

ENHANCING THE CAPACITY OF WOMEN FOR
INCREASED PARTICIPATION IN NIGERIA MAIN-
STREAMING AGRICULTURE: A RE-DESIGNING OF
STRATEGIES

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ABSTRACT

Africa is a region of female farming compared with other regions of the world where women have the responsibility for food production, processing, marketing, cooking, child care and other home related activities. It is argued that women account for 70-80 percent of household food production in sub-Saharan Africa. However, case studies in Nigerian and in most Africa countries tend to point to the fact that women who have been described as the hidden productive force in the countryside have not fully benefited from food production development planning strategies, despite their increased involvement in agricultural production. The food production development programme has often focused in the designing of effective packages for generating surpluses in agriculture without particular focus on women. The basic needs approach which emphasizes the expansion of people's capabilities therefore points to the importance of re-examining the strategies for promoting participation in agricultural production with specific focus on women. Food development planning and execution strategies need to be re-oriented and re-designed to ensure that development packages reach women farmers as well as stimulate them to participate more actively to increase output through technology and other incentives. This paper therefore focuses on the importance of women's participation in Nigerian agricultural production and its implications for national development. The neglect of women's roles in agriculture and factors that have adversely affected rural women's agricultural production is also reviewed. Finally, the paper proposes some socio-economic, socio-cultural and institutional structures that must be re-examined and redesigned to facilitate the increase in women's participation in Nigeria's main-streaming agriculture.

INTRODUCTION

The critical interplay between women's productive roles and linkages that exist between gender issues related to these roles and women's status in development have come to be understood as of paramount importance in Africa's economic and social transformation. In Africa, Nigeria inclusive women control most of subsistence agriculture, have high rates of economic activities in agriculture labour, are involved in informal and in limited wage employment activities while at the same time take responsibility for child bearing and rearing and domestic maintenance (Eshete, 1992; FAO, 1983, Fortmann, 1986). On a continental-wide basis, about 60-80 percent of the labour input in agriculture is provided by women in Africa (Boserup, 1970; IFFRI 1995). African women have continued to juggle and cope with maternal, occupational and domestic activities and responsibilities with very little or no recognition of their work, no remuneration and support with services that make their activities more productive and self-enhancing. Case studies in African countries show that women's roles in agricultural and domestic duties continue to be disproportionately high but lack the intervention of governments, non-governmental organizations and men to improve their status and facilitate their equal participation in productive and public roles for Africa's development transformation (FAO, 1985,

Olayide 1980, Adekanye 1988). The integration of women into the development process has recently become official policy in most countries (Wickramasinghe, 1999:159).

In recent times, most developing countries have displayed a greater concern and understanding of women issues and proposed a multi-pronged approach to women's integration in development, with emphasis on areas such as nutrition, employment, environment, agriculture, etc. (Varma, 1993; Samarasighe, 1993). The aim is to ensure that women, like their men counterpart have a proportional share on development. In Nigeria, attempts have been made at both the national and state levels by the ministries of women affairs, the Nigerian Council of Women Societies and other Non-Governmental Organizations to promote women's participation in the process of development. Despite women significant contribution to agricultural production and rural household, it has been observed that all the various efforts made have been largely ineffective in eradicating gender differences, especially in rural sector. Instead of providing equal opportunities for both genders from the stage of project planning to the level of evaluation, a separate set of projects are introduced for women. With the persistence of gender inequality, gender issues call for re-examination as it is the only process whereby the relations between men and women in a community could be carefully analysed in order to determine gender division of labour, access and control of resources and benefits, level of participation in the community activities, and to look at more important ways of eliminating or reducing the gender disparities.

However, it is evident in Nigeria that most of the young and able-bodied men are continuously leaving the rural areas for urban cities, in search of jobs with better remuneration. Agricultural production is therefore left in the hands of the older population, comprising aged men and women with an average of fifty years and above. The exodus of youths from the rural areas has resulted in reduction in available human labour and deprived rural farming population of the virile labour force needed in agriculture (Richard, 1974:303' La-Anyane, 1976). In order to fill the rural labour gap created by out-migration, women are now being much more involved in agriculture. The high level of adult male migration away from agricultural sector to non-agricultural sector is partly a cause and partly a consequence of the high level of participation of women in agriculture, particularly in food production.

The objective of this paper is to examine women's productive roles in agriculture, the constraints to women's roles and participation to agricultural production and explore ways/strategies that will enhance the capacity of women for sustained participation in agricultural production in Nigeria

AFRICAN FOOD CHALLENGES AND WOMEN IN AGRICULTURAL DEVELOPMENT

One of the greatest challenges facing the world with particular focus on Africa is to find solution to problems of hunger and poverty. Despite concerted development efforts made over the years, millions of people within the continent are ill-fed, poorly housed, underemployed and afflicted by a variety of illnesses. Also, the natural resource base is being rapidly degraded with potentially serious implication for the well-being of the present and future generation. Severe hunger and poverty problems exist in many sub-Saharan African countries, where per capita food production has experienced a downward trend for more than 25 years (Norton and Mwang, 1993). The percentage of the population under the poverty line in sub-Saharan Africa during the 1985-90 estimation was

put at about 48 percent, while the number of poor people increased by about 17 percent (Awudu and Delgado, 1996). Again, the average per capita daily calorie supply in Africa was put at 2027 kilo calories during 1986-89, less than the United Nation recommended minimum. Today it is estimated that Africa imports about 8 million metric tons of cereals each year, mostly subsidized food aid from industrial countries, and this import gap is projected to increase upto 30-50 million tons per year by 2020 (Von Braun and Paulino 1990; Awudu and Delgado 1996). Despite this import level, many Africans still go hungry, because concerted efforts are not made towards raising internal production.

It is estimated that upto 80 percent of Africa's crop and pasture land is degraded to varying extents by soil erosion and much of this damage is attributed to rapid population growth and inadequate increases in yields. By extension, as low-income farmers search for livelihood and food, fallow periods are shortened to the detriment of soil fertility. All these cumulatively threaten Africa's future ability to food herself. Meanwhile Agriculture still dominates the economic activities of most sub-Sahara African countries and play important role in the overall development of the region. The sector still accounts for about 42 percent of the Gross Domestic Product (GDP) and 65-80 percent of the labour force. Despite the overwhelming importance of agriculture, supports and assistance to the sector have declined in both absolute and relative terms in recent years. National budgets of governments of developing countries have continued to experience cuts for items such as agricultural research, extension and rural infrastructure. These have been made more severe under the austerity policies, with government expenditures on agriculture continuously decreasing (Clearver, 1993). Low agricultural productivity, wide variation in yields due to natural, economic and political causes and rapid population growth have combined to create a very precarious food situation in Africa. In the recent times, agriculture has not been very productive in the continent. Despite significant economic progress recorded in some countries in Africa a substantial proportion of the people currently still live in acute poverty and suffer immensely from inadequate access to economic, technical and social resources. The low productivity of agriculture in developing countries suggest on economic and structural transformation and this entail re-appraisal and re-orientation of strategies for increased agricultural production to the target group that dominate primary production.

Effective economic and social transformation in African societies requires recognition and understanding of the intricate phenomena of gender issues to provide women with the means for economic and social self-determination. Such economic and social self-determination requires rights in the family and society, access to indices for self-enhancement namely – education and healthcare, access to resources and income development and an active role in decision-making on issues that affect their lives (Esthete, 1992).

WOMEN'S ROLE AND STATUS IN AGRICULTURE

Africa has been described as the region of female farming per excellence, with women, particularly in the rural areas regarded as the hidden productive force in the countryside (Dumont, 1969:105; Borsierup 1970). Although women's activities vary according to differences in rural setting and cultural background, they generally participate actively in agricultural work and income-generating activities which include food production and tending of livestock, making of pottery, handicraft, weaving of cloths and mat as well as in trading. They are also responsible for hoeing, weeding, harvesting, transportation of harvest from the farms to the homes, preservation and marketing of corps. In a nutshell,

women take primary responsibility for the production of subsistence food essential for family survival (Ogbonna, 1989, Buvinic & Sally 1989). It is estimated that rural women contribute two-thirds of all the time that is put into traditional agriculture in Africa. Lele (1975:26) shows that whereas Tanzania men spend only 1,800 hours annually on agriculture, women spend 2,6000 hours annually on agriculture i.e. 44 percent more than men. In Gambia for example, rice which is a major component of the Gambian diet is produced almost exclusively by women. They also perform essential functions in the agricultural production process of household farms in selecting seeds, planting, weeding, fertilizing harvesting and the bulk of crop processing and storage.

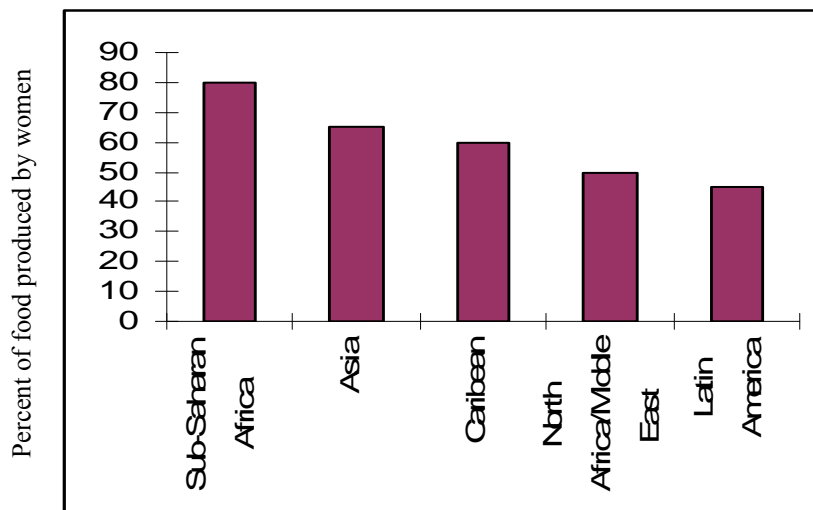


Figure 1: Food Produced by Women
 Source: Buvinic, Mayra and Yudelman, Sally W. 1989.

African women have mainly shouldered the responsibility for domestic food production and processing. FAO (1983) estimate shows that in West Africa, 60-90 percent of the domestic farm and marine produce are handled by women. Women farmers work on the average from 10-14 hours in many parts of Africa and carry multiple responsibilities for food, water, fuel, housework and childcare making their agricultural productivity lower than it need be. Their agricultural workload grows, alongside with their traditional work burden of domestic responsibilities. Although women contribute in food production and processing, there is very little quantitative and qualitative information about their role. These activities of rural women which are mainly carried out in the domestic spheres and at subsistence level are often under-estimated, overlooked, devalued and are not measured in economic terms (Spiro, 1984; Rogers, 1980). Nevertheless, the success of agricultural improvement and indeed the rural development effort, to a large extent, depends on the activities of women. In Nigeria, studies show that rural women make important contributions in food production (Oshuntogun, 1976; Patel and Anthonio, 1973). Among the Igbo, for instance whereas men are traditionally responsible for bush clearing, land preparation, growing of yams, collection of palm products and fishing, the Igbo women grow every other crops namely cocoyams, melons, cassava, okra, maize etc. Compared to men, Igbo women have more responsibility and spend more time on farm work (Smock and Smock, 1972).

The status of women in different cultural contexts is currently understood as one factor that has effects on mainstreaming women in development (this entails the overall position of women in society, including the amount of control they exercise over economic, social, political and domestic spheres as well as personal autonomy they enjoy and the esteem accorded to them. Where the status of women relative to men is high a good proportion of them go to school, modern sector employment is encouraged and the amount of control they have over personal and household decisions is high. Therefore, women's status especially in agriculture needs to be understood in its many aspects and as having differing level and different impacts.

CONSTRAINTS TO WOMEN PARTICIPATION IN AGRICULTURE

Women generally face more serious constraints than men regarding the establishment or expansion of their economic activities. These obstacles include women's lack of access to financial services, lack of entrepreneurship and market knowledge, low management and technical skills, women's lack of time due to household responsibilities and their generally low levels of livelihood which affect their ability to accumulate capital for investment (Berger 1989; Kane et al 1991). Although, there have been accepted evidences of the contribution of women in food production, there are a lot of problems encountered by a great majority of rural women who wish to fully participate and contribute more in agricultural production. In Nigeria, rural women participation in production, distribution and marketing of farm produce is yet to be fully appreciated. All channels of information, inputs and access to markets have often been aimed at men on implicit assumption that men are heads of households and that heads of household produce the food crops (Ogbonna, 1989). Raza and Famoriyo (1980) noted that the bulk of women in developing economics like Nigeria contribute significantly to their national economies, yet they are usually the poorest in the society, less educated, disease ridden and occupy low social, economic and political status. Male migration often leaves women with complete charge of farms, but extension services and incentives such as loans, improved inputs and planting materials by-pass them. Most farm women do not have access to the use of improved agricultural inputs and reasons for non use include: high cost of farm inputs, non-availability in the market, lack of knowledge of their existence and lack of technical know how on their uses. The resultant effect is that women continue with the traditional practices despite the negative effects on agriculture (Nnadone & Ibe 2000). Also, there is lack of agricultural training for women, necessary to provide them with knowledge and skills in modern farming techniques yet on-going literacy campaigns are designed mainly for men with little or nothing for rural women. In the words of Boscrup (1970) efforts due to improvement are oriented towards men. This higher rate of illiteracy among rural women, compared to men could therefore be attributed to this fact.

It has been pointed out that because there is no detailed information about female farming, rural women are usually excluded from development planning and that only few development programmes are being undertaken for women (ILO, 1981). There is often under-reporting of women in agriculture in national statistics for religious and socio-cultural reasons. A conservative estimate of female participation in agriculture on the basis of national statistics according to Adekanye (1988) showed 47.2 percent for Sub-Saharan Africa, 25.2 percent for North Africa and the Middle East, 40.2 percent for South America and 54.0 percent for the Caribbean. Correction for over and under-reporting resulted in an estimate of 46 percent for sub-Saharan Africa, 31 percent for North Africa and the Middle East, 45 percent for Asia and 40 percent for the Caribbean (FAO 1985). Much of women's work is unpaid and is therefore unreported in National Statistics (FAO

1985). In all probability however, the proportion of women actually involved in agricultural work is greater than these estimates based on National Statistics. This neglect of data on women's activities has been attributed to blindness on the part of male, urban and foreign planners towards the important work and activities of rural African women. Certain myths are held about the role of women in agriculture. Some of these myths outlined by Tadesse (1981) are that: only men are farmers, while women merely assist in farm work; that only men are involved in cash crops production; that modernization is neutral and beneficial; that members of household benefit equally; that housework is different from production and is merely concerned with consumption.

It is believed that the Europeans who were not familiar with female farming came with these Victorian ethos about women's fragility and dependence. Boserup (1970) pointed out that the Europeans thought that the men were lazy in the areas they visited, while women were involved in agriculture. Consequently, they tried to promote male farming by introducing cash crop production to men. Changes in sex labour allocation started occurring with the introduction of cash crops. So, as men participate and devote more time in cash crop production, their role in food crop production diminishes. Studies have shown that a good number of Nigerian farm women are illiterate. They lack the basic skills and knowledge needed for agricultural transformation. Because of no education and training, a majority of farm women have difficulties in engaging in income generating activities in agriculture, which in turn will improve their productivity. The enrollment rates of girls remain much lower than those of boys. In 1983, girls in Sub-Saharan Africa countries accounted for only 34 percent of those enrolled in secondary school and 21 percent of those in higher education. The total percentage of total enrollment for girls for 1989 was 39 percent, 41 percent, and 30 percent for primary, junior and secondary levels respectively. At the tertiary levels, between 1984 and 1987, there was a 13 percent decline in female enrollment accounting for only a percent of total population. In the agricultural institution, in most African countries women represent only 5 percent of total enrollment as it is the case in Ethiopia. Not only is girls' participation rate lower than that of boys, but girls are more likely to drop out from school than boys. In North Africa, 6.0 percent of girls drop out compared to 4.3 percent for boys (Eshate, 1992). In Nigeria, this high drop out rate for girls is being attributed to such factors as early pregnancy common in Northern Nigeria, early introduction to economic activity as it is the case in the Southeast of Nigeria and the structural factors in the school system favouring boys. Inequitable access to education and training limit women access to employment, and other productive resources. Thus, there is high literacy rates among women than men in almost all African countries (see figure 2).

On access to credit facilities, evidence has shown that the commercial and rural development banks normally will not loan to women who have little security to guarantee the loan, lack positive credit experiences, are unable to prepare feasibility studies or meet the high interest rates (Kogo et al 1990). In the past, and even at the moment in some cultures, women have had to borrow in their husband's or father's name or from friends or middlemen (the latter at very high interest rates). It is obvious that commercial banks loan projects have high security requirements and have provided very limited funding to women due to their inability to provide the needed security. Even when cooperative organizations are to be involved in the loan programme in developing countries, administrative costs have been found to be so high averaging between 20 and 30 % of funds. Meanwhile, sales of farm produce, personal savings and gifts from family members have served as the main sources of farm finance for most rural women.

However, the amount of finance obtained from sales of farm produce by farm women depend on a number of variables which include: the prevailing market price at the time the produce was brought to the market and the quantity of produce available for sale among other variables. The amount realized for this source is often inadequate to meet the needs of farm women. Although women are not excluded from obtaining credit, they have received virtually little or no benefits from formal credit programmes of government and private bodies. Commercial banks being basically profit-oriented are not structured to deal with the rather slow-moving rural sector dominated by women. Besides, customary rights in many African nations forbid female landownership, resulting in the weakness of women in using land as collateral to obtain credit from formal sources. Low per capita income is a characteristic feature of the rural sector and often leads to low savings, low capital accumulation, low investment and low adoption of agricultural technologies. Low income has serious implications on the livelihood of rural households as the poor; instead of increasing their savings rather dissave (Upton 1977).

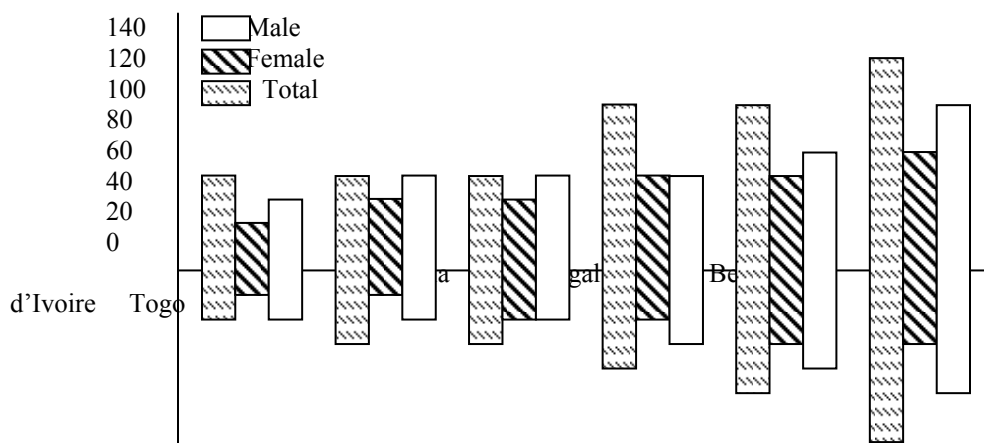


Figure 2 Primary School Enrollment Pattern by Gender in Six Sub-Saharan African Countries 1986
Source: Eshete 1992

It is a common feature in developing countries that most rural women farmers have their farm plots scattered at different locations within and outside their areas. With poor road networks and lack of means of transportation in the rural areas, a majority of farm women spend much time and labour trekking and carrying products upon their heads to and from the farms. These affect women's capabilities with negative impact on productivity. Similarly absence of efficient processing and storage facilities result to the farmers disposing of their farm produces at a time price is at the low regime, resulting to low net returns to investment. In most African countries, land is predominantly patrilineally inherited and where it is not, it is legally allocated and distributed through lineage. In East and South Africa, women cultivate fields belonging to the household over which men have the ultimate control. Among the Hausa of Niger, plots of land are allocated to women on a short term bases. In eastern Nigeria, widowed or separated women are allocated land at the start of the farming season. Wives of male members of the lineage have to wait until their husbands subsequently allocate land to them. These complex and generally limiting situations of women's access and use of land for their important role of

family food provision and other economic social obligations make their status in this respect insecure and precarious. The insecurity of tenure and use of land, not only limit women's access to land but exacerbates their productivity and limit their access to other factors such as membership in peasant associations, extension, training and technology. Thus, women's state of insecurity over the means of their occupational role contributes to their low social and economic status (Eshete, 1992).

Apart from land problems, there exist in one form or another traditional practices and social attitudes that directly affect the health, the self-esteem and the capabilities of women. In societies, where women have been subordinated and their needs not given much concern, traditional practices serve to reinforce these attitudes and give legitimacy to the practices in the name of tradition, in contrast to the well being of the family and men. From the above revelations, it is clear that Women have less access to production assets such as land, credit, labour and extension services which are needed to increase agricultural production and income. Many Women are excluded from most farmer's groups and cooperatives and this impact critically on their rights of ownership or use and control of the means of production such as land and access to resources that advance their agricultural produce and income generation. Although in some cultures, women may be allocated fields – usually from their husband's or father's land, be responsible for specific crops and operations and may enjoy in some areas independent income from certain crops, but often benefits of initiatives such as promoting cash crops, mechanization, extension and membership in farmers associations flow to men who manage these activities.

STRATEGIES FOR ENHANCING WOMEN CAPACITIES FOR PARTICIPATION IN NIGERIA MAINSTREAMING

It is clearly established that women play important roles in agricultural production and food utilization but the challenge now is to go beyond this realization and take positive steps to enhance women's capacities in agriculture. In programmes designing to increase agricultural output, it is essential to develop strategies that enable women to have access to land, technical assistance, information, appropriate technologies and credit for purchasing seeds and fertilizers etc. In other word, resources and technologies needed for the development of the agricultural sector must reach women both in quality and quantity. Consequently, government agencies, development organizations, scientists, extension workers and policy makers must pay attention to gender issues and eliminate bottlenecks to agriculture particularly food production. This implies that development of strategies must identify tasks that women undertake, emphasis their roles as farm managers and workers and take measures to eliminate barriers which hinder women's access to agricultural assistance programmes. A number of strategies have been proposed by this paper as means of enhancing the capacity of women for participation into Nigerian mainstreaming agriculture. They include the following:

Resource Allocation and Distribution

A closer examination to Nigerian development interventions reveals that resources are not going to women who need them urgently and can make use of them. Social attitudes, biased government development interventions and discriminatory approaches as well as private agencies policies especially the financial institutions have been limiting women's access to resources. In analyzing the important considerations in enhancing women's capabilities in agriculture, Eshete (1992) stated that the solutions to gender discrimination

in resource distribution entails the redesigning of services to make them more relevant and accessible to women.

Credit Mobilization and Distribution

In major reviews of small-scale enterprise in third world countries Liedholm and Mead (1986) and Kogo et al (1990) found that small scale enterprises use less capital and unskilled persons to produce goods consumed primarily by low income persons and concluded that working capital is the scarce factor in production. In the same vein, Buvinic (1989:1045-1057) reviewing donor policies for poor women conclude that the greatest constraint to micro enterprise development within the limited strategies adopted by donors is capital. Women often need credit to hire labour, purchase labour saving devices or purchase food in the planting season when their own food supplies are exhausted. Cases of loans advanced to women were used for livestock and crop production, craft production, baking, sewing, pottery production, milling, trading, growing vegetables etc (Kogo et al 1990). Given women's time constraint loans credit can be helpful in that they would allow women to save time, improve their family income, food supply and in some cases increase employment generation. It is clear that Africa women are utilizing varied credit sources for increased income generation. The major women's credit sources utilized in most developing countries such as Nigeria, Tanzania, Kenya, Malawi etc fall into three types: (a) those administered by government ministries or parastatals (Ministries of Agriculture, Rural Development), (b) those modeled after the Grameen Bank model in Kenya (Malawi Mudzi Fund, Nigerian Poverty Eradication Programme, Kenya Rural Enterprise Programme (KREP) and others by donor agencies (UNDP/FAD, ODA and commercial bank special loan projects) (Kogo et al *ibid*).

In many developing countries, capital has been subsidized in the past to encourage investment and to aid farmers in agricultural production. However, with high transport and other running costs, administrative cost on loan programme which is said to be above the 30 percent level. Hence, it is obvious that women, for reasons of culture low level of education and most importantly inability to provide the needed security would unlikely have easy access to credit. Although Economists recommend against subsidization of interest rates to allow maximum efficiency of capital use, a case can be made for subsidizing credit for poor women to enable them get started in agricultural production and other income generating projects assuming that the credit will enable the survive, increase their incomes and move them into commercial credit in future. In most cases where loans were procured and disbursed, repayment of the loan is meant to commence immediately after the disbursement, without acknowledging the fact on that perennial activity often is reduced during agricultural season to allow owners to produce most of their own food. It is therefore apparent that repayment period of loan advanced to women need to be made more flexible. Therefore, repayment procedures should not be so stringent to inhibit borrowing by rural women farmers. Also, bank stringent credit policies which discriminate against the female gender based on women individual characteristics relating to education, female land ownership and property rights especially the application of conventional banking practices which involved compelling women to put up physical collateral and completing copious amount of paperwork which is a negation of women peculiar situation due to their high level of illiteracy, should be reviewed and re-designed. Criteria for granting credit should not require fixed assets or collateral which women who are usually poor cannot provide nor should they require

their husband's authorization. Thus, adapting credit delivery systems to women will yield tangible benefits and enhance their productive capabilities.

Land Acquisition

Access to land is crucial in agricultural production as this means access to the means of production. Traditionally Nigerian women, like others in patrilineal societies, have no direct access to land. Their access to land is through their male relatives, thereby increasing the dependence on men. There are very few who can have title to land except in matrilineal cultures and these are not many in Nigeria. Ironically, traditional societies which acknowledge the significant role of women in food production have at the same time, through traditional norms and values provision, taken away from them the very means which make production possible. Therefore, the need for a progressive land reform has never been more urgent than at the present. The error of omission of the place of women in the Land Use Act of Nigeria, which has had very serious repercussions on general land use and agricultural land use in particular, should be corrected without delay, if women participation in agricultural production is to be sustained. States must therefore take steps to invalidate customary laws which impinge on women landownership and household property rights.

Agricultural Inputs Provision

In many African countries and Nigeria in particular shortages of subsidized inputs as fertilizers, improved varieties of crop, and other production inputs lead to situation few farmers and non farmers appropriate most of the inputs meant for agricultural production. In some cases, these inputs are then re-sold to the unprivileged farmers at exorbitant prices. Therefore Provision of agricultural services need to be made more efficient. Often times, subsidies are made to favour large scale and male farmers rather than low-income farmers where majority of female farmers are found, thereby contributing to bias against women in agricultural production.

Extension Services Delivery:

In Nigeria, as in most Africa Countries, case studies have shown that men benefit more than women from the use of extension services and innovation in agriculture. Okonjo (1980) noted that extension workers taught only men the use of fertilizer in Edo State. Igben, et al (1977) agreed that extension services in Nigeria tend to be directed at men. Women farmers would then be at ease in appreciating the significance and the expected yields of new innovations. Extension workers should intensify their training, visit and follow-up programmes in the rural areas to reach the women. This paper suggests that more women be trained as extension personnel. This will ensure the establishment of closer contact between farm women and extension services and encourage them to seek advice on how best to improve their production. Adapting extension delivery to women will enhance their participation in agriculture. Extension incentive approach would need to be re-oriented to provide strong re-enforcement to existing strategies in order to stimulate behavioural change in women for higher productivity. Therefore, governmental, non-governmental as well as private sectors working in research and extension problems must play an active role in the provision of extension services to women.

Development of Appropriate Technologies

Provision of technologies that alleviate women's burden associated with crop production, food processing and preparation, fetching water and fuel wood, etc. can ensure women taking part in development activities. Ekejiuba (1980) observed that women who are

morally responsible for agricultural production in rural areas still use outdated tools, lack technical information and training. Technological breakthrough now require a clearer focus on the intended clientele and economic environment in order to ensure that technologies are appropriate and will be adopted. Tripp (1985). If women's role in both production and post-harvest activities is overlooked in the development of new technologies, then the technologies would never be used. It is therefore imperative that the female contribution to food crop production be taken into account by agricultural researchers and extension agents in the process of agricultural technology development and utilization.

Another justification for paying more attention to women's role in agriculture when designing technology is related to the issue of equity. There are two points to be considered. First, it can be argued that the poorer the household, the greater the relative contribution of women to its total income, and that many of the poorest households are those headed by women. The implication is that attention to women and their activities is thus one way of targeting assistance to the poorest sectors of the population (Buvinic, 1982). The capacity of these groups of farmers can be enhanced when they are targeted by scientists developing technology that will meet their needs. Also, There is the question of women's status. The argument here is that women are subject to various forms of discrimination, some of which have been exacerbated by technological change. Some of this discrimination may be in the area of access to land, credit, jobs, equal pay and to education. The implication is that it is not enough to conclude that technologies that can improve farmers' productivity have been developed but rather technology development should take into consideration these issues of discrimination, as a way ensuring that women are equal partners in the development process. Thus, if women play an important role in the production process, then they need be included in the activities of the on-farm research programme, like their male counterparts (Tripp 1985:19).

The relationship between women's time and income on one hand and child health and nutrition on the other should point to be considered with respect to women participation in agriculture and agricultural technology development. The argument is that women's production and income are more valuable than an equivalent male contribution in determining child welfare, and that rural women's work load is a particularly sensitive indicator of time available for childcare. This argument leads to the suggestions that technology design should always take into account the possible impact on women's time allocation. Given the fact that most developing countries, particularly in Africa, are still at a very early stage of agricultural technology, there is a need for increased support for agricultural research to develop technologies that will raise productivity. The participation of women in farming appears to increase with age. This means that in the next few years, most of the rural women would not be strong enough to meet the rigours of labour-intensive farming operations, thus perpetuating the low supply of food production. The farm labour gap created by the out-migration of young and able-bodied men which have been filled by women is widening tremendously. As the amount of labour required for farm work is not readily available, a supplementary source of farm labour would be necessary if the production of farm women must be high enough to satisfy the nation's food requirement. This indeed calls for adequate funding for agricultural research and development. In the labour constrained systems as is the case in Nigeria, technologies that permit rapid increases in labour productivity are essential. Also, yield-enhancing technologies are urgent for the land-constrained systems as is the case in some part of Nigeria and this will ensure sustainable land use since the scope for

continued expansion of production by bringing new land into cultivation appears to be limited in future due to population increase.

Education and Training

The provision of training programmes that take account of women's multiple farming and household roles, their limited time and mobility is another strategy for enhancing women capacity for participation in mainstreaming agriculture. The multidimensional and complex channels through which education affects economic development in general and the household's economic well being and economic dependence of women in particular have been examined in numerous studies. Recent findings leave little doubt that women's education has a powerful social and economic impact. In addition to the socio-economic benefits for women and their families, education empowers women to exercise their rights and responsibilities and enable them to make efficient choices. The right to use credits, or own land is enhanced if women's literacy level is high. Changes in attitudes, self-perception and women's productivity are also of conceptual significance for education of women. Literacy training for women and increased education for the young girls will increase productivity and rural livelihood both now and in the future. Thus, providing women basic education will give them access to credit enhance adoption of new technologies and improve income. Women education will improve their agricultural productivity and their potentials to use resources to improve their activities. Therefore both government and non-governmental organizations in Nigeria can increase agricultural productivity and remove barriers that restrict access to resources by strengthen women's technical and managerial capabilities through informal training.

Provision of Basic Infrastructural Facilities

Rural roads and transport systems which constitute perhaps the most important single factor for transforming rural areas have deteriorated to the point where costs of transport add significantly to the costs of input and outputs in agriculture. Most rural communities are completely cut-off from sources of information, resources and markets due mainly to poor road network. Thus, improvement of road and transport facilities in rural is crucial for farm women to use purchased inputs. Basic infrastructural facilities must be provided to reduce drift of labour away from the village. Therefore the potentials of farm women in contributing to agricultural production and economic growth will be greatly enhanced with the provision of all necessary support in the form of rural infrastructure and educational training programmes. An active role is therefore required of government as well as private sectors in mobilizing resources for rural infrastructure creation and in improving the access of women to such infrastructure to support agricultural development.

Information Delivery

Effective and smooth information flow has been identified as one of the key strategy for enhancing women participation in agriculture (Awudu and Delgado 1996). As economies become more complex, information needs are on the increase. Most rural people do not have access to new modern information systems which are slow to develop. Those with greater access than others can take advantage of their opportunity to further their own welfare. Women must be made to have easy access to technical and economic information if they must contribute meaningfully to agricultural and economic development.

Promotion of grassroots organizations

The current emphasis on women empowerment for self-reliance focuses on Grassroot organization and popular participation in development and growth process. The assumption is that local organizations functioning at the grassroot level will provide leverage for women to participate in development activities for economic self-reliance within their environment. Some analysts have argued that a local organizational framework by which peasant women farmers can defend and negotiate their interest against those of bureaucratic development experts is essential to the success of general rural development projects. This is because they can mobilize local resources and regulate their use with a view to maintaining a long term base for productive activity and put available resources to their most efficient and sustainable use (Daane & Mongho 1991; Uphoff, 1992). Recent policies of international donor agencies aim to increase women's access to factors of production and income generating projects are stressing grassroot organizations. The argument is that if women are to benefit from public sector grants, they must organize into cooperatives and be part of the developmental process. Therefore, if government can invest and help the growth of such women organizations, they will provide the necessary medium for spreading incentives and thus give women economic empowerment and self-reliance through access to agricultural services in the area of finance, inputs and extension services.

Re-examination of traditional practices

An examination of the situation of women in many parts of Nigeria, with regard to hazardous traditional practices perpetuated by the society has shown that women are the main victims of such practices. It should be recognized that traditional practices are associated with the extremely adverse social and economic conditions and the status of women, not only in Nigeria, but in other African countries. A response to women's need and problems associated with this issue is a response to the overall low status of women and the multiple and conflicting roles of women in Nigeria societies. The need to combat practices detrimental to women health and identity is now apparent and action plans to gather information, generate awareness of the adverse effects and plan approaches and activities to be taken to eliminate them must be seriously put in place. Governmental and non-governmental agencies should respond more vigorously to the challenge of eradicating traditional practices by initiating grassroots programmes as a means of improving the lives and status of women, thus enhancing their capacity toward sustained agricultural production.

To increase women's productivity and benefits from formal and informal sector, activities, management and skill training, access to credit, extension services and marketing programmes need to be established. This entails going beyond gender stereotypical domains and removing prerequisites that block women's participation in agricultural production, such as customs and laws which prevent women from owing land and property thus stopping them from entering into credit market for lack of collateral.

SUMMARY AND CONCLUSION

In the recent times, there is a call for mainstreaming of women in Nigerian agriculture for sustained agricultural productivity. Nigerian women all along have been confronted with complex institutional barriers and regulations, as well as customs and laws which prevent their active participation in agricultural production. Any effort to increase food production in Nigeria would have to first of all recognize women as cultivators and target groups of rural development programmes. Until now, emphasis is usually on male heads

of households. This male bias is based on the assumption that benefits men derive trickle down to women and that women's views are similar to those of their husbands. The potentials of women in food production are not effectively utilized to promote increased agricultural production.

As level of living deteriorates in tropical Africa and Nigeria in particular, national governments, international donor agencies and even private organizations are searching for ways of funding and managing resources to establish small scale enterprises to increase food production, nutrition, employment and family incomes (Kogo et al, 1990). Almost all low income families are trying to increase their incomes to survive, resulting to more and more families turning to crop and livestock production, craft making, petty trading etc. it is within this distressing situation that national governments and donors should seek ways to assist women, knowing that women spend more on family necessities if earning accrue directly to them. Unfortunately, in many African countries, returns from women's labour do not flow directly to them. Given institutional supports and representation women would continue to be a positive and leading force in agricultural production particularly food production.

This paper reaffirms recent views that women, despite their long hard-work schedules and their lack of education and training have collectively utilized their traditional knowledge and awareness gained from daily living experiences in contributing significantly to agricultural production. This paper therefore argues persuasively that unless gender issues are specifically considered in formulating programmes and policies, and appropriate strategies to enhance their capabilities fully implemented, women will continue to be ignored and their situation damaged. The fact that women's roles and responsibilities in societies are considered reproductive and natural have denied them equity with men and their rights to equal share of the benefit of development. As a consequently, welfare oriented programmes designed for women are ineffective and therefore inappropriate in enhancing their capacities to participate more in development programmes, in alleviating poverty or included as agents and beneficiaries of development. Evidence of the negative impact of development strategies on women led to the call of gender analysis which sought and organized information pertaining to differences between men and women in production and routine domestic tasks, and the differences in the distribution, access and control of resources. The understanding that women and men have specific potential needs and constraints implies that development strategies should be designed to produce a balanced and sustainable development for women as well as for men. With respect to women, gender responsive development planning strategy should take a comprehensive view of women's multiple roles; emphasize their economic contributions and focuses on remove constraints and obstacles to their integration and full participation in agricultural production.

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