

WOMEN AND SUBSISTENCE FARMING: CASE OF SOUTHERN AFRICAN COUNTRIES

Author's Name: ¹Prof. A S. Yaruigam, ²Songamla A. Sharon

Affiliation: Faculty of Social Sciences, University of Delhi, India

DOI No. – 08.2020-25662434

Abstract

Subsistence agriculture has a potential to raise rural incomes and is the driving force behind economic development. Agriculture in southern Africa represents much more than a mere means of subsistence, in fact, it lies at the heart of development, providing opportunities for rural communities to enhance their living standards. Women, in southern Africa plays a crucial role in agriculture sector and are known to be generators of food, but at times, were often masked with great complexities and constraints. Bridging the inequality gap is considered as a prerequisite to enhance women's political standing as well as ensuring food security in the region. Education is undeniable for the simple reason to improve gender balance and to acquire much needed human resources.

Key words: *Agriculture, Income, Women Empowerment, Food Security, Technology*

INTRODUCTION

Subsistence farming is characterized by small production of food in the farm primarily for consumption by the family and to survive and to make living on the land. It is associated with low use of fertilizers and inputs, low mechanization, and limited irrigation systems that reflects limited access to finance, low level of investment and limited access to and knowledge of improved agricultural technologies and practices. Smallholder agriculture has long been served as the dominant economic activity in the region and still remain enormously important for the foreseeable future. Rural family farmers continues to value the pursuit of farming for home consumption. Although, households have varying degrees of diversification apart from farm activities, nevertheless, farming activities remains a dominant source of income for large fraction of rural smallholders in southern Africa. The sector is indeed important to the national economy and is mostly dominated by small-holder farmers operated by farm families and is one of the crucial economic sectors that plays significant role in the development of any developing nation. Subsistence farming is not the only sources of employment but they are obviously a source of food and sustenance since many smallholder families produce a large fraction of food and conversely much of their agricultural output is consumed domestically. "In most sub-saharan African countries, over half of the economically active population earns its income from agriculture, and the share is closer to 90 percent for some countries such as Niger, Rwanda, and Burkina Faso" (UNDP, 2012).). Farming activities constitute a major part of economic life of the large agrarian region of southern Africa and normally they constitute a key player in shaping and determining rural incomes. More than ever, agriculture has been the engine behind recent growth successes in several southern African countries and has strong linkages to their economic sectors. "The international development community has recognized that agriculture is an engine of growth and poverty reduction in countries where it is the main occupation of the poor" (World Development Report, 2008).

Southern African small-scale farmers are predominantly women as, and they involve in all aspects of

farming process from seed selection and planting to harvesting and grain storage. World Bank indicates that “rural women in South Africa and in most other African countries, spend up to 60% of their time on agricultural work” (World Bank, 2012). “In most rural areas of South Africa, women are the major subsistence farmers, providing the basis of household and community sustainable livelihood” (Kotane, 2009).

Agricultural production which includes almost all of the countries in southern Africa provides the basis for most rural livelihoods and thus, is the engine of economic growth, where women make up a substantial majority of the agricultural workforce. Due to their large proportion of agricultural production, it makes them important agents of economic development and also the principal agents of household welfare. Since, farming activities plays a paramount role in most non-industrial economy and being the major contributor to export earnings, women continues to represent a substantial proportion in labour force, as a food producer and as a workers.

The sector is no doubt, one of the important source of employment for women by a wide margin in southern Africa, moreover, it is often viewed as an intrinsically low-productivity sector relative to manufacturing and service sector. In spite of their immense contribution to agricultural sector, they were underrated because of their mode of production, particularly associated with domestic and subsistence in nature. Rural women folk are dependent to agricultural production being the chief source of agriculture labour, yet often the primary victims of malnutrition, poverty and maternal mortality rates. “women are known to be generators of food for their families and as such, they play a significant role in national agricultural production; however they are particularly vulnerable to poverty” (FAO, 1999). Mufamadi (2006) demonstrates that “the lack of visibility of women’s contribution and participation in agriculture stems from the patriarchal norms which make African rural women’s contribution to the household or the subsistence sector—non-economic or non-market activity”. Work activities of women and men in rural environment of southern Africa typically revolves around land and its related scare resources. In rural households, agricultural activity is considered vital important because it fetches a direct monetary reward for the farmers. The related activities such as management and care of livestock are considered essential as they forms a part of contributing additional income for subsistence farmers. While, wage rates for their labors in farming vary from place to place, and types of season. Meanwhile, accessing land and the provision of land tenure for women greatly determines their efficiency and output level. Hence, it is extremely a complex issue for women to inherit land on their own. “Despite increasing urbanization, the scarcity of non-farm employment and the prevalence of low wage incomes mean that many SSA families continue to struggle for access to land for their social reproduction” (Moyo and Yeros, 2005). Similarly, “in most of the predominantly rural provinces of South Africa, owing to cultural factors women have still limited ownership or control of land” (Dak and Jain, 2009). Compared to men, it appears that women farms are smaller and more dispersed and are less likely to hold title, dispose of land. “Women may have low tolerance for risk and were slower to adopt new technologies because they typically have and control fewer productive resources” (Doss, 2001).

Agriculture sector no doubt, is a fundamental instrument for mitigating poverty, however, the sector is subject to major challenges—land degradation, depletion of soil and water resources and lack of adequate micro nutrients. Study elsewhere shows that agriculture output in SSA is further deteriorated because of women’s limited access to resources and inputs. “Women in Nigeria and

other parts had lower yields than men due to the inferior quality of their land, and women experienced lower yields for the same crops due to scale diseconomies caused by the smaller size of women's plots compared with men's" (IFAD, 1999). As a result, "shrinking farm sizes and increasing land size inequalities within the smallholder sector, and the emergence of middle sized farmers, are reported in studies from several southern African countries" (Jayne et al. 2014).

Asset ownership therefore, is connected to women's possibilities in influencing household security and their opportunities both within and outside the household.

EMPOWERING WOMEN IN AGRICULTURE FARMING

Southern Africa is distinguished by a large and rising trend of female-headed households. "Southern Africa has the highest rate of female-headed households (43 percent), West Africa exhibits the lowest incidence (20 percent), partly reflecting the continuing practice of polygamy, together with high remarriage rates among widows" (Beegle, et al.,2016). The fact that women education affects to a great extent in strengthening their rural life, however, it was constraint by their households work loads, and cultural influences. It is seen that, women are bound to follow the norms, cultures and values of the societies in social and economic spheres. They are victims of traditional practices and high responsibility in domestic affairs, which locked them from doing certain high-valued jobs. The predicament of their multiple roles as a mother, income earner, worker and care giver leaves them vulnerable, which some analyst argues to be the root cause for discrimination and even dismissal from employment. While, Coontz, argues that "women also lives in an environment where less or no social services, lack of infrastructural facilities and with no exposure to information and technologies" (Coontz, 1986). "It is impossible to think of development while neglecting the women work force, as women represent the major force for rural changes, largely as an untapped resources that could boost rural development" (Nigist, 2004). Women also faced barriers to membership in rural organizations and cooperatives, agricultural inputs and technology such as improved seedlings, training and extension and marketing services. As UNECA, clearly pointed out that "the solution to overcome poverty, hunger and chronic food shortage in Africa should be focussed on economic empowerment of women, especially on the rural women" (UNECA, 1996).

Many international development agency, perceived women's empowerment as a key factor in bridging gender gaps and improve living standards. "Women empowerment is widely perceived to be a key factor in closing gender gaps in agricultural productivity" (Diirro et al, 2019). It may be state that, empowering women enhances their status including greater control over resources—land, in particular, livestock, labour, education, financial, health care, skill development, information on markets, all these variables in turn positively impact level of production. It is no doubt that, empowering women in agriculture can boosts increased productivity among smallholder farmers. Recent available data shows that, female and male managed plots experienced significant improvements in production when women were more empowered. Agriculture is under performing because half of the farmers, women specifically, do not have equal access to resources and opportunities to engage in farm and non-farm activities. Empowered women who make decisions about planting materials and inputs have been found to be more productive in agriculture.

Subsistence farmers inhabited in a villages with varying degree of community and social groups have helped women to develop stronger social networks, which in turn realize their potential. This has stimulating them to be more decisive in group associations— business associations, small credit

groups, civil society groups, marketing groups etc. At the same time improve in human capital would meant women's higher bargaining capacity within the community. Their is a considerable potential for increasing the role and participation of women in agricultural research and extension service. A study on agricultural productivity, finds that, "women's empowerment leads to increased maize productivity with the greatest gains derived from increases in women's participation in decision-making on agricultural production" (Diirro et al.,2019). The findings further offer some encouragement with respect to the effectiveness of policies and strategic interventions aimed at stimulating increased agricultural productivity through women's empowerment. Hence, gender roles come to play in farming activities in wide range in farming and non-farm activities. Changing lives with new opportunities is thought to breakdown the traditional gender disparities. Since, women who have enough experience and skills and access to resources and services are in better condition to respond to such challenges and are better -off in dealing with family decisions and in outside situations.

Widening gender inequality in agricultural policies, and programs has been significantly damaging the credibility of women, undermining the key role, they played in fulfilling multiple assignments. Neglecting gender roles entails the increase risk of burden for women and undermining them in their ability and effectiveness of becoming a role model. Meanwhile, recent study from IFAD, FAO, and World Bank, demonstrates that women's lack of assets leaves them more vulnerable to rising food prices and to the effects of climate change and forests loss, which can have dramatic consequences for the amount of time they have spend gathering fuelwood and water. Similarly, "restriction on women's mobility, partly due to their heavy burden of labour and the prevailing gender norms may not only prevent them from accessing traditional markets to hire additional labour but could also make it more difficult for them to supervise any workers they did manage to hire" (Diirro et al, 2019). From the context, one can points that, in meeting farmers food demand, women's roles have to be recognized and they should be given equitable access to and control over the land, and credit facilities, extension services as well as provides membership in cooperatives and other rural benefits. The World Bank warns that, the status quo is unacceptable and must change so that all Africans can benefit from their land.

When examining among different countries, throughout Africa in general, women are present in lesser degrees in rural organizations, they are observed to be less involved and low proportion in regard to leaderships and less participation in technically oriented activities. In addition, their labor contribution to the agriculture sector is invisible because of the gender division of labor. Other factors includes time and energy, limited ownership and rights of property and also subsequent neglect of issues of concern on women farmers. Considering the fact that, farming activities is the backbone of rural economy in many SSA countries, women's contribution in the activities from plowing of field, to transportation of commodities to homestead and finally to the market, should be considered paramount importance. Increased female participation has had a great impact in policy making at district level, provincial level and national level. Such lack of representation, in authorities has serious implications in ensuring gender balance. Furthermore, due to their limited knowledge in marketing behavior i.e, management of prices and risk, storage capacity of perishable goods, and no control over financial resources causing them even more arduous which is why they operates in a marginal level and unable to compete with the larger firms.

Undoubtedly, future trends in female participation in agriculture would reflect the educational status of rural women. As it is widely observed that, women involvement in agriculture is on the increasing rate, proper financial support, accessing intensive farm activities and more available of farm land is necessary through appropriate regulations. Cultural attitude of the rural people, has further aggravated women's vulnerability and insecurity not only within the household but also outside of her homes, in their work place, and in other community. Probably, the lack of human capital and fewer bargaining power, plus limited knowledge in managerial positions on the part of women could be the result of not being able to take up to higher positions. Unquestionably, government interventions did little to address the plight of rural women, regardless of their participation major sectors, their invisibility in national statistics, would only mean that, the country neglects most important issues of concern. When women engaged in employment and took part in many of the high value agricultural commodity chains, will eventually provides them with better living standard and can be an instrument for change in their economic activity and expand their horizon. As mentioned, rural development from grassroots level is a key to ensure gender equality, not disregarding the role of women in the mainstream.

One can say that, increasing rate of employment for women in sectors like, in business expertise, is also a key to improve gender balance. "Strategic gender interests in the form of legislation at local, national and international level are a means to create gender equity in agriculture" (Wakhungu, 2010). Poverty in developing countries are mainly caused by low income, low assets, lack of opportunities (absence of information and knowledge) and social exclusion. Increasing gender gap give rise to greater poverty especially among women in developing world. The incidence of poverty, and its depth and magnitude is particularly more pronounced in SSA countries with significant rural-urban gender differences. UNDP, argued that "the household headship approach in the studies of gender inequalities and poverty resulted from the fact that the household has been the unit of analysis for studying poverty and female headship was the only gender transparent factor in the approach" (UNDP, 1994).

It is examined that, ownership of agro-enterprise that offers profitable market niche and producing or selling commercial agricultural commodities can enable a woman to move out of traditional subsistence-oriented tasks. In some areas where women are disadvantaged by gender norms, explicit targeting would be necessary to canalized gender inequality. It may be mention that, women's farmer should be supported to integrated and participate fully in agricultural value chains. At the same time, farm inputs needs to be made available for women farmers at subsidized rates. It is already understand that, women played a key role in linking agriculture to nutrition and to preparation of family needs. Better nutrition enhances the cognitive and mental developments of children as they attained their adulthood. As per the study, women are more likely than men to spend their incomes on their families in food, education and health care. In addition, children from women headed households were healthier than children from male-headed households. Thus, considering all these, women played significant role as farmers, mothers, workers and educators.

WOMEN ACCESSIBILITY IN MODERN FARMING INPUTS

The increasing demand for higher value of products and advances in agriculture in the region has offered new opportunities. New technologies and innovations are generating better opportunities and generates higher skilled jobs for both men and women. Today's implicit opportunities of

innovative agriculture and technology strategy can be capitalized upon in much broader way. Such opportunities, are likely to resolve the ongoing challenges of gender disparities in southern Africa. “Creation of effective local markets with regulated prices that better serve farmers, improving access to rural finance, equipping women with knowledge and new farming technologies and improving local infrastructure” (Sibanda, 2012). Support systems for farmers within a holistic gender- based strategy are prerequisite to form a development agenda focussing on women. Besides, many women were involved in the informal employment sector with little capital and asset to start up their business. In addition, in many rural areas, micro credit support are not sufficient to reach grassroots level, women in particular. Financial enterprise and banks appears to be limited and discouraging to meet the needs of these vulnerable households. Credit and micro-finance would not only encourage women empowerment in rural areas but they also played a critical role in alleviating poverty for the rural poor. By availing such credit facilities among the large section of people and disadvantaged, it would mean an improvement in their well being and rural life.

Accessing credit is extremely important since, it gives them assurance whenever they purchase new sets of technology. Consequently, accessing credit will keep them in-track in purchasing new methods of production and improves welfare of the society. Liquidity constraints in acquiring technology of poor households reflects the lack of access to credit. Due to this lack of credit, they do not qualify for bank loans offered. At the same time, inability to manage new farming technologies due to illiteracy, lack of skills and training is another problem from adopting such technology. As such, low adoption of technological innovations by smallholder farmers in rural rain-fed areas has numerous challenges, which, eventually results to under-performing relative to its potential. Boosting agricultural production through extensive use of modern inputs has become a solution to low productivity and malnutrition.

Credit financing although is important in dealing with poverty alleviation, a large portion of rural farmers, especially women were not benefited from the opportunity launched by the government and other international agencies. “Micro finance and credit support are part of an integrated program for poverty reduction for the poorest people, creation of accessibility for credit and micro-finance is an entry point for women’s economic, social and political empowering” (Mayoux, 2005). It appears that, due to their lack of knowledge and no experience in business expertise has causing them to fear of taking risk of borrowing loans from banks and other financial institution. Credit undoubtedly is necessary to acquire inputs such as land, machinery, tractors, fertilizers, irrigation and high quality seeds. The situation of women, however, as mentioned is restricted to large extend unlike men. Such restrictions creates an imbalance environment curtailing women’s potential, that would only results to gender gap. “The use of formal financial service is lower for women than men in all regions of the world, globally, 47 % of women have an individual or joint account at a formal financial institution compared to 55 % of men with wider gaps in some countries in the Middle East and North Africa and in Southern Asia” (United Nations, 2015).

Meanwhile, skill development has been a key to improve rural development in various ways including—income earning opportunity, food security, promotion of sustainable environment and better livelihood prospects. Skill development requires women, a combination of learning mechanisms such as schools and institutions consists of —formal educations and training in areas of vocational, entrepreneurship and agricultural extension services. Therefore, women needs to linked

their domestic responsibilities towards high skilled labour to do managing or undertaking specific tasks in different sectors from livestock to forestry or crop production and processing. Capacity building is generally required to encourage women to remain active and involve in important decisions, leaderships and decision making. Organizing in groups on large scale would magnify their political influence and create scope for their participation in political arena. Rural development can be fast track by collective participation and coordination and joining various organizations that give priority to women. “Legal protections of women’s and men’s equal access to institutions is the most successful area at the country level in both the regions” (UNCTAD, 2019).

Despite women’s major role as a farmer in agriculture process, their limited education and other training experience becomes a major constraints in their participation in remunerative work and hindering them to perform in managerial and leadership roles to represent fully. Learning about improved production technologies in regard to new techniques of production and market management as well as life skill including health management and self confidence helps to built them up. A recent study from *African Renewal, Quarterly* shows that, “the reason African Women are largely excluded from decision making in their homes and communities and underrepresented in leadership roles, is their high rate of illiteracy” (Africa Renewal, 2014). Other study found that, female-headed households had agricultural yields lower than those of male-headed households, attribute by the differences of lower educational levels.

Women farmers could benefit from crop diversification from new farming technologies which helps to save time and invest in more productive activities. The approaches of technology development can improve the potentials and values of small scale women farmers, ultimately enhancing their ability to develop better ideas and knowledge in farming. Technology is valuable to smallholders in agricultural food value chains because of its diverse variety of possibilities. Fulginiti et al, postulated that, “productivity is vital and for sub-Saharan African countries, that rely heavily on agriculture, knowledge of new techniques that can increase productivity growth is critical” (Fulginiti, et al.,2004). “In developing countries, improving the livelihoods of rural farm households via agricultural productivity would remain a mere wish if agricultural technology adoption rate is low” (Ajayi, et al.,2003). Similarly, technical innovations such as, Information and Communication Technologies (ICT), are increasingly necessary for smallholder farmers because it lowers the cost of transaction of agricultural commodities, and increase efficiencies. As such, rural farmers especially women can benefit from such new innovative systems by way of training, extension services, and by using mobile phones as well.

However, the fact that, agricultural technology is a key driver in increasing farm productivity in developing countries, accessing agricultural technology is still inadequate. Whereas in some other parts of developing countries, productivity is maximized and thus, faster the rate of growth, largely as a result of extensive adoption of new agricultural technologies. It was examined by research analyst as to how farmers of sub-Saharan Africa are induced by low or non-adoption of improved agricultural technologies. UN-Millennium Project, demonstrates that "this has become urgent than ever since SSA has been very backward in reducing poverty and fighting hunger in particular and in meeting the Millennium Development Goals (MDGs) in general" (UN-Millennium Development Goals, 2005). In achieving such goals, of halving the people living in extreme poverty, agriculture would play a prominent role. In addition, Foster and Rosenzweig, argues that “for developing countries, the best way to catch with the developed countries is through agricultural technology diffusion and

adoption” (Foster and Rosenzweig, 2010). Thus, it may be mention that, if productivity would decrease due to non-adoption of required technology, it is likely that poverty would continue to persists.

CONCLUSION

Reducing inequality and poverty is the overriding concern of Africa’s development policies and programs. The measure of success of developmental policies adopted by various stakeholders and the concern governments needs to foster more towards inclusiveness. The focus should be on areas where there has been the least progress such as— agriculture, health sector and environment. UNDP in its recent report sub-Saharan Africa point out that “tackling the root causes of gender inequality is a way to improving the lives of both women and men” (UNDP, 2012). Many gender experts says that to achieve goals on women’s empowerment, there has to be effective implementation of policies that encourages empowerment and requiring changing of attitudes. “To address the country’s triple challenges of high poverty, high inequality and high unemployment government investment education, health services and social development as well as social assistance to vulnerable households and contributory social security, public transport, housing and local amenities has played a notable role in these efforts” (World Bank, 2007).

Farming requires a wide range of financial institutions, for accessing micro credit and insurance companies to cover risks as well as for purchasing modern techniques of production. Thus, by improving this institutions and restoring land management, farmers can move from subsistence to commercial-oriented farming that are higher economic value. Today the consensus of an agricultural development in SSA, lies on the application of modern technology and farm input (improved seeds and fertilizers). Introducing this types of technology will shift subsistence agriculture towards climate -smart agriculture.

In the world of food surplus, hunger and poverty remains elusive in the continent despite ample agricultural endowments.

It is obvious that fundamental gender inequalities in regard to and control over some productive resources as well as gender biases in labour market, all these accentuated the level of poverty and thus increase women’s vulnerability. Although there is wide exception on the fact that, the degree of poverty varies between men and women, linking gender and poverty is a complex phenomenon that demands greater recognition and becomes increasingly primary focus of analysis in today’s world. Low income and resources poor farmers depend entirely on their own food production to sustain livelihood. Cagatay, points out “that from a human poverty or capabilities (education and health) perspectives, women are poorer in most societies” (Cagatay, 1998). The relationship in regard to gender and poverty is a complex phenomenon and have been debated more than before.

Strengthening rural institutions and more transparency in decision-making process can help improves the quality of rural life. African countries must increase their level of production capacity and exposed to more competition. “Diversification of production and exports being a business on a medium and long term, African countries should also be more competitive in the traditional export sectors” (Ayenagbo et al, 2012). In addition, the continent also needs to take up new macroeconomic policies to improve their price policies and measures to reduce production costs. Recently survey of UNCTAD concluded that “without enabling laws in place, the achievement of gender equality in different domains of economic life which is essential for the successful participation of both men and

women in trade, will not be possible, it is therefore critical to address the legal gaps on gender equality” (UNCTAD, 2019).

The continent can achieve food security by paying attention on agricultural research, more effective nutrition policy especially for women and children and rural poor. With the right policies and institutions, southern Africa can overcome the vicious circle of poverty and could sustain human development and thereby ensured food security. Southern Africa can reap substantial socio-economic benefits from increased investment in core sectors, and developing strong knowledge-based economy. A commitment in improving higher education will give the next generation of leaders an opportunity to create a better future for their community and for their nation.

REFERENCES

1. Africa Renewal, Special Edition on Agriculture. (2014). Agriculture is Africa’s Next Frontier. www.un.org/africarenewal. africarenewal@un.org.
2. Ajayi, O, C. Franzel, S. Kuntashula, E. &Kwesiga, F. (2003). Adoption of improved fallow technology for soil fertility management in Zambia: Empirical studies and emerging issues. *Agroforestry Systems*. Vol. 59(3). P-317-326. <https://link.springer.com>. Retrieved on 14 May, 2022.
3. Ayenagbo, K. Rongcheng, W. Wengjing, W. Nguhi, S. Kimatu, J,N. Patrick, J,M. (2012). The impact of globalization on African countries economic development. In *African Journal of Business Management*. Vol. 6(44). P-11057-11076.
4. Beegle, K. Christiaensen, L. Dabalen, A and Gladdis,I. (2016). Poverty in a rising Africa, Africa Poverty Report. World Bank Group/IBRD. www.worldbank.org. Retrieved on 27 March, 2022.
5. Cagatay, N. (1998). Engendering Macroeconomics Policies. Working Paper 6. BDP/SEPED. United Nations Development Programs. New York. www.pnud.org. Retrieved on 11 may, 2022.
6. Coontz, S. (1986). *Women’s work, Men’s Property: The Origins of Gender and Class*. Verso. ISBN-10. 0860911128.
7. Dak, M and Jain, P. (2009). Indigenous Knowledge and Institutional Framework for women participation in agriculture. *Indian Journal of Social Studies*, Vol. 56 (4). P- 285-291.
8. Diiro, G, M. Seymour, G. Kassie, M. Muricho, G.Muriithi, B, W. (2019). “Women’s empowerment in agriculture and agricultural productivity: Evidence from rural maize farmer households in western Kenya”. CGIAR Research program on policies, Institutions and markets IFPRI, Washington DC & International Center for Insect Physiology and Ecology (icipe), Nairobi, Kenya. gdiiro@icipe.org. Retrieved on 12 June, 2018.
9. Doss, C. (2001). Designing Agricultural Technology for African Women Farmers: Lesson from 25 years of experience, *World Development*, 29 (12).
10. FAO, (1999). Poverty reduction and Irrigated Agriculture, International Program for Technology and Research in Irrigation and Drainage (IPTRID). Issues Paper No. 1. www.fao.org/publications. Retrieved on 2 March, 2022.
11. FAO. (2002). *The State of Food Insecurity in the World 2002*. Rome.
12. Fulginity, Lylyan, Perrin, Richard, Bingxin, Yu. (2004). *Institutions and Agricultural Productivity in Sub-Saharan Africa*. Department of Agricultural Economics, University of Nebraska, Lincoln. NE.

13. Foster, A,D. & Rosenzweig, M,R. (2010). Micro economics of Technology Adoption. Economic Growth Center Yale University center discussion paper. No. 984. <http://www.econ.yale.edu/egcenter/publications.html>. Retrieved on 16, July, 2022.
14. IFAD .(1999). *Rural Poverty Report 2001*. Oxford, UK: Oxford University Press.
15. Jayne, T, J. Chamberlin, and D. D. Headey .(2014). 'Land pressures, the evolution of farming systems, and development strategies in Africa: A synthesis.' *Food Policy* 48: 1– 17. <https://doi.org/10.1016/j.foodpol.2014.05.014>. Retrieved on 1 January, 2022.
16. Kotane, A. (2009). *The Role of Rural Women in Household Food Security and Nutrition in Limpopo Province*. Master's Thesis, Unpublished. Department of Youth Development, University of Venda.
17. Mayoux, L. (2005). Women's empowerment through sustainable micro finance: Rethinking best practice. www.arabic.microfinancegateway.org. L.mayoux@ntlworld.com. Retrieved on 11 May, 2022.
18. Moyo, S & Yeros, P. (2005). *Reclaiming the land: the resurgence of rural movements in Africa, Asia and latin America*. London and Cape Town: Zed Books and David Philipe.
19. Mufamadi, D. (2006). The Division of Agricultural Labour by Gender in Limpopo and Kwazulu-Natal Provinces. Unpublished Research Paper. Department of Sociology, University of Venda.
20. Nigist, S. (2004). Gender Main Streamlining World Vision. www.wvi.org. Retrieved on 18 January, 2022.
21. Sibanda, L,M. (2012). Women in African Agriculture: farmers, mothers, innovators and educators, The Montpellier Panel Briefing Paper. London: Agriculture for Impact. www.ag4impact.org. Retrieved on 12, January, 2022.
22. The World Development report, (WDR). (2008). World Bank.
23. United Nations .(2015). The World's Women. <http://unstats.un.org/unsd/gender/worldswomen.html>. Retrieved on 11, March, 2022.
24. United Nations, UNCTAD. (2019). Trade and Gender Nexus in the Context of Regional Integration: A Comparative Assessment of the East Africa Community (EAC) and the Southern Common Market (MERCOSUR). <http://creativecommons.org/licenses/by/3.0/igo/>. Retrieved on 4 May, 2022.
25. UNDP (United Nations Development Program). (1994). <https://www.undp.org>. Retrieved on 27, February, 2022.
26. UNDP, (United Nations Development Program). (2012). Africa Human Development Report 2012, Towards a Food Secure Future. www.afhdr.org. Retrieved on 8 March 2022.
27. UNDP, (United Nations Development Program). (2012). Africa Human Development Report 2012, Towards a Food Secure Future. www.afhdr.org. Retrieved on 18 March 2022.
28. UNECA, United Nations Economic Commission for Africa. (1996). Economic Report on Africa. <http://hdl.handle.net/10855/15498>. Retrieved on 19, May 2022.
29. United Nations Millennium Project. (2005). Halving Hunger: It can be done. Task Force on Hunger. UN Millennium Project. www.millennium-project.org. Retrieved on 12th, April, 2022
30. Wakhungu, J,W. (2010). Gender Dimensions of Science and technology : African Women in Agriculture. (UNESCO, United Nations, Division of Women). Paris, France.
31. World Bank. (2007). *Agriculture for Development-World Development Report, 2008*. Washington D.C.: The World Bank.