

## Gender Roles in Farming Systems: An Overview Using Cases from Ghana

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**Abstract:** The situation of hunger and poverty continues to persist despite recorded economic growth and democracy in Ghana. This presents the challenge to address the problems of small farmers, who produce most of the food. The improvement in small farmer livelihoods calls for sustainable farming systems that include the farm and non-farm economy and addresses gender perspectives for effective investment policies and development strategies. Agricultural programs and services are more effective when they are targeted within particular farming systems. There are also differentiated gender roles in farming systems with men and women playing vital, but complementary roles. Yet the limited access to, and control over resources by women compared to men, limits their productivities and therefore productivities of the whole system.

**Key words:** Farming systems, Ghana, gender concerns, livelihoods..

Given global demand for food and the local need to improve farmers' livelihoods, there is a pressing need for sustainable farming systems intensification, including the associated local non-farm economic growth, to reduce hunger and poverty, which includes the agribusiness sector (Dixon and Hitchcock, 2004). The zoning and characterization of national farming systems geographically, demographically and culturally facilitates agricultural development planning and policymaking. Availability of such information will be of value to the planning of the on-going poverty reduction program in Ghana. Poverty reduction has been a major developmental agenda for the economy of Ghana since 1995 and this effort now incorporates issues of vulnerability and exclusion.

The prominence of poverty reduction strategies, combined with responses to global agendas, such as the Millennium Development Goals (MDGs), are having a strong impact on how international organizations are addressing developmental programs. Emerging global trends, such as the rapid spread and feminization of the HIV/AIDS pandemic, have also influenced the efforts towards gender equality. The World Bank recognizes that gender equality is critical to development and to poverty reduction (World Bank, 2005). The MDGs include the eradication of extreme poverty and hunger, promotion of gender equity and empowerment of women, reduction in child mortality, improvement in maternal health, environmental sustainability, and combat of HIV/AIDS, malaria, and other diseases by the year 2015, all of which

require a close attention to women and to gender issues.

The purpose of this paper is to provide an overview of the challenges of African agriculture in relation to gender roles in farming systems in Sub-Saharan Africa with examples from Ghana. The discussion presented in the paper is more focused on women farmers as their contribution to farming systems is often faced with challenges from the social, cultural and institutional environment. Overlooking their contribution has implications for food security, child education and efforts in poverty reduction.

### **The Role of Farming Systems in the Development of the Ghana Economy**

About 61% of the population of Sub-Saharan Africa is classified as agricultural (World Bank, 2000). Food production has failed to keep pace with increases in demand for food by growing populations in most Sub-Saharan African countries. According to McCalla, though a high percentage of the population is engaged in agriculture, the task of achieving food security in Sub-Saharan Africa is still immense. While other regions improved per capita food availability over the last 30 years, Africa's food availability declined. Food security is also about access, which means income generating employment is critical (McCalla, 1999). Africa imports one-third of its food grains and nine of its ten largest countries are net importers of food (Galdwin *et al.*, 2001).

The rural poor make up more than 75% of the poor in many Sub-Saharan and South Asian countries and studies on rural poverty

identify small farmers, the landless, women, nomadic pastoralists, artisanal fishermen, indigenous ethnic groups and displaced people as the most vulnerable groups in the rural sector (FAO, 1997). Ghana's rural population is about 64% (UNDP, 2003) and out of the rural, small farmers, women constitute the majority. Agriculture provides about 50% of GDP and more than 90% of this production occurs in the traditional sector where the average holding is less than 1.6 ha (Dowswell *et al.*, 1996).

The situation of hunger and poverty continues to persist despite recorded economic growth and democracy in many African countries, including Ghana. In 1999, out of the ten regions in Ghana, five regions had more than 40% of the population living in poverty, with the worst affected being the three northern regions and food crop farmers. A study by the FAO indicates that Ghana is a low-income food-deficit country with per capita income of less than US\$ 340 (Aggrey-Fynn *et al.*, 2003).

What reasons explain the persistence of hunger and poverty, despite the numerous programs and interventions to improve the situation? Understanding the dynamics of food production and availability can provide some facts that explain the existence of the problems, within the socio-cultural and institutional environments of food production and availability. Many studies have long established that food production is generally undertaken by women farmers, (including Brown *et al.*, 1995; FAO, 1998; 2001) and men are more concerned with cash crop production. An analysis therefore of the roles of men and women small farmers, the constraints they face, and the nature of programs designed to assist their

efforts can provide some insights into the poverty and food problems of Sub-Saharan Africa.

### Types of Farming Systems

African smallholders have diverse sources of livelihood including crop and livestock farming and off-farm activities. Dixon and Gulliver (2001) identified 15 broad farming systems in Sub-Saharan Africa and Ghana that fall within the tree crop, root crop, cereal root crop mix, and coastal artisan fishing systems. The adoption of a particular farming system is influenced by the social environment, policy environment, institutional arrangements and support, and marketing and information linkages. Social networks affect the nature of farm enterprises that farmers operate.

An FAO/World Bank study undertaken in Ghana to determine the effects of globalization on smallholders was carried out in three intentionally selected farming system zones that were highly populated and economically important with different levels of market access (mainly high, medium and low market access). Bekwai in the Ashanti Region with high market access represents the forest zone and has tree crop, cereal, roots and livestock components in the farming system. In the medium market access zone, Offuman was selected which represents the transition zone and has tree crop, roots, cereals and industrial crop components. The low market access was represented by Walewale in the Northern Region which belongs to the Savannah zone and has cereal, roots and tubers and livestock elements in the farming system (Drafor *et al.*, 2003).

In most parts of Ghana, small-scale farmers practice mixed cropping, but there are a few isolated cases where mono cropping is carried out. Farming systems are generally cereal, root and tubers, tree crops, livestock, fishing and non-traditional export crops. The farming system practices identified in the Forest Zone consist of mono cropping, mixed cropping and crop rotation. Tree crops such as cocoa, oil palm and citrus start in a mixed cropping system with cereals and root crops until the canopy closes when it becomes a single crop. Within the mixed cropping systems, both crop rotation and relay cropping are found in the Bekwai and Offuman areas in the Ashanti and Brong-Ahafo Regions of Ghana. Fallow periods for crop rotation are becoming shorter due to pressure on the land and soil fertility problems continue to be of concern.

Cereal farming systems include maize-based, sorghum and millet, and rice. Both men and women participate in the cereal farming systems. The roles differ in the activities involved as discussed below. Women, however, hold individual use rights over their personal cereal crop farms and make decisions on the use of the money. While some cultivate the crops solely for household consumption, others have surplus for sale. Maize yields under farmers' conditions are low, often less than one ton per ha due to biophysical and socio-economic constraints such as weeds, pests and diseases, unfavorable weather conditions, low soil fertility in the face of high fertilizer cost, poor infrastructure and high post harvest losses. The use of purchased inputs is limited to improved seed and fertilizers and even those are

infrequent. However, according to MOFA (1998), Ghana has been among the world's lowest fertilizer consumers even during the days of heavy subsidization

The northern savannah zone produces dryland crops mainly for local consumption or processing, including sorghum, millet, yam and cotton. Rice and vegetables (tomatoes) are produced in some places under state irrigation schemes for national consumption. Though Ghana has the potential for increased rice production, high competition from imported rice presents a challenge for local producers and processors of rice. The quality of locally parboiled rice is lower than that of imported rice and improvement in the quality of local parboiled rice will sustain the industry, which is a source of livelihood for small farmers, women processors and small millers. Unless the production and quality of local rice is improved, rice will continue to be imported to satisfy quality demands of consumers.

Root and tuber crop farming systems include cassava, yam, cocoyam and sweet potatoes. These are grown for food and cash and men and women participate in the cultivation of these crops, but the processing of cassava into gari and tapioca is almost uniquely carried out by women.

Tree crop farming systems involve the production of industrial and commercial tree crops, especially cocoa, oil palm, citrus and rubber. Rubber production is often taking place through nucleus estate and outgrower schemes. However, price fluctuations for industrial crops constitute the main source of vulnerability (Dixon and Gulliver, 2001). Though cocoa is

generally considered as a 'male crop', Anarfi (2000) estimated that women produce about 30% of the cocoa in Ghana. Ownership of tree crops by women is limited though there is no exact data available.

The forest zone has ample rainfall and is suitable for tree crops for local or international processing such as cocoa, coffee, oil palm, rubber and cashew together with tree crops for the national perishable market: plantains, banana and citrus. Tree crops such as mango and coconut are produced in the drier coastal savannah zone, where maize, cassava, rice, pineapples for exports and sugar cane are also produced.

Livestock is a savings account among farmers in many parts of the country. It is often kept to serve as savings towards unexpected expenditure. Although there are clear linkages between different cropping systems and livestock, the integration of crops and livestock is not at the optimum. Livestock ownership is variable, but a high proportion of farmers have animals including cattle, small ruminants, pigs, rabbits and some poultry. Donkeys are kept in the savannah zone as draught animals for farm work and transport. The purpose for keeping the animals is for sale, consumption and to serve as security against unforeseen needs. Women, may also own livestock, but in general they are involved in the feeding of animals. Women are quite often involved with the fattening of the animals.

The non-traditional export crop systems include pineapple, papaya, banana, cashew nuts, cocoa waste, fish and seafood which are produced and exported for foreign exchange earnings. In the case of pineapple grown for export or local market,

thousands of smallholder farmers in southern Ghana have benefited from the pineapple business since 1990. Nonetheless, their livelihoods are threatened by changes in European market requirements and EU pesticide residue legislation. Women and the youth have benefited from cultivating their own pineapple plots and this has helped women become increasingly economically independent of their husbands and some young men are now returning from low-paid jobs in the towns to take up pineapple farming as a profitable career. On the other hand, in the face of increasing production costs for pineapple, some women have abandoned pineapple cultivation (Gogoe *et al.*, 2001). Their study indicated that while marital status had no effect on a woman's decision to grow pineapples, a woman's position as head of household did this to a large degree. Education level and access to information favorably influenced adoption.

In fishing, women serve as transporters, processors and marketers of fish. Actual fishing is largely carried out by men in the coastal area as well as inland waters of Ghana. Women fishmongers have created associations for smoking, storing and marketing fish, contributing to increased protein intake in the country.

*Off-farm income generating activities:* As mentioned earlier, the development of the non-farm economy is important for improving the welfare of rural dwellers and it serves as one of the strategies of escaping poverty. Differences in livelihood strategies lie in the differences in resource endowment, institutional linkages and the diversity of activities undertaken by household members. As focusing on one

cropping activity makes the farmers vulnerable to economic and climatic shocks, most farmers are diversifying their crop enterprises to reduce their production and financial risks. However, crop failure is on the rise due to land degradation and population growth coupled with varying rainfall patterns that limit farmers to a single cropping season in certain farm localities. As such, farmers tend to engage in non-farming activities to generate additional income to meet the current financial demands.

Trading, fishing, processing of agricultural products and other artisan activities are carried out. Trading may be practiced as an off-season activity to supplement farm incomes. Most of the activities are inter-related as income from trading could be used to finance agricultural production and vice versa.

Processing of local agricultural and other products has increased in many parts across all farming systems and market access conditions in Ghana, but thrives on intensity of market transactions. Examples are cassava processing into gari and shea nuts into shea butter that has an increased demand (Drafor *et al.*, 2003). Other processing activities include chips and tapioca; maize into flour/*kenke*; sorghum into beer; rice parboiled; cowpeas/bambara nut into weaning flour; groundnuts and oil palm fruit into oil; and fresh fish into smoked fish. The processing is usually done by women through manual and arduous methods, but high-yielding procedures. Men are also engaged in processing using manual or diesel-powered equipment. The processing equipment may be manufactured locally, but may still be too expensive for

procurement by individual farmers without some credit or assistance in kind. The Food Research Institute under the Council for Scientific and Industrial Research (CSIR) is developing new types of products.

### **Gender Roles and Farming Systems**

Gender refers to socially and culturally defined roles and attributes attached to each sex, as well as to the relations between the sexes. It is a central organizing principle of societies that often govern the processes of production, reproduction, consumption and distribution. Gender approaches emphasize: a) the social construction of male and female roles rather than their biological distinctions; b) the gaps between women and men in all spheres of life; and c) the relations between men and women. Staudt (1994) states that gender places people at the center, women and men. With its emphasis on how society constructs opportunities and life chances, it allows for differentiation among women and men, for example, by age or income.

Gender roles and responsibilities are dynamic and men and women respond to changing economic circumstances (Doss, 2001). Though gender analysis represents a useful advance on previous attempts to conceptualize the social and economic lives of rural peoples in Africa, the complexity of the characteristics of different categories of women need to be taken into consideration (Warner *et al.*, 1997).

In most African countries, more than 50% of the active female population work in agriculture, reaching 93% in Burkina Faso, 87% in Angola, 98% in Burundi, 96% in Malawi, and 92% in Mali and

Tanzania (World Bank, 2001). Statistical data for Ghana show that women account for about half of the agricultural labor force and produce around 70% of Ghana's food crops (MOFA, 2003). In Ghana, women are involved in farm activities as well as all household activities which include food preparation, cleaning, caring for the children, fetching of water and firewood gathering. Traditionally, men are not expected to involve themselves in much of household work, especially in the rural areas.

There are differentiated roles in farming systems with men and women playing vital, but complementary roles. Women undertake about 90% of the food processing, are responsible for about 80% of food storage and from farm-to-village transportation of produce. Also, they carry out 90% of hoeing and weeding and 60% of harvesting and marketing. Women are largely responsible for harvesting and post-harvest care of produce, especially storage of cereal crops and their processing.

Due to the rural-urban migration of male agricultural workers, available labor resources become increasingly scarce, and women have to participate in activities that were traditionally dominated by men. As men move away and women remain, rural areas are populated by ever-higher proportions of women (Huvio, 1998). In Guinea, the economically active labor force between the ages of 20 to 49 have become predominantly women (FAO, 1995) which could be due to high level of migrations of men to urban areas and death through HIV/AIDS. Increasing male out-migration from the rural areas confirms that women are becoming increasingly responsible, not

only for the family food supply, but for national food security.

Women are the first to be concerned with household food security and nutrition, acting as producers, processors and consumers. They form a major part of agricultural and livestock development, and have proved to be the driving force in achieving project objectives and reducing poverty. Therefore, increasing the economic status of the poor is largely concerned with enabling women to realize their socio-economic potential more fully and to improve their quality of life (IFAD, 2000). Due to the vital role of women in ensuring food security, achieving the first MDG - to eradicate extreme poverty and hunger - must focus on women and their work in agriculture because they are significant actors in the provision of food security.

Women belong to male-headed and female-headed households. About 53% of female household heads in rural areas fall within the poorest 20% of the population. Three types of female-headed households exist in rural Ghana, namely *de jure*, *de facto* and polygamous households. *De jure* female-headed households are autonomous households headed mostly by widows or single women, *de facto* households are headed by wives during the male head's absence for various periods of time with varying degree of autonomy and independence, and there are polygamous households where co-wives head economic sub-units within the household, which can increase the percentage of households that are headed by females.

Migration has contributed to the rise in *de facto* female-headed households, which has challenged the gender-based roles

of rural areas. On the other hand, rural women, especially the younger women, also migrate to urban areas in search of work to earn additional income and to learn skills.

The significant involvement of women in agricultural work and their extensive economic contribution has not received much recognition. By and large, they have remained as invisible workers. Throughout the 1980s and 1990s many researchers have attempted to overcome this invisibility through gendered empirical research studies focusing on gender analysis and gender roles. It is recognized that women stand at the crossroads between production and reproduction, between economic activities and the care of people, and therefore between economic growth and human development (Blackden and Bhanu, 1998).

Some studies show that female farmers are just as productive as male farmers. One study, conducted in the Mossi Plateau of Burkina Faso, even found that female labor in farming was six times more productive than male labor (IFAD, 2005). Men and women in Ghana are faced with changing roles as a result of the transformation of agricultural enterprises from subsistence-based farming to market-oriented production systems and activities.

### **Contributions of Women Farmers and Issues of Inequality**

Women farmers in small scale farming systems have contributed to food security, poverty reduction and overall household welfare. Their contributions to food production, processing and post-harvest activities have already been mentioned.

Crops in many instances are "gendered". In much of West Africa women are the cereal crop farmers (rice, maize, and beans) and vegetable farmers and some undertake the production of export crops such as cocoa. However, men produce maize, but mainly for sale and dominate tree crop production. Traditional farm chores are also often "gendered". Land preparation is usually undertaken by men, planting is done by women and children with men assisting; weeding, harvesting, transportation and marketing are primarily done by women. But women oversee the land preparation in female-headed households though it is mainly done by men.

The findings of an IFPRI study showed that cocoa plays a vital role in the lives of poor women farmers in West Africa, who grow much of the world's cocoa (IFPRI, 2002). The study also indicated that small-scale farmers produce almost all the cocoa grown in Ghana. Growing cocoa enhances the status of women in Africa and provides them with an important source of income. Cocoa is considered as an important cash crop and the dynamics of cocoa production makes it possible for women farmers to produce food crops in the same farm (intercropping) till the cocoa is mature and forms canopy. However, when women grow cocoa, the additional income they earn is more likely to be used to meet the family's basic needs of nutrition, healthcare and education than additional men's income earnings.

Besides, there is an increasing role of women's contribution to household food security. Poverty and food scarcity cycles in certain parts of Sub-Saharan Africa result in disproportionate allocation of rural

household budget to food. Poorer farm households, due to poverty and lack of appropriate storage opportunities are compelled to sell their produce immediately after harvest at very low prices. When their supply runs out, they are compelled to buy the food at high prices due to the lean season. But where does the household get money to purchase the food? The dynamics of ensuring household food security goes beyond production and includes ability to purchase food when household either does not produce it or their supply runs out. Women and children undertake off-farm income generation activities such as providing labor services on other farms, petty trading, firewood collection, and whatever activity that provides some income to enable them purchase food for the household. Thus, women remain poor and often have small landholdings partly due to demand on their time for other activities.

Owing to low level of agricultural mechanization, the need for agricultural labor is high. It is usually men who are responsible for highly mechanized large-scale cash cropping while women take care of household food production and small-scale cultivation of cash crops, which may require lower levels of technology (FAO, 2001). Export opportunities are also increasingly taken up by commercial farmers. There are women who are involved in large scale crop production but the focus of this paper is on small farming systems.

### **Challenges Faced by Women Farmers**

According to a World Bank report, there is no region where women and men have

equal social, economic, or legal rights. Women continue to have systematically poorer command over a range of productive resources (World Bank, 2000a). Men and women farmers are not homogeneous groups and their needs and priorities will vary according to different socio-economic factors. Pasteur (2002) noted that the livelihood needs of men and women are not always the same, due to their different roles, responsibilities and resources. The impact of different livelihood interventions will also vary according to gender. For example, a technology designed to relieve the workload of men would need to ensure that it does not result in an increase in the workload of women, or vice versa.

Women's unequal access to resources is rooted in cultural and social institutions as much as in economic processes (Coelho and Coffey, 1996). In Sub-Saharan Africa, more women than men are too poor to buy inputs such as fertilizer, and they are not generally considered creditworthy by financial institutions (Rathgeber, 2003). Inequality in the distribution of resources and consumption of food within the household makes women, in general, poorer than men. Within the livelihood framework, women are disadvantaged with respect to either assets or activities, or sometimes a combination of both, linked to inequalities of access to resources and income-generating opportunities (Ellis, 2000).

It is now well known that women are not sufficiently included in development efforts or that these efforts are not planned and implemented in a manner that will have the desired impact on them. Their role in farming systems and decision-making is not well understood, and the means of

increasing their access to and control of resources are not sufficiently investigated and addressed. There are constraints ranging from poor access to productive resources, market, knowledge gap, limitations in communication and the policy environment.

Research in the past 30 years has shown that women have less access to land and productive resources and when they work in paid employment, they receive lower wages than men. At the same time, it has been shown that women play important roles in agriculture and food production in most parts of the world (Rathgeber, 2003). If women had equal access to agricultural inputs in Sub-Saharan Africa, where women are a large proportion of farmers, total agricultural outputs would increase by 5 to 20% (World Bank, 2001).

The results of a rural poverty assessment in West and Central Africa on productivity by IFAD indicated that lower yields should not be interpreted as indicating lower productivity among women farmers. According to IFAD, gender differences in yields are not a result of biological differences in productivity between women and men or how hard men and women work, but factors such as intra-household allocation of resources, women's difficulties in accessing financial resources, women's shortage of labor as a result of their multiple responsibilities and poor control of family labor should be taken into consideration (IFAD, 2005).

*Labor and time:* Labor and time are major constraints to women farmers, especially those in female-headed households. Time constraints are acute for female heads of households due to domestic responsibilities, farm and off-farm activities.

As stated by Ellis (2000), female-headed households tend to be smaller than male-headed households and therefore have less family labor available for farm work and other income-generating activities. Women can only appropriate their own labor and that of their children and only women who are heads of households are more able to have access and control over household labor. To cope, women reduce the crop area that can be cultivated or change to less labor-intensive crops.

Use of child labor is more frequent in female than in male-headed households, which reduces the educational level and life learning opportunities of the child. Women spend up to five hours a day collecting fuelwood and water and up to four hours a day preparing food, leaving little time for child care or other productive tasks (IFAD, 2000a). According to a UNAIDS report in 1999, intra-household labor reallocations and withdrawing of children from school occur where HIV/AIDS had led to the loss of an adult family member to alleviate the loss of labor.

The results of a study on labor utilization for cash and food crops in Ghana show that labor availability increases the probability of a woman adopting pineapple production by 50%. However, an additional source of income decreases the likelihood of a woman adopting pineapple by 18% as the additional income source might impose competing demand on the woman's time and could also meet her cash needs (Al-Hassan and Egyir, 2001).

*Land:* In all regions of the world, there is evidence of significant gender disparities in land ownership (World Bank, 2005). Land ownership is an important issue in

forestry and agricultural development. Access to land and other resources are key to basic livelihood especially in an economy that is predominantly agricultural. The domination of agriculture in Ghana suggests the importance of land as basic tool of development and a significant determinant of income earning power. Yet, most women are left with only usufruct rights to land without title deeds that can enable them make long-term investment decisions on the land and also use land rights as collateral for credit which can be used to make investments. Guarantees normally required by lending institutions are land rights, which rural women almost never have.

Quisumbing and Meinzen-Dick (2001) stated that rights to land and houses convey status and power within the community, yet these resources are unequally distributed between men and women as a result of social, cultural and traditional systems. In most parts of Ghana, women do not directly inherit land, and their access to land is affected by family linkages. Some rural women receive land use rights from their husbands upon marriage and many use this land to grow crops to feed the family. However, some women are able to obtain a surplus for sale. Such lands are often low in fertility, as they might have already been cultivated for several years.

Though the legislation and land reform in Ghana attempts no discrimination against women, customary laws present severe limitations. An example is the policy guidelines of the National Land Policy document on 'Facilitating Equitable Access to Land', which did make mention efforts to improve women's access to land.

*Credit:* A study of rice farmers in Cote d'Ivoire revealed that women are at a disadvantage in their access to credit services, receive less for their output, and paid more for their chemical fertilizers than men (Adesina and Djato, 1994). Women are found to have lower yields than men, and the difference is attributed to the fact that women have less adequate access to credit and essential inputs and education (Adesina and Djato, 1994). Yet, one of the important support services for increased production is credit. Equity capital is usually insufficient to meet the expenditure requirements for higher productivity and expanded production

Many women farmers growing cowpea in Ghana have been unable to adopt improved varieties because they lack sufficient access to cash for the insecticides required (Williamson, 2005).

Lack of financial services is one of the major constraints in farming communities making it impossible for them to benefit from improved profitability of the cash crop sector. This is critical due to the fact that input supplies are now provided by private traders after the structural adjustment program and trade liberalization. Access to financial institutions has not improved. Women have greater difficulty accessing credit as the forms of collateral required by financial institutions are not available to them.

Traders and entrepreneurs in non-agricultural activities attract credit more easily than those in agriculture due to the high risk in agriculture and lack of collateral security by many small farmers. Certain types of smallholders, especially women

and poorer farmers, are finding it much more difficult to afford pesticides.

*Education and extension service:* Agricultural extension agents are an important potential source of information for men and women farmers, but more so for women because of their generally lower levels of education. Female farmers do not have access to extension information necessary for increasing crop yield. Few women are agricultural extension agents, and agricultural research and extension institutions rarely seek the expertise of local women farmers. When women receive the same education as men, farm yields increase considerably. But, women farmers still receive a small proportion of all agricultural extension services worldwide.

*Technology and information:* Throughout most parts of Africa, female farmers have less access than male farmers to machinery, fertilizer, credit and other related financial services. Men tend to have greater access to information because they participate largely in cash-based economy where more information is documented. A study by Doss (2001) found that African women farmers are less likely than men to adopt improved crop varieties and management systems.

*HIV/AIDS:* Globally, women account for 48% of adults infected with HIV/AIDS, but infection rates are increasing more rapidly among females than among males. In Sub-Saharan Africa, 57% of those infected are women. In many African countries, females aged 15-24 have prevalence rates three times higher or more than those of males of the same age (UNAIDS, 2004).

The HIV/AIDS prevalence rate in Ghana is about 3.8% (MOFA, 2003). Women are at greater risk than men (women's risk exposure is 2 to 5 times higher than that of men). Factors contributing to their risk include polygamy, certain widowhood rites and poverty among young girls. HIV/AIDS generates poverty, consumes resources, induces regional instability and contributes to exclusion because of the social stigma attached to the disease.

Besides, women farmers are traditionally caregivers and take care of family members who are afflicted with the disease, placing an additional burden on their time and labor needs.

### **Interventions for Women in Agriculture**

Governments have realized how central the agricultural sector is to their broader economic and social development. However, hastily implemented adjustment policies and declining donor support have made Africa's agricultural revival more difficult, especially in the continent's low-income, food-deficit countries. According to McCalla, encouraging signs exist, in that, a growing number of African countries have undertaken policy reforms and institutional changes that move in a direction of encouraging the millions of small farmers in Sub-Saharan Africa to be productive and profitable in their activities (e.g., Uganda, Tanzania and Guinea) (McCalla, 1999). The scope and intensity of the interventions and their impact on the various types of farmers is a matter of debate.

The benefits of agricultural development interventions have been taken over by

better-off and more powerful members of the household and community. Women often need to adopt strategies that allow them to bypass gender constraints to enable them have access to land, capital and other productive resources, which may not be necessarily profitable. This is because the transformation of traditional farming economies into modernized small farming has cultural implications, including important changes in indigenous patterns of gender relationships within the household and the community.

In Ghana, a number of programs have been designed to support small farmers, improve their productivity and empower them; including micro-credit, supply of equipment for small-scale processing, and support for group formation. Some of the interventions are government initiatives while others are from international organizations and NGOs. A Ministry for Women and Children Affairs (MOWAC) was established in the current government to address specific issues relating to women. Many interventions directed at women are also directed to male small farmers except in the case of the MOWAC initiatives that are exclusively for women farmers and traders.

The Women in Agricultural Development (WIAD) have developed a Gender and Agricultural Development Strategy (GADS) which is to address gender and rural livelihood issues within the agricultural sector; serving as a guide for addressing the challenges of women in agriculture (MOFA, 2003).

Women are creating small business activities and off-farm income generating activities that can help support their

agricultural investments and escape poverty, while ensuring food security. Civil society and NGOs are providing trainings to acquire skills and financial assistance for small to medium enterprises owned by women (NETRIGHT, 2004). A Social Investment Fund (SIF), which is a vehicle for multi-donor funds, has provided micro-credit to small farmers for group production of products including pineapples, pepper, mushrooms and honey. The SIF has a female representative on the District Sub-Project Review and Approval Committee.

The Ministry of Women and Children Affairs established a special micro-finance fund to provide working capital for women entrepreneurs who are disadvantaged in accessing loans from the traditional banks known as the Women Development Fund. The fund also seeks to contribute to the efforts of poverty alleviation and the Government of Japan provided 26.5 million US dollars to initiate this effort. The fund encouraged women to form groups and the groups were to open an account with either a Rural Bank or the Agricultural Development Bank. This was one of the requirements that entitled them for a loan with an interest rate of 20% as opposed to the normal 40 to 50% charged by conventional banks (MOWAC, 2003). The amount given to women ranged from 500,000 cedis to one million cedis (1US\$ is equivalent to 9000 Ghanaian cedis). This amount is not sufficient to enable women meet the cost of production to improve on productivity and incomes. Input prices have even increased in the current economy due to price deregulation of the structural adjustment program and trade liberalization.

An institutional credit was operated by IFAD/SCIMP in four districts in the Volta Region of Ghana within 1996/97 cropping season. Under the scheme, the Agricultural Development Bank (ADB) granted loans to both male and female beneficiaries who were involved in farming and processing activities. The farmers were mainly food crop farmers who cultivated maize, cassava and yam. This project is laudable in targeting small-scale food producers, most of whom are women. However, the project could not meet the minimum financing requirement of the beneficiaries to enable them procure the required production inputs or pay labor and other expenses that could result in increased profitability.

The Ministry of Women and Children Affairs also purchased 200 cassava processing machines for distribution to women in cassava growing communities for gari production. Fifty women were to work on one machine. Tomato processing machines and groundnut and shea butter machines were also purchased for distribution. The number of women covered with these initiatives is few and there is a need to extend these initiatives to other women.

Though there has been number of interventions, lack of gender disaggregated data as well as consolidated data on women does not provide the opportunity for appropriate targeting and effective site and farmer selection processes for any of the described farming systems. The cultural and institutional environment and low representation of women at decision-making levels have resulted in the persistence of the challenges.

Low budget allocation to the agricultural sector has also contributed to the

ineffectiveness in achieving desired results for intervention efforts. There is continual reliance on donor funding for many projects. Some projects are discontinued once donor funding is over, and the timeliness of the release of funds have also affected the effectiveness of project implementation and achievement of target. The agricultural sector received 3.03% of the total national budget in 2004 and 4.02% in 2003. The national budget allocation for the agricultural sector in Ghana was 34.4 billion cedis (about 3.78 million US dollars) in 2004 of which government contributes 36.2%, an amount that is used for personnel emoluments, administration, services and investment.

In addition to the limited budget allocation to agriculture, there is a high focus on the industrial and service sectors and there is still a way of thinking towards agriculture that present it as a less profitable business option. It must be stated that if for example, the government does not understand that improving the state of women farmers is important, it does not matter how many programs are implemented; the status of women farmers will not be improved. The government and policy makers need the will to address these issues. As long as small farmer agriculture is considered a less profitable business option, credit difficulties will continue to persist.

The international donor community has been criticized for focusing too much on macro level development instead of focusing on micro level with the option of empowerment of the people at the grassroots. There is now an increasing awareness of the implications of leaving

out women and the poorest from development plans. According to Pinstrup-Andersen (1994), hunger associated with failure to effectively integrate the poor and vulnerable groups into the economic development process is evident and will accelerate unless policies to alleviate poverty, generate employment, and raise [rural] incomes are vigorously pursued.

### **The Way Forward for Enhancing the Role of Women**

The way forward discusses the nature of interventions and issues relevant for enhancing the role of women. Some questions that need to be addressed are worth asking. For example, in the face of globalization, what will be the fate of women farmers in the next ten years? Will their economic activities continue to be relevant and what would be the extent of market integration?

A recent World Bank report presented at the 49th Session of the United Nations Commission on the Status of Women showed that disparities between men and women remain pervasive around the world – in resources and economic opportunities, in basic human rights, and in political voice – despite significant gains in some areas and countries. These disparities are strongly linked to poverty and ignoring them comes at great cost to people's well-being and to countries' abilities to grow sustainably and govern effectively (World Bank, 2005).

More attention should be paid to the agricultural sector than that exists in present reports and program designs. Development programs continue to eliminate poor rural households as a result of the design and the criteria for farmer selection. Yet food

poverty is more prevalent in the rural than urban areas, and poverty is linked with average family size and dependency ratios, which are higher in rural than in urban areas (World Bank, 1997). The Ghana Government and World Bank policies can easily exclude the rural poor, especially women, from the development plans and processes. While farmers in Ghana have little or no assistance to provide all the agricultural products needed for food, to feed livestock, to feed agro-based industries and meet export requirements, many industrialized countries provide large support to their agricultural producers.

Identifying policies, processes and institutional factors which can best contribute to improving gender-based farming systems will enhance household and national food security, overall household welfare and rural poverty reduction. Though some progress has been made in supporting the role of gender in farming systems, the scope and intensity are still challenged. Some of the persisting challenges can be attributed to lack of gender disaggregated data within farming systems, and the socio-cultural and policy environment.

In African agriculture, discussion of farming systems needs to include gender roles due to the context in which these roles persist. The cultural and institutional norms are hard to overlook. Considering farming systems through a gender lens makes it possible to identify development approaches that may act against women's interests. As mentioned earlier, most African countries are agriculturally-based, yet are unable to match per capita food production with population growth rates. Understanding

the roles of men and women small farmers and the contributions made by women farmers towards reduction of hunger can provide insights into planning and design of interventions in the sector.

As stated by Haddad (1999), if programs that aim to increase women's income today can increase women's status within the household, then the returns to those programs tomorrow could be profound in terms of lowered fertility, improved child survival, and increased human capital. A study by Al-Hassan and Jatoo (2003) concluded that policies and strategies that enhance incomes of the poor and facilitate the production of farm non-tradables are most likely to generate the greatest impact on growth and poverty reduction.

For example, because women often have a small political presence on community councils, agriculture extension programs may be perceived as male spaces and local agrarian organizations and institutions may be based on male hierarchies. Also, gender analyses have made clear that men and women often manage, use and control natural and agricultural resources differently. By understanding these differences, and the gendered power relations behind them, agricultural programs and policies will achieve greater equity and efficiency (Rojas, 2004).

Women's low participation in national and regional policy-making, their invisibility in national statistics and their low participation in extension services have meant that the issues that concern women most have been neglected in the design and implementation of many development policies and programs (FAO, 1996). Though rural women and men are both active agents

in agricultural and rural development, women have not received the desired benefits from development programs that provide agricultural support systems to farmers. Moreover, agricultural and rural development policy and planning often do not reflect and address the different roles and needs of rural women and men adequately. Available gender information on farming systems and conscious efforts to improve women's participation at policy and decision-making levels can improve the ability of male and female farmers to play their complementary roles effectively.

Direct access to land is particularly relevant to women in female-headed households in order to facilitate access to agricultural support services, as many types of development initiatives and programs seek out only heads of households with secure tenure status. The same applies to adoption of certain technologies that require long-term land commitments including the rubber project in the Western Region of Ghana where the outgrower scheme requires participating farmers to have a long term access to land.

Improving women's access to land will enhance their ability to participate in the on-going programs such as the Presidential Special Initiative in oil palm. Otherwise, women will continue to participate only by transporting the palm fruits to mills and working at the mills. According to Crowley (2001), rural women claim that secure land rights increase their social and political status, improve their sense of self-esteem, confidence, security, and dignity.

A study by McCalla (1999) concluded that meeting future requirements in Africa

and the world will require sustainable intensification of complex production systems, appropriate national and international policies and continued investments in agricultural research. The question of sustainability cannot be overemphasized in the face of high dependence on donor funding for agricultural projects that are targeted towards improving farming systems and agricultural productivity. The policy environment that is based on the findings of national level agricultural research will be relevant in the years ahead. Currently, the link between policy formulation and agricultural research is not strong.

## Conclusion

Though the recognition and integration of gender concerns into various national and international policies and programs have increased in recent years, there is more work to be done. In the agricultural sector, gender roles present challenges in achieving food security, improving household incomes, and reducing poverty. When an economy is primarily based on the agricultural sector, an increased attention should be paid to gender issues and roles of male and female farmers and their participation in different farming systems.

There is the need to improve farmer livelihoods, which calls for sustainable farming systems. Gender relations in farming systems are important for the achievement of vital indicators of economic development. Women operate within particular farming systems and often under different conditions than male farmers. As such, agricultural programs and services

are more effective when they are targeted within particular farming systems.

More importantly, measures need to be taken to intensify women's agricultural production by improving women's access to inputs such as land, credit, labor appropriate technology, extension and education. Most women farmers are vulnerable and require policy support that enhances their access to resources. Empowerment of women through an increased representation on policymaking platforms and decision-making levels is critical to enable them voice out their concerns at all levels. Education and improvement in the status of women are able to have an impact on development objectives of poverty reduction, food security, family planning and effective education of children.

Further studies that focus on gender roles and farming systems at the national level, mapping out the diverse livelihood activities undertaken by women, men and farmer groups will inform policy formulation and targeting of development initiatives. The study would need to be carried out in the major agro-ecological zones, identifying the major farming systems, determining the specific roles performed by men and women farmers in those systems, and the specific interventions that will result in improving productivity. Generalization of the agricultural sector in terms of gender will continue to produce erroneous results from development projects and programs. The major farming systems can become rural development domains. Further studies should also validate the degree of constraints often mentioned and their intensity on male and female farmers.

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