or specially constructed wooden troughs. The general traditional method of oil extraction consists of steeping the pounded fruit mash in hot or cold water; removing fibre and nuts in small baskets and hand squeezing; filtering out residual fibre from the oil/water emulsion in perforated metal colanders or baskets; boiling and skimming palm oil from the oil/water mixture and drying the recovered oil. The village traditional method of extracting palm oil involves washing pounded fruit mash in warm water and hand squeezing to separate fibre and nuts from the oil/water mixture. A colander, basket or a vessel with fine perforated holes in the

bottom is used to filter out fibre and nuts. The wet mixture is then put on the fire and brought to a vigorous boil. After about one or two hours, depending on the volume of material being boiled, the firewood is taken out and the boiled mixture is allowed to cool. On cooling to about the body temperature (98.6oF), a calabash or shallow bowl is used to skim off the palm oil. Large quantities of water is used in washing the pulp hence this procedure is called the ‘wet’ method (FAO, 2002). Oil extraction processes from the palm-nut was a process that span approximately 21 days for the farm family, and it involves the cooperation of the man, his wife and children, and in some cases, members of the extended family. The first stage in palm collection was the climbing of the palm trees using ropes woven from raffia palms. The man uses a cutlass or an axe to cut down the nuts, usually bunched together in a big cob of about eighteen inches long. The women’s role was to haul to the trough the nuts collected. In certain circumstances, such as when the tapper is a bachelor or the husband is sympathetic if the wife is very sick, the man could assist the woman in gathering the scattered nuts to his own trough. At the end of the collecting period, the palm nut collector, then slices the bunches into four or more smaller pieces each, covers them with palm branches after which they are left for a period of two to three days to ferment a little. This fermentation softens the nuts and facilitates further processing. Water is then added to the pulp and shaken vigorously to float the oil that is left in the nuts and hairy integument. The oil is siphoned off from the top of the water into drums and boiled for about one hour. The oil obtained through the traditional method of processing is usually of poor quality; hence it may be further subjected to additional boiling to remove impurities after which it is poured into kegs of various litre sizes ready for consumption and sale. Meanwhile, the clean nuts and fibrous residues are thrown out of the trough to dry for about nine to ten days. These are shared by the women who participated in the palm oil processing. The women crack the nuts to recover the seeds for domestic use and for sale.

### **ROLE OF ISALU WOMEN IN OIL PALM INDUSTRY**

Females dominate in palm oil processing in Isalu community. It was equally discovered that women engage in almost all the stages of operations such as threshing, cooking, pressing or extraction, drying and oil packing. Men do the harvesting and pressing with the help of extracting machine. Machines do the pounding or digestion of the cooked fruit as well as extraction of the oil. The age distribution of the processors studied was important because palm oil processing requires the use of large amount of labour and able-bodied individuals. Different age groups were found to be involved in the palm oil processing activities in the study area. Prior to the oil boom, the Agricultural sector accounted for more than half of the Gross Domestic Product (GDP), and employed about 80 percent of the adult working population. Agriculture is, relative to manufacturing and services, the most important source of employment for women by a wide margin in South Asia and in sub-Saharan Africa.

Women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Many of these activities are not defined as “economically active employment” in national accounts but they are essential to the well-being of rural

households.

Apart from their mothering roles, women here are contributing heavily to nutritional development, farm employment and food security. Women are the major food crop producers and distributors today in most developing countries because men were encouraged by the Colonial policy of export oriented agricultural production to concentrate on export crops for its cash gains. A number of studies carried out in many Nigerian cultures provide us with useful guidelines as to the functional importance of women in the socio-economic life of the families. In Isalu community Area of Ogun State certain agricultural operations such as harvesting, storage, fertilizing and marketing were undertaken wholly by the Isalu women while men concentrated their attention on operation like land, clearing, weeding and mulching. A greater number of women devote their time on food crop production; hence they tend towards solving problem of food crisis.

### **CHALLENGES FACED BY THE ISALU WOMEN IN OIL PALM PRODUCTION**

The economic role of the Isalu women in farming cannot be compared with that of men. The labour of women starts from the time of cultivation to the time of marketing of the farm products. Most Isalu women have no personal land for farming. The women sometimes have to pay men labourers to do some tasks that they may not be able to perform; such as land preparation and heap making for root crops. Women are not paid for working on family farms, self-employed producers, on and off employees, traders and providers of services (Hill, 2011). Women comprise the majority of the poor. They constitute the majority of unpaid productive workers through their labour on family farms and other domestic activities (UNDESA, 2010). Yet they are usually expected to manage their family's nutritional needs in the face of these constraints and poverty (Holmes, Jones & Marsden, 2009; World Bank/FAO/IFAD, 2009). Their productive capacity is also being undermined due to their lack of access to productive resources such as land, seeds, and credit (IDS, 2014).

The Isalu women lack agricultural farm equipment and land constraints. They lack of support from their husbands can lead to the lack of success in their farm activities. A woman can do very little without the husband's emotional, physical and financial support. In addition, psychologically and socially some husbands may create barriers for their wives economic success when they notice that they are economically successful more than them. This is one of the major problems hindering many women's progress in life. It should be noted that the economic improvement of women will also lead to the improvement of almost all aspects of the family well-being, particularly the nutritional status of the family. If a woman is poor it will reflect in the diet of the family, but if she is economically buoyant she will ensure the food security of her household. Less attention is given to rural women farmers needs when compared to men farmers, with regards to the provision of agricultural extension services. Other constraints limiting Isalu women's oil palm productivity are land tenure system, lack of access to loans, illiteracy, multiple family responsibilities and other cultural, religious barriers and also the way that agricultural services are staffed, managed and designed. Many Isalu women do not have access to improved technologies and innovations, agro-chemicals and fertilizers which are essential for agricultural business. Isalu women tend to be disadvantaged compared with men because they have less education, capital and they cannot easily obtain credit. The Nigeria's philosophy of education is based on the integration of the individual into a sound and effective

citizen and equal educational opportunities for all citizens of the nation from primary to tertiary levels (Fabiya, 2015). There is the need for a type of education which must equip the receiver with necessary skills to face the challenging situations which can be economic, social, political and cultural in nature. Educated women are also more likely to make sure that their children go to school. From a development perspective, investing in girls' education has the highest rate of returns of any possible investment in developing countries (IDS, 2014). Education and training are crucial to the improvement of agricultural and non-farm productivity and reducing household poverty levels. Nigerian women like all women all over the world, especially in most developing countries, continue to face several forms of discrimination which stands as hindrances to developing to their full potential (Okebukola, 2001).

## **THEORETICAL FRAMEWORK**

### **Radical Feminism**

Radical feminism believes in eliminating the concept of gender entirely. This term refers to the feminist movement that sprung out of the civil rights and peace movements in 1967-1968. The reason this group gets the "radical" label is that they view the oppression of women as the most fundamental form of oppression, one that cuts across boundaries of race, culture, and economic class. This is a movement intent on social change, change of rather revolutionary proportions. Radical feminism was the cutting edge of feminist theory from approximately 1967-1975. It is no longer as universally accepted as it was not then, nor does it provide a foundation for, for example, cultural feminism.

This theory focused on sweeping social reforms, social change, and revolution. Argues against institutions like patriarchy, heterosexism, and racism and instead emphasizes gender as a social construction, denouncing biological roots of gender difference. Often paves the way for other branches of feminism. They emphasize the patriarchal roots between men and women and the social dominance of men. They imply that the institutions of male rule are privilege depend on the subordination of women. Men control property and families, oppressing women. Traditionally in Nigeria, most women are oppressed in the home, among the Tiv, the women are regarded as property of the man after her bride price has been paid, among the Hausa, the women is to be seen and not heard. They want a major reform in society so that gender roles and patriarchy do not exist. Among the Igbos, the women are regarded as Oriakwu "they are there to eat their husband's money. Women do not have a say in the home, until very recently when women as trying to liberate themselves from this traditional domination of men with the help of education.

Radical feminism is a movement that believes sexism is so deeply rooted in society that the only cure is to eliminate the concept of gender completely. Radical feminists suggest changes, such as finding technology that will allow babies to be grown outside of a woman's body, to promote more equality between men and women. This will allow women to avoid missing work for maternity leave, which radical feminists argue is one reason women aren't promoted as quickly as men. In fact, radical feminists would argue that the entire traditional family system is sexist. Men are expected to work outside the home while women are expected to care for children and clean the house. Radical feminists note that this traditional dichotomy maintains men as economically in power over women, and therefore, the traditional family structure should be rejected. Radical Feminism considers the capitalist hierarchy of society, which it describes as sexist and male-based, as the defining feature of women's oppression. Most Radical Feminists

see no alternatives other than the total uprooting and reconstruction of society in order to overthrow patriarchy and achieve their goals. They view patriarchy as dividing rights, privileges and power primarily by gender and, as a result, women are oppressed and men are privileged.

Most harmful traditional practices are as a result of patriarchy. Right from the time of creation, when the first human, Adam was created, and Eve was created as a companion for him out of his ribs, women have been treated as inferior sex. Women are regarded and treated as second class citizens, for instance, in the religious circle, the men hold firmly to the biblical details of the story of creation that woman was taken from the side of the man; therefore, the man stands out to be the real creature. Situating this theory to this study, as a result of patriarchy women lack access to land ownership which is a very important factor for oil palm production

## **RESULT INTERPRETATION OF KEY INFORMANT INTERVIEW**

What can you say about the Isalu community?

Majority of the women are illeterates and do not know their age. The only school available is located in Ado-Odo town and its far Isalu community. The bridge linking the village and the school is very bad and so the students go through the stream (IDI, Male, 2017).

What is the challenges they face in oil palm production?

He also stated that they are faced with the problem of electricity and many of them are illiterates. They are faced with various challenges ranging from lack of education, problems of transporting their goods to the market, bad road network, no hospital, no secondary school in the community (IDI, Male, 2017).

What methods of production are used?

The Isalu women lack technology to produce in large quantity and many of them are dependent on their husband to carry out some tedious part involved in the production process. After the production, it is the women who go to the market to sale this product. They make use of crude method for production. The men assist in plucking the oil palm fruit and cracking (IDI, Male 2017).

How can their production be increased?

Proper training and providing better tools and modern equipment will aid production of oil palm among the Isalu women. Road networks should be repaired for easy access to the market to trade their product (IDI, Male, 2017).

## **CONCLUSION**

From the research it is clear that the Isalu women participate actively in agricultural production but lack the exposure and adequate to meet up mechanized farming. Women's role in production seriously is affected. This research reveals that apart from their mothering roles, Isalu women have really contributed in to local food production. Apart from this, women agriculture has contributed to nutritional development, income generation, and local employment through hired labour and general food security in the local environment.

## RECOMMENDATIONS

Palm oil enterprise could be a viable venture if properly managed. In the light of the various problems or constraints to palm oil processing, the following suggestions/recommendations are hereby rendered:

- Rural women cooperative Societies could be encouraged among these rural women farmers. This will give them improved access to credit facilities, extension services and modern farming systems. This will also expose them to improved ways of land management system that will enlarge their horizon and consequently improved rural nutritional development and food security.
- More accessible loan schemes exclusively for women in various tiers of government should be made available and establishes a programme to monitor loan beneficiaries for repayment.
- There is a need to provide enabling environment and basic infrastructures for the women such as modern well-staffed hospitals and Primary Health Care Centres, good feeder roads and transportation schemes, portable water project, rural electricity and storage facilities.
- Incentives should be given to researchers by the government to enable them find out the possible means of having a high breed species of palm tree that could be unseasonal. This is to ensure steady availability of pal fruits throughout the year.
- The mechanization of major stages of operations such as fruit digestion and oil extraction to alleviate the drudgery of female processors. This mechanization must have to be women friendly, that is easily handled by women.
- It is important that women's enormous contribution to agriculture be recorded, recognized and encouraged.

## REFERENCES

- Bezu, S., & Holden, S. (2014). Are rural youth in Ethiopia abandoning agriculture? *World Development*, 64, 259-272.
- Corley, R.H.V. (1998). What is the upper limit to oil extraction ratio?. In Proceedings of International Conference on Oil and Kernel Production in Oil Palm-A Global Perspective, 1998. *Palm Oil Research Institute of Malaysia*.
- Raney, T., Anríquez, G., Croppenstedt, A., Gerosa, S., Lowder, S.K., Matuschke, I., & Skoet, J. (2011). The role of women in agriculture.
- Doss, C. (2014). If women hold up half the sky, how much of the world's food do they produce?. *In Gender in agriculture*, 69-88.
- Dvorak, K.A. (1996). *Labor requirement in assessment of technologies*.
- Ekong EE (2003). An introduction to rural sociology. Uyo: *Dove Educational Publishers*. 198-207.
- Fabiyi, E.F., & Akande, K.E. (2015). Economic empowerment for rural women in Nigeria: poverty alleviation through agriculture. *Journal of agricultural science*, 7(9), 236.
- FAO (Food and Agriculture Organisation). (2010). Roles of women in agriculture. *Prepared by the SOFA team and Cheryl Doss*, Rome.
- FAO (Food and Agriculture Organisation). (2010). FAOSTAT statistical database.
- Feintrenie, L., Chong, W.K., & Levang, P. (2010). Why do farmers prefer oil palm? Lessons learnt from Bungo district, Indonesia. *Small-Scale Forestry*, 9(3), 379-396.
- FOS (Federal Office of Statistics). (1999). Poverty and agricultural sector in Nigeria. Federal Office of Statistics, *Journal of Agricultural Science*, 7(9), 241.
- Hill, C.A.S.T.L.E. (2011). Background paper. Prepared for: UN Women Expert Group Meeting on enabling rural women's economic empowerment: institutions, opportunities and participation. *New York: UN women*.
- Holmes, R., Jones, N., & Marsden, H. (2009). Gender vulnerabilities, food price shocks and social protection responses. *Overseas Development Institute*.
- IDS (Institution of Development Studies). (2014). Availability of food and nutrition. *IDS Bridge development gender*, 104.
- Omiye, F.S. (2004). Poverty alleviation strategies of rural women in Akure North local government area of Ondo State. *Unpublished Postgraduate Diploma Research Project. Department of Agricultural Economic and Extension, Federal University of Technology Akure*.

- Madeley, J. (2010). Women Marginal Farmers: Mobilising for Change. *Concern Worldwide*, 3.
- Maiga, E., Hristiaensen, L., Palacios-Lopez, A., (2015). "Are young people in Africa really leaving agriculture?" Mimeo.
- Oladeebo, J.O., & Fajuyigbe, A.A. (2007). Technical efficiency of men and women upland rice farmers in Osun State, Nigeria. *Journal of Human ecology*, 22(2), 93-100.
- Ogunlela, Y. I., & Mukhtar, A. A. (2009). Gender issues in agriculture and rural development in Nigeria: The role of women. *Humanity & social sciences Journal*, 4(1), 19-30.
- Peterman, A., Behrman, J.A., & Quisumbing, A.R. (2014). A review of empirical evidence on gender differences in nonland agricultural inputs, technology, and services in developing countries. *Gender in agriculture*, 145-186.
- Prakash, D. (2003). Rural women, food security and agricultural cooperatives. *New Delhi: Rural Development and Management Centre*, 50.
- Sayer, J., Ghazoul, J., Nelson, P., & Boedhihartono, A.K. (2012). Oil palm expansion transforms tropical landscapes and livelihoods. *Global Food Security*, 1(2), 114-119.
- Spencer, D.S. (1976). African women in agricultural development: A case study in Sierra Leone (Vol. 9). Njala, Sierra Leone: Department of Agricultural Economics, Michigan State University.
- Steady, F. C. (1985). African Women at the End of the Decade. *Africa Report*, 30(2), 4.
- Basri Wahid, M., Abdullah, S.N.A., & Henson, I.E. (2005). Oil palm-achievements and potential. *Plant Production Science*, 8(3), 288-297.
- UNDESA (United Nations Department of Economic and Social Affairs). (2010). *The World's Women 2010: Trends and Statistics*. New York: UN
- Villoria, N.B., Golub, A., Byerlee, D., & Stevenson, J. (2013). Will yield improvements on the forest frontier reduce greenhouse gas emissions? A global analysis of oil palm. *American Journal of Agricultural Economics*, 95(5), 1301-1308.
- World Bank/IFAD/FAO. (2009). *Gender and Agriculture Sourcebook: Investing in Women as Drivers of Agricultural Growth*. Washington, DC: World Bank. World Bank, 2012. *World development report 2012: Gender equality and development*. *The World Bank*, Washington, DC.