

**INFLUENCE OF GENDER ROLES ON CROP PRODUCTION
AND FOOD SECURITY IN NORTH WEST KISUMU
LOCATION, KISUMU COUNTY KENYA**

BY

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ABSTRACT

Gender disparity is a general global and regional concern. Locally, nearly 80% of Kenya's population depends on agriculture for its livelihood. However, agricultural production has been declining due to constraints such as gender participation in crop production leading to poverty and food insecurity in the country. Generally gender mainstreaming is essential for increased food production. Most studies have attributed food insecurity to physical, economic, technological and administrative factors forgetting gender participation as a problem. In principle, existing laws provide for equal rights and privileges for both men and women. However, it is difficult to interpret existing laws ultimately compromising the equality enshrined in them. The main purpose of this study was to establish the influence of gender roles in crop production on household food security. Specific objectives are to establish the existing gender roles in the study area, assess the influence of socio-cultural practices on crop production, determine the influence of access, control and ownership of production resources on crop production and food security, and established the hunger gap in the study area guided by the functionalist perspective, which views a part of society as functional if it maintains and contributes to the survival of the society. The study area was North West Kisumu Location consisting of four sub-locations which were considered as the basic sampling unit. The total locational population is 6,075 households; the study population was 4075 farming households. The unit of analysis was the household heads. The sample population was 364 calculated using Taro Yamane's (1967) formula ($n = \frac{N}{1 + N(e)^2}$). Simple random sampling was to reach households and purposive sampling was to get respondents for Focal Group Discussions and Key Informants. Intensive interviews, household questionnaires and observation were used to collect quantitative data, while Focus Group Discussions and key informant interviews were used to collect qualitative data. Quantitative data analysis was through descriptive statistics, while qualitative data was analyzed by categorizing relevant responses to answer research questions. Research results indicate that education plays a role in women's engagement in crop production and that females generally engage in reproductive, productive and community activities, giving females less time to work on the farms effectively, unlike their male counterparts who mostly engaged in productive and community activities. Study results indicate division of labour by crop and by task between the males and females and heavier work-loads on females than males. The study revealed discriminatory practices and norms against women characterized by differences in power which determine access, control, and ownership of property, crop production resources, decision-making and a hunger gap in the community. Findings of this study will be of relevance to gender and food security policy and decision-makers, individuals and also improve the existing body of literature on gender roles and food security in the Location as the existing literature have their focus at the national level.

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Social development aims at raising the living standards of the community, enhancing quality of life and improving social conditions (Dube, 1998, Thompson 1997). Food security is an indicator of social development. Policy interest in rural women emerged as an issue, at a time when there was increasing disenchantment with the effects of development policies on rural areas. Despite the advances of the Green Revolution, levels of food production were not keeping pace with population growth, and there was consequently a decline in nutritional standards. By the beginning of the 1990s there was a growing impatience with the failure of development efforts to make a real impact on those below national poverty lines. This new determination to tackle rural poverty is bound into the debate on how best to realize the potential of rural women. The feminization of agriculture is a trend which has unfortunately grown hand in hand with the feminization of poverty. War, sickness and death from HIV/AIDS and migration in search of paid employment have all reduced rural male populations. In South-East Asia, women currently provide up to 90 percent of labor for rice cultivation, while in Sub-Saharan Africa, women produce up to 80 percent of basic foodstuffs for household consumption and sale (FAO, 1999). At the same time, figures show that more than 550 million women or 60 percent of the world's rural population live below the poverty line. The implication is that people know and learn things in different places in different ways. The issue is not just whose knowledge counts. But who knows, has access to and can generate what knowledge and how. What people do is not necessarily what people consciously know (Scoones and Thompson, (1994).

Most societies have a complex division of labor and women work in separate spheres, in an almost segregated manner from men. This separation permits the development of what can be termed a woman's subculture. In a woman's subculture, separate group activity, status systems, and support networks operate. Such sex segregation system poses many constraints to access, use and benefits to women in agriculture (Staudt, 1976). Household gender division of labor contributes to the choices household members make about whether to accept, reject or seek alternatives to the conventional or normative model of agricultural production (Rural Sociology Journal, Spring 1995).

Most outstanding features of agricultural policies in Africa put their attention to gender issues in agriculture, namely lack of emphasis in policy documents recognizing women's contributions in agriculture, needs and prospects. Most often, women only receive paragraphic attention in development plans and policy documents. Hence, it is not a surprise that agricultural development programmes have tended to ignore them. Gender bias and blindness are evident throughout the agricultural and food systems and farmer is usually perceived as either genderless or male (Scoones and Thompson 1994). Women are both farm workers and decision-makers, at least to some extent. Kenya relies heavily on the agricultural sector as the basis for economic and social development (Ogot and Ochieng', 1996). The sector is fundamental as it is the main source of food security and employment for over two thirds of the Kenyan population (KARI, 1998; GOK, 2010). Men's role in agriculture has been commonly limited to land-bush clearing and oxen ploughing and to a limited degree breaking up the soil using hoes. Women usually carry-out the major tasks of breaking up the soil, planting, weeding, harvesting, and carrying the harvest home with little or no male assistance (NEF, 2006). Gender affects the distribution of resources, wealth, work, decision-making, and entitlements within the family and in public life. Women from poor households engage in a variety of income generating and expenditure saving activities. In some cases, these activities supplement the contribution by males while in others they are the primary or the sole sources of household livelihoods (Maxwell, S. and Smith, M. (1992)). This also gives women less or very little time to rest.

Analysis of the gender division of labor has revealed that women typically take on three types of roles in terms of paid and unpaid labor. The *productive* roles include market production and home/subsistence production undertaken by women to generate incomes. The *reproductive* roles include child-bearing and childrearing (Razavi and Miller, 1997: 14). Reproductive roles influence crop production immediately before a woman delivers and after delivery because during this period the woman is either too weak or is taking care of the new born baby. According to Fernando (1998), activities, resources and opportunities of people are significantly influenced by gender roles, that is, by the socio-economic such as marketing the produce and making decisions in the community, and cultural dimensions of being male or female. Reproductive tasks or tasks related to child bearing and care, maintenance of household (cooking, fetching water and firewood) are assigned to women by the society. In addition, women also

manage community resources while men participate in formal community politics (Fernando, Sen, 1998). The existing low level of consciousness about the roles women play in the development of Kenya; the deep-rooted cultural beliefs and traditional practices that prevent women from playing their full roles in the development process of the country; lack of appropriate technology to reduce the workload of women; shortage of properly qualified female development agents to understand, motivate and empower rural women by eliminating the major constraints hindering their progress needs to be addressed (United Nations 2002). This is a motivation for this research in North West Kisumu Location of Maseno Division.

There is substantial evidence that gender-based constraints restrict the productivity of female Kenyan smallholder farmers. This is important because women form the majority of the active farming population. Youths also face gender-based constraints as young men are unable to own land due to socio-cultural norms that accord considerable decision-making power to their elders. This militates against allocating young men plots to work on while their fathers are still alive. A study carried out under NALEP, 2009 shows that, with respect to women farmers specifically, the assets they possess typically have low income-generation potential. They include poultry, dairy goats, firewood and charcoal, savings invested through local credit facilities such as 'merry go rounds', and kitchen utensils. Men's assets are generally of high value and directly related to crop production for instance land and access to production resources such as credit, machinery and modern farming technologies. The differentials between women and men in access to and control over assets result in important productivity differentials. Limited control over benefits for which women have contributed in male-headed households, results in their reduced contribution during subsequent seasons, thus undermining overall production and productivity. A recent district survey of Kisumu West Sub-county, where Kisumu West Location falls, by the Ministry of Physical Planning revealed that 40% of the households consume less than the National requirement of 120 kilogrammes of maize per person per year, as crop production has not been able to meet this consumption requirement as "Ugali" is the main meal of the people in the area. The study attributed this to physical, economic, technological and administrative factors. (Republic of Kenya, 2005).

1.2 Problem Statement

Kenya depends on the agricultural sector for social and economic development as nearly 80% of its population depends on agriculture for its livelihood. However agricultural production has not been adequate to take the households through from one harvesting season to another. They can not afford three adequate nutritious meals in a day. This has led to poverty and food insecurity in the country. The low level of production is attributed to several constraints among them the influence of gender participation in crop production. It is generally agreed that gender mainstreaming is essential for increased food production. It is therefore necessary to establish the gender roles in crop production and policies that would effectively lead to gender mainstreaming be formulated for increased crop production. The Ministry of Physical Planning, 2005 survey of Kisumu west Sub-County revealed that 40% of the households consume less than the National requirement, and attributed the food insecurity to physical, economic, technological and administrative factors. Yet gender participation which is part of the problem has received divided attention. In principle, existing laws provide for equal property rights and privileges for both men and women. However, it is difficult to interpret existing laws through common law and social conventions and ultimately, the equality enshrined in these laws are compromised. Despite a lot of initiatives by the government, donors, non-governmental organizations and community based organizations, gender inequalities in division of labour in crop production still exist in North West Kisumu Location in Maseno Division and need to be established. Hunger gap is another negative effect on food security. This study therefore seeks to establish the influence of gender roles and factors that explain the situation. The reduction in supply of staple foods, every season and the increase in demand by season due to an ever increasing population, have led to price increases and less access to the commodities leading to food shortage and therefore food insecurity in N.W.Kisumu Location.

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1.3 Objectives of the Study

The broad objective of this paper was to determine the influence of gender roles influence crop production and food security in N.W. Kisumu Location in Maseno Division. Specifically the study sought to:

1. Establish gender roles in crop production activities in North West Kisumu Location in Maseno Division.
2. Assess the influence of socio-cultural practices on crop production in North West Kisumu in Maseno Division.
3. To determine the influence of Gender distinction in Access and control of Resources on Crop Production and Food Security in North West Kisumu Location in Maseno Division.
4. To establish the food insecure months in North West Kisumu Location in Maseno Division.

1.4 Research Questions

The study specifically addressed the following questions:

1. Which gender roles influence crop production activities in North West Kisumu Location?
2. What is the influence of socio-cultural practices on crop production in North West Kisumu Location in Maseno Division?
3. How does access to production resources and ownership of land influence crop production in North West Kisumu Location in Maseno Division?
1. Which months of the year are households food secure and which months are they food insecure in North West Kisumu Location?

1.5 Scope and Limitations of the Study

The study was carried out in North West Kisumu Location in Maseno Division in Kisumu West Sub-County. North West Kisumu Location has four sub-locations namely Marera, Sunga, W. Karateng and E. Karateng'. The respondents were 364

household heads. The researcher was aware of the possible shortfalls of the investigations and instituted reasonable safeguards to mitigate against some of the limitations such as incomplete data due to failure in allocating appropriate respondents to give correct data. The community also had a culture of "Hand-Outs" which could have made it a bit difficult to get information. This was, however, well handled due to proper coordination between the researcher, the agricultural extension staff in the Location and the Provincial administration in N.W. Kisumu Location. Another limitation was cultural practices that belittle women and made them shy away from giving information. This was sorted out by meeting the males and females separately same day, time and area by the researcher and her assistants. Low literacy levels, on the part of female respondents, somehow slowed down the exercise but with positive results in the end. 21.9% attained primary level of education, 17.3% secondary level and 8.5% were illiterate.

1.6 Justification of the Study

Gender equality and attaining food security are major global concerns that should be addressed, as they lead to both economic and social development. The government of Kenya gradually realized that gender inequality, poverty and food insecurity in the country can only be reduced through increased agricultural production. The results from this study are expected to be of relevance to gender and food security policy and decision-makers in both government and non-governmental institutions and individuals as far as project choices and implementations are concerned, considering areas of assistance, advice and appropriate policy formulation. The findings will also be important in evaluating the already existing projects, strategies and policies and will also go along way to add to the available body of literature on gender roles and food security in N.W. Kisumu Location in Maseno Division as most of the existing literatures has its focus at the national level.

1.7 Assumption

That the community members/ the respondents approached volunteered information freely about gender roles and food situation and on issues that influence crop production.

CHAPTER TWO

LITERATURE REVIEW

2.1 Gender Roles and Crop Production

Women globally play triple roles which include productive, reproductive and community management this leads to time poverty which therefore affects their role in crop production. Gender inequitable rural employment outcomes persist because of a range of interlinked social, economic and political factors. Analysis of the gender division of labor has revealed that women typically take on three types of roles in terms of paid and unpaid labor. These roles are for example the *productive* roles, which include market production and home/subsistence production undertaken by women to generate income; the *reproductive* roles such as child-bearing and childrearing responsibilities borne by women, and are essential to the reproduction of the workforce; and the *community management* roles which include activities undertaken by women to ensure the provision of resources at the community level, as an extension of their reproductive role. Analysis of the gender division of labor has revealed that women typically take on three types of roles in terms of the paid and unpaid labor (Razavi and Miller, 1997). Apart from the women's triple roles, they burden of domestic work and time poverty that also affect crop production leading to food security.

The presence of rigid, socially sanctioned gender roles in rural societies severely constrains women's choices regarding how they allocate their time among different paid and unpaid productive and household activities, giving rise to the incidence of time poverty. Culture, religious beliefs and social norms are all factors which dictate that unpaid domestic and reproductive activities (such as water collection, child care, cooking and washing clothes) are the domain of female members of the household. This is precisely the situation in rural Africa (Serra, 2009). The effects of this domestic burden on women's economic opportunities are damaging and predictable but often neglected in policies aimed at increasing female participation in crop production. The time burden of rural women's domestic unpaid work and the lack of substitutability of female labor in household work by men serve to limit women's choices with regards to crop production. Activities that are time intensive and physically arduous (e.g.

loading and fetching indispensable household goods like water and fuel) are generally the domain of female household members, with little help from males (ibid).

Lack of infrastructure, such as running water, fuel-efficient stoves and electricity, exacerbate women's unequal burden. Consequently, inequalities in the amount of time available to women and men to devote to crop production play a significant role in low yields and to food insecurity. Furthermore, even in the absence of cultural restrictions, time poverty which is too much work and little time to accomplish the tasks. This restricts women from taking advantage of employment opportunities which require travel or migration far from their rural homes (Serra, 2009). Secondly, time poverty may be a significant factor in men's dominance of riskier but also more lucrative types of work. The probability of success of a given venture is at least partly determined by the amount of time invested in it (that is, the degree of risk can be endogenous). Accordingly, the relative scarcity of time for women naturally leads to their having fewer opportunities than men to pursue such ventures (ibid). Thirdly, female time poverty contributes to unequal education outcomes which, in turn, hinder women from competing with men for more skilled, better paid jobs. This, combined with gender discrimination, often results in lower school enrolments and attainments for girls and reinforces girls' weaker position in the labor market. However, in some cases, in particular in Latin American countries, boys are withdrawn from school to work in agriculture, and this worsens their educational levels relative to girls (ibid).

Apart from the above literature review, it is important to review literature on Food Security: Food security is a major global concern. To show their solidarity over poverty and hunger issues, nations under the umbrella of the United Nations (UN), target to reduce the proportion of hungry people by half by the year 2015 (UNDP, 2003). Globally there is a concern over food as it is the most basic human need, and access to food is a fundamental human right, contained in the Universal Declaration of human Rights adopted in 1948 by the General Assembly and reaffirmed by the World Food Summit(WFS) and the Food and Agricultural Organization of the UN in 1996 (Eide, 1999). Food security is also considered to be one of the most powerful indicators of rural development Omosa, (1998). This is the paradox being faced despite the fact that agriculture is a major activity of the rural people. Apparently, many developing countries especially South Asia and Sub-Saharan Africa have the majority of the hungry, thus the challenge is to increase agricultural

productivity (UNDP, 2003), if their food situation is to improve. Agriculture is a major component of rural income. Access to, control over and management of resources determine which activities are pursued and which goods may be produced. Gender determines who has access to these resources and what kind of access they have. Although women work in fields, the homes, outside of farms, and at the market, their male counterparts often dictate decisions over the household and its economy. Much of the agricultural work done by women is subsistence agriculture. While their households often go to cities or large scale farms to find work, women are often left to produce and raise food for their children. Agriculture, especially subsistence agriculture, is a way of survival for many women. Human Rights Watch: Double Standards).

2.1.1 Effects of Gender Division of Labor on Crop Production

In many places in Africa, traditionally there has been a strict division of labor by gender in agriculture. This division of labor may be based on crop or task, and both types of division of labor by gender may occur simultaneously. Women may mobilize male labor for some tasks involved in their crops and men frequently mobilize women's labor for crops that they control. These divisions are not static and may change in response to new economic opportunities.

2.1.2 Effects of Division of Labour by Crop on Crop Production

In some areas, men and women may tend to grow different crops. One frequently made distinction is that cash crops and export crops are "male crops," while subsistence crops are "female crops" (e.g., Kumar, 1987, Randolph, 1988, Koopman, 1993). The standard explanation for the division of crops by gender is that women are responsible for feeding the family and thus prefer to grow subsistence crops for household consumption. Men involved with agriculture, on the other hand, are responsible for providing cash income and so are said to grow cash and export crops. In general, however, it is difficult to tell whether women grow lower-value subsistence crops because they have different preferences and concerns or because they have limited access to land, inputs, credit, information, or markets which also lower their levels of production and quantities produced.

The situation with maize is particularly complicated. Maize may be grown as both cash and a subsistence crop. High-yielding varieties were introduced in many areas to help generate a marketable surplus, but many of these varieties had different processing, cooking, and storage characteristics than the local varieties. The high-yielding varieties were often promoted as cash crops. Consequently, in many places, local varieties tended to be considered "women's crops" and high-yielding varieties tended to be "men's crops." This implies that not only the crop, but the variety of a given crop, may vary by gender. To the extent that high-yielding varieties are a cash crop and local varieties are a food crop, they may continue to fit into this pattern. However, as high-yielding varieties that meet the consumption preferences of smallholder farmers are developed, the distinctions between subsistence and cash varieties may become blurred. Recent evidence from Malawi suggests that both hybrid maize and local maize can be viewed as either subsistence or a cash crop, depending on the farmer's circumstances. As markets based on food for local consumption develop, the definitions of cash versus subsistence crops become less clear. Currently, women frequently are involved in marketing crops for consumption by urban markets (Guyer 1980; von Braun and Webb 1989). In most parts of the world, men and women tend to work at different tasks. Numerous time allocation studies have examined the issue of which household members perform which farm tasks (McSweeney, 1979, Pala, 1983), it is important to define what is meant by a crop being a man's or a woman's crop. Cropping involves numerous stages, each involving a variety of decisions and the use of inputs. Frequently, calling a crop a man's or a woman's refers to the gender of the farmer who controls the output. This may not be the only distinction, however, for the purpose of understanding technology adoption. It is also important to consider who makes the decisions about which crops to grow, on which plots of land, and what inputs, including labor, to use. Decisions about labor inputs include whose labor will be used and whether to use outside labor. Different people may be involved with any given crop. Although there may be some cases in which the adoption of a crop variety is conditioned by traditional notions of appropriate crops for men and women, there is increasing evidence that these norms change as economic circumstances shift. Thus, it would expect to see women adopting modern varieties of maize when it is appropriate for them to do so. As the modern varieties incorporate more of the desired characteristics for home consumption, we would expect to see them being grown for subsistence as well as cash.

2.1.3 Effects of Division of Labour by Task on Crop Production

In most parts of the world, men and women tend to work at different tasks. Numerous time allocation studies have examined the issue of which household members perform which farm tasks (McSweeney, 1979, Pala, 1983, Hirschmann and Vaughan, 1984, Saito, 1994). These studies often identify some tasks as men's tasks and some as women's tasks. For example, in Kenya, women reported that men were responsible for building the granary, while women were clearly responsible for hand digging, harvesting, and transporting the crops (Pala, 1983). However, though tasks may be viewed as women's or men's, in practice, the divisions are blurred with both men and women involved in many tasks. Relatively few tasks are done only by men or only by women. Many studies examining time allocation across agricultural and non-agricultural tasks find that women work more hours than men (Saito, 1994). In a time-allocation study in Burkina Faso, data on rural women's time use obtained using the two techniques were compared. Some 44% of women's work was unaccounted for using recall made, so it is not clear how the bias affects the *relative* amounts of work attributed to women and men. Labor inputs may also be affected by farm size and other farm characteristics. In Zambia, as farm size increases, women (on a per capita basis) allocate more labor to both household maintenance and agriculture, while men work slightly less in agriculture and much less in non-agricultural activities (Kumar, 1991)

2.2 Influence of Socio-Cultural Practices on Crop Production and Food Security

Retention of negative cultural values and practices have structurally marginalised women, youth and disabled persons for a long time. Values and practices such as wife inheritance, early marriages as well as gender based violence have visited inordinately on women. Also holding tenaciously to cultural practices that inhibit certain food consumption, people's rights to own property/assets and participate in food production have caused food insecurity in the area Sen and Grown, (1987). For instance, when a woman gives birth she will take time before resuming farm work which affects production. Social institutions refer to evolved practices with stable rules of behaviour that are outside the formal system (Sen, 2007 as cited in Jutting and Morrison, 2009). They include the traditions, customs and social norms that govern the intricate workings of (especially) rural societies. Programmes and projects which ignore the

traditions, values, and the social organization of the beneficiaries, have little chance of success (UNEP, 1992). Hence, taking into consideration the socio-cultural practices in crop production in order to adapt to the traditions and socio-cultural norms of the local population is important in organizing and mobilizing people to foster the process of social change (Ibid).

The socio-cultural factors to be considered include finding out how decision-making takes place, (who makes the decisions in the households), gender roles (who does what), taboos, illiteracy, language and land-use practices (Peterson, 2006, Adhikarya, 2006). It has been clearly established that this impacts negatively on agriculture, extension and technology adoption. However, religious affiliation, behaviour patterns, peoples' attitudes and apathy also affect agricultural practices. The presence of rigid socially sanctioned gender roles severely constrain women's choices regarding how they allocate their time among crop production. Different paid and unpaid productive and household activities such as fetching water and firewood, house cleaning, and cooking among others give rise to the incidence of time poverty. Culture, religious beliefs and social norms are all factors which dictate that unpaid domestic and reproductive activities (such as water collection, child care, cooking and washing clothes) are the domain of female members of the household. This is precisely the situation in many rural communities, as Serra articulates in her recent study (ibid). The effects of this domestic burden on women's economic opportunities are damaging and predictable but often neglected in policies aimed at increasing female participation in productive paid employment. Several aspects of this problem must be considered. Women's choices may be critically constrained by the rigidities governing their time use. These are partly governed by social norms that regard certain tasks as being purely female. Policies that provide high-return work opportunities for women but which are oblivious to their overall time constraints, may actually deteriorate women's living conditions. There is a need to make household production more visible when addressing the question of increased rural incomes or economic diversification (ibid).

2.3 Influence of Gender Distinction in Access and Control of Resources on Crop Production and Food Security

Generally there is unequal access to assets between women and men. Laws, traditions and social norms often prevent women from gaining equitable access to and control of

assets. The situation is aptly described by Raj Kumari, a woman from the Etawah District in India (as cited in Kelkar, 2009, "*Women never control any assets... Land is passed on from father to son. Even jewellery that is gifted to a woman on her marriage is not given to her; it is kept by the parents-in-law. If a man dies or remarries, the woman is completely dependent on others for survival.*") In many countries, gender-biased inheritance and property and land tenure laws restrict women's ability to own assets. Even in areas where women do have use rights, gender biased social customs and norms often restrict their opportunities of gaining equal use of assets. Unequal access to assets undermines women's economic performance. In general, women have less access to land than men; when women do own land; the land holding tends to be smaller and located in more marginal areas. Rural women also have less access than men to credit, which limits their ability to purchase seeds, fertilizers and other inputs needed to adopt new farming techniques. Although women's access to credit and extension services is improving due to the increase in special programmes and funds created to address their particular needs, access to land continues to pose problems for rural women in almost all of the countries examined. In Chókwè, in southern Mozambique, women account for more than 30 percent of total register although their actual numbers could be twice that given that plots are usually registered in the name of a family member or relative. Women have had and still have the same right as men to obtain a land title, provided there is a vacant plot in the irrigation scheme.

In Chókwè, the problem for women is not accessing land, but the use that they make of it and the factors that influence this use and reduce women's livelihood possibilities: lack of time and financial capacity to acquire new skills in farming, to differentiate crops and to commercialize them; the amount of productive and reproductive work that has to be carried out by women; and the high rates of HIV and AIDS infection in the area. Women of Chókwè hold a title to their plot, but this is not sufficient insurance against the risk of landlessness: land tenure security in Chókwè depends on individual (and group) capacity to meet the criteria of productivity of the irrigation scheme management. The scheme management's expressed desire that irrigated land be used to grow cash crops creates further difficulties, particularly for women farmers. Factors that inhibit women from satisfying the conditions set out by the scheme management, leading to the possibility of their losing the land or having their use of the land restricted in the future include: unavailability of credit; lack of

marketing and processing facilities, and limited control over price; gender inequities in local and national decision-making bodies; unsuitability of rice for export and cheapness of imported rice; lack of education and productive knowhow; poor quality and unavailability of productive inputs; and other difficulties such as the migration of young labourers to South Africa (Vijfhuizen, 2001). Women's lack of access to assets acts as a self-perpetuating cycle which only serves to strengthen already existing gender biases in crop production. Also, women's limited means of attaining the use of key productive assets such as land, water and livestock minimizes their capacity to use what assets they do have access to in a productive way. This further undermines their opportunities of taking part in skilled productive activities. "The overall ability of women to utilize assets as productively, or more productively, than men when given opportunities to do so should not be doubted, as Vigneri and Holmes showed with their research on the Ghanaian cocoa sector".

National statistics on the economically active population have been of limited value in looking at the extent to which women are economically involved in agriculture, food production and processing, as conventional definitions of the labor force have led to an under-estimation of women's work. In Africa, it is estimated that only 42% of the economically active population involved in agriculture are women due to the tendency to register farm women as housewives. Nevertheless, in all of the countries examined women's contribution to the production of food crops is substantial, ranging from 30% in the Sudan to 80% in the Congo. However, women's involvement in agriculture tends to be as own account or unpaid family workers, as they continue to have fewer opportunities for formal employment than do men (FAO 1995). Studies conducted in Kenya by NALEP show that men producing maize, beans and cowpeas in Kenya achieve higher gross value of output per hectare than women, but the difference is accounted for by differences in input use. In western Kenya, female-headed households were found to have 23 per cent lower yields than male-headed households. The difference was caused by less secure access to land and lower education levels. Another study of smallholder farmers in western Kenya found that women's maize yields were 16 per cent lower than men's, largely because they used substantially less fertilizer. According to data from a household survey across three Kenyan districts, the value of farm tools owned by women amounted to only 18 per cent of the tools and equipment owned by male farmers. Lack of access to information is also a big problem

in production. Information, like knowledge is a weapon that can be used to liberate or subjugate the populace. The most important is timely and accurate information on marketing of farm produce (STIPA).

2.4 Hunger Gaps and Crop Production

Rainfall in N.W. Kisumu Location is bi-modal. Meaning it has two rainy seasons, long and short rains where long rains come between mid March and late June and short rains between late August-mid November. The amounts vary between 1400-1600mm per annum in the upper part and 900-1000 mm per annum in the lower part. The area has two cropping seasons. The area gets a total of 5090 bags of maize and 500 bags of beans during the long rains (there are other minor crops such as vegetables), and 1020 bags of maize and 400 bags of beans during the short rains. This totals 6110 bags of maize per year and 900 bags of beans per year for a population of 6075 people. (NALEP, Report 2009, N.W. Kisumu Focal Area Baseline Survey Report, 2010). Each person requires 2 bags of maize per year and ½ a bag of beans per person per year. This gives a deficit of 2040 bags of maize and 237 bags of beans (N.W. Kisumu Focal Area report, 2010).

2.5 Theoretical Framework

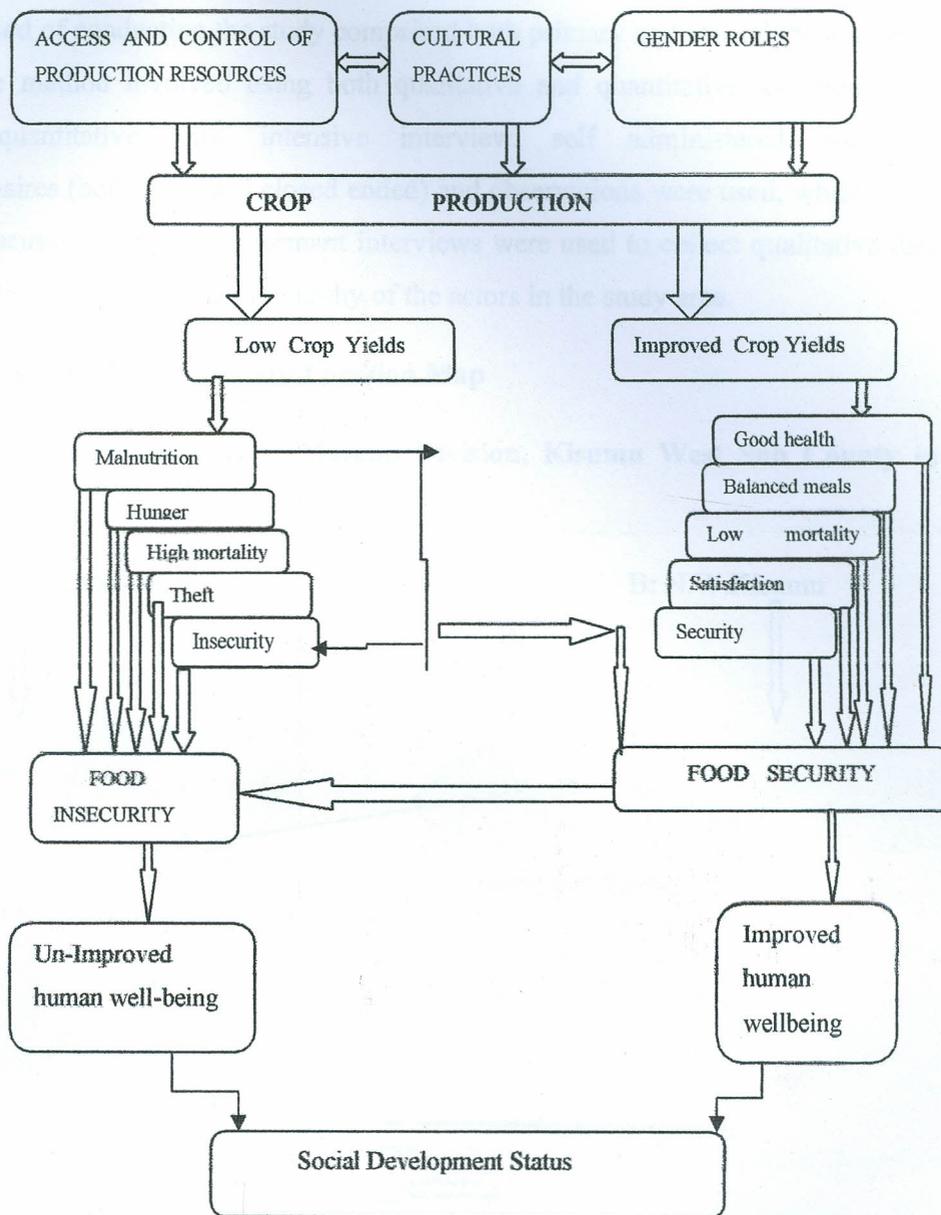
This study will be guided by the functionalist perspective which is a theoretical framework that views the society as a having interconnected parts that are interrelated and together form a whole. Functionalism explains how social phenomena contribute to the overall maintenance of society. For instance, if society is to continue existing, its basic needs have to be met. Therefore any part of the society is functional if it maintains the society and contributes to its survival (Ritzer, 1998). According to Talcott Parsons, any social system has four basic functional prerequisites: A-Adaptation, G- Goal attainment, I-Integration, PM-and L-latency of Pattern Maintenance, (Harambolis, 2000). These functional prerequisites are known as the AGIL Scheme. These are viewed as problems within the society, and if society is to survive, they must be solved. Thus, the social society must perform all the four functions in order to attain equilibrium.

Adaptation refers to the relationship between the system and the environment. The society must have some degree of control over its environment if it has to survive.

Goal attainment refers to the need for society to achieve the defined goals. Integration refers to adjustment of conflict. A system must regulate the interrelationship of its component to achieve integration. In addition to managing the relationship among the other three prerequisites, integration is concerned with the coordination and mutual adjustment of the parts of the social system. Latency furnishes, maintains and renews both the motivation of individuals and the cultural patterns that create and sustain the motivation (Ritzer, 1998; Harambolis, 2002). According to Parsons, any social system can be analyzed in terms of the functional prerequisite. Hence, all parts of a society can be understood with reference to the functions they perform in the adaptation, goal attainment, integration and pattern maintenance systems (Giddens, 2001; Harambolis, 2002). That is, a part of society is examined in terms of its contribution to the maintenance of the social system. However, as Merton, 2008, correctly observes that not all human ideas or behaviours are functional. A single object, action or idea can be functional for some systems but dysfunctional for others. Therefore, identification of all the functions and dysfunctions of a particular action, idea or object and of the various systems to which each consequence applies is necessary. Any part of the social system is functional only if it maintains the system and contributes to its survival. Functionally, ASDS intends to enhance food security by equipping the individuals and the community at large with basic skills and knowledge for increased and sustainable food security. If ASDS contributes to the improvement in the availability and accessibility of food in N.W. Kisumu Location, then it can be said to be functional, in the sense that its outputs would contribute to food security, which would ultimately enhance social development and improve the social development status.

2.5.1 Theoretical Framework Diagram

The Influence of gender roles on crop production and Food security in North West Kisumu Location.



Source :Maseno Division Focal Area Baseline Report 2010

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

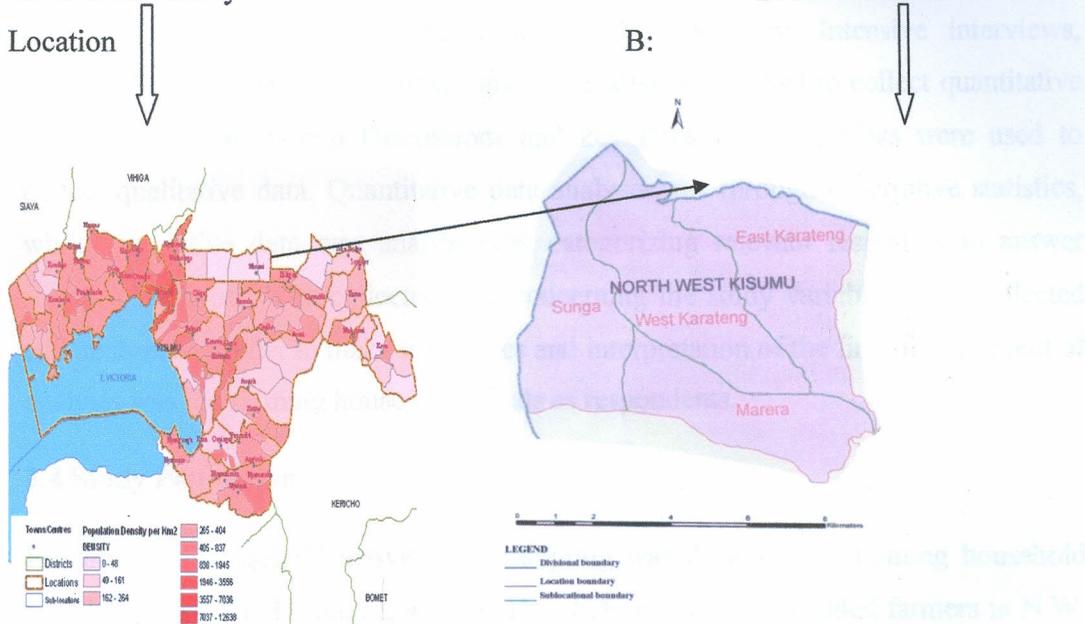
The method of conducting the study comprised both primary and secondary sources of data. The method involved using both qualitative and quantitative techniques. To collect quantitative data, intensive interview, self administered household questionnaires (both open and closed ended) and observations were used, while Focus Group discussions and key informant interviews were used to collect qualitative data for baseline survey across the hierarchy of the actors in the study area.

3.2 Area of Study/N.W. Kisumu Location Map

N.W.Kisumu Location was in Maseno Division, Kisumu West Sub County in Kisumu County.

A: Kisumu County
Location

B: N.W.Kisumu



The study was carried out in N.W.Kisumu Location in Maseno Division. The Location covers four sub-locations namely Marera, Sunga, W.Karateng and E. Karateng. Maseno Division borders Winam Division (In Kisumu East Sub-County) towards the east, Vihiga Sub-County to the North, Lake Victoria to the South and Kombewa Division (In Kisumu West Sub- County) to the South West and West respectively. The

lower part of N.W.Kisumu is within (LM3) and (LM4). The upper part is predominantly within (LM2) with pockets of areas within (LM1) and (LM3).

Soils vary from sands to sandy-loams. Rainfall is bi-modal. Meaning it has two rainy seasons, long and short rains where long rains come between Mid March and late June and short rains between late August-Mid November. The amounts vary between 1400-1600mm per annum in the upper part and 900-1000 mm per annum in the lower part. N.W.Kisumu Location is an administrative location within Maseno Division. The area is inhabited by luos and the household was the basic sampling unit. N.W.Kisumu Location covers an area of 42 km. squared (approx) with a total population of 6075 people (1999 census).

3.3 The Study Design

The design of the study was cross-sectional and descriptive aimed at describing the influence of gender roles in crop production and food security in N.W. Kisumu Location. Both qualitative and quantitative data were collected to address the influence of Gender Roles in Crop production and food Security. Intensive interviews, household questionnaires and observation checklists were used to collect quantitative data, while Focus Group Discussions and key informant interviews were used to collect qualitative data. Quantitative data analysis was through descriptive statistics, while qualitative data was analyzed by categorizing relevant responses to answer research questions. The collected data concerning the study variables were collected and analyzed in order to make inferences and interpretation of the findings. The unit of analysis was the farming house hold heads as respondents.

3.4 Study Population

Farming is a household activity and sampling was done on the farming household population in N.W. Kisumu Location. The study population included farmers in N.W. Kisumu Location. The Locational population is 6075 people (NALEP, 2012), and sampling population comprised 4075 farming households. 364 household heads were selected proportionately and randomly as respondents, from the 4(four) N.W. Kisumu sub-locations of Marera with a population of 30% of the total population, Sunga 20% of the total population, W.Karateng' with 25% of the total population, and E.Karateng' with 25% of the total population. The study targeted adults of over 18

years of age on the basis of at least 1/2 of either gender and only those involved in crop production. The agricultural extension staff and the administration staff, in the area of study, were included in the study.

3.5 Sample Size and Sampling Procedures

The sample consisted of 364 heads of households. The sampling procedure was purposed to enable the researcher get in-depth assessment of relationship between the variables and ensured that all the categories of people were represented in the study. The household was the basic sampling unit. This study elicited data useful in handling the research topic at hand. A research proposal was submitted for review followed by the field study which began after the research design was approved including the questionnaires and interview format. The study instruments were initially pre-tested to ensure validity and reliability in meeting the purpose of the study and appropriate adjustments made after the pre-research activities and corrections from the supervisor of this study Dr. Abuom P.O.

3.6 Sample Size Calculation;

To get the sample size for studies, Taro Yamaneis (1967) formula below was used.

$$n = \frac{N}{1+N(e)^2}$$

$$1+4075(0.05)^2$$

Where n= the sample size, N = the population size and e = precision level.

Therefore ;

$$n = \frac{4075}{1+4075(0.05)^2}$$

$$= \frac{4075}{1+10.1875}$$

$$= \frac{4075}{11.1875}$$

$$= 364.6$$

$$= 364$$

$$= 364$$

= 4075

11.1875 = 364 respondents (selected randomly on 50-50% basis for male and female farming household heads).

3.7 Data Collection Procedure

Before going to the field, permission was sought from the University and the local Chief's office as a request for identification to ease research work and to remove suspicion from the local people/community. The researcher elicited data from a cross section of respondents. To effectively gather adequate data in this regard a combination of research instruments was employed. The study categorized data collected into two; Primary and Secondary data.

3.7.1 Primary Data

Household Questionnaires

Semi structured questionnaires with closed and open ended questions were used to obtain quantitative data from the 364 respondents from N.W. Kisumu Location in Maseno, which were administered by the researcher and her assistants. Through this method information pertaining to gender roles and crop production was collected. It also helped in getting information about their views, feelings and knowledge about gender roles within the study area (Mugenda and Mugenda, 2003).

In-depth Interviews

In-depth interviews were carried out using standardized open ended interview guide for key informants of samples/groups of 10 respondents. Key informants in this study were farmers, extension staff, administration and youths who are knowledgeable about crop production and occupy influential position within the study area (Mugenda and Mugenda, 2003).

Observations

The researcher used observation as a tool containing an important area to capture in the study. The researcher observed and recorded the economic activities and their social life related to household crop production and food security.

Focus Group Discussion

Groups consisting of 5-10 people, both males and females involved in agricultural activities took part in the Focus Group Discussions. Discussion guides were administered to the groups. The method was used to collect qualitative data to explore some of the issues that emerge during the study and also the need for clarification. Qualitative data collected involved farmers' verbal expressions, rendering the event active rather than passive. This allowed the research participants to put the data into their own words and revealed the latent "why" behind their assertions. Farmers told their views on challenges faced in crop production. In setting up farmers groups, the researcher gave farmers attention and room for a free discussion.

3.7.2 Secondary Data

Documents from offices, books, journals, and reports were reviewed for further information on the study topic. The internet and the library were rich sources of secondary data.

3.8 Data Analysis and Presentation

Both qualitatively and quantitatively data collected was analyzed to address research objectives. The data collected from the 364 respondents was coded and clustered for subsequent analysis using the Excel computer programme. The analysis generated statistics for background variables in order to meet the research objectives. The responses were interpreted at the trends within the responses. Qualitative data was constructed from Focus Group Discussions and Key Informant Interviews which was analysed then evaluated for usefulness in answering the research questions. Quantitative data was analysed using descriptive statistics such as percentage. The result of quantitative data is presented by use of tables, charts, and graphs while text and direct quotations were used for present qualitative data. Data analysis process was an on-going exercise, which took place before, during and after the field study to ensure that the study remains focussed in meeting the objectives and purpose of the research.

The report write up is in the form of abstract page, chapter one introducing the topic, chapter two literature review, chapter three methodology and chapter four results and discussions, and chapter five summary, conclusions and recommendations.

3.9 Ethical Considerations

Necessary precautions were taken to ensure that the research was ethically appropriate. Of importance was the identification of the respondents where identification by name was optional in the questionnaires to protect the respondents in the study. Secondly, transcription of the research data collected was done by the researcher to account for accuracy and validity of the provided information. Participation in the study was voluntary therefore participants chose to respond to or ignore the questions asked to them. This encouraged openness which is conducive for interviews and Focus Group Discussions. Finally, high confidentiality was maintained, for participants answering questions on family matters and customary issues.

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CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This section presents the study findings and discussions. It captures an analysis of gender roles associated with crop production, cultural roles and responsibilities of men and women, division of labour in crop farming, decision making and control of assets and land in the agricultural sector, constraints in accessing farming technologies and the hunger gap. In the study area 75% of the farming household heads are males and 25% are females. Of the 364 respondents, 185 were female farming household heads selected randomly from the 25% and 185 male farming household heads selected randomly from the 75%.

Questionnaire Return

The study covered 364 households of which 182 (50%) of the respondents were females and the other 182 (50%) were males. Majority of the households were male headed (75%) while 25% were female headed. 364 questionnaires were administered by the researcher and eventually returned by the respondents making the response 100%. According to Mugenda and Mugenda (2008), a response rate of 50% is adequate for analysis and reporting while a response rate of 60% is good and that of 70% and above is very good the response rate in this case was 100% which is very good. This is due to the fact that the extension staff and the administration in the location were involved right from the start.

4.2 Household and Demographic Data

In the agricultural sector, it is important to understand whether education has a role to play in constraining women's engagement in the sector. From the findings, it emerged that, among the respondents, more women (9%) have not attended school at all, while more women (22%) than men have attained primary level of education. However there is a difference between the males and females who attained tertiary (7% males and 2% females) and university education (7% males and 0 %females). (Table 4.2.1).

Table 4.2.1: Education level of respondents by gender

Education Level	No Male	%male	No Female	% Female
No education	20	5.49=5	31	8.51=9
Primary	68	18.68=19	80	21.9=22
Secondary	60	16.48=17	63	17.30=17
Tertiary	25	6.86=7	7	1.92=2
University	10	2.74=3	0	0
Total	182	50.2=50	182	49.70=50

Education is a key player in the socio-economic well-being of a society. In the agricultural sector, knowledge is a powerful tool that would equip the farmer with the best farming techniques. Thus farmers should be able to read and write to understand the latest technology and also assist them in record-keeping. Thus a farmer with a higher level of education would have a better understanding of what is expected. However, research findings indicate that the education gap between male and female farmers gets wider with the rise in the level of education. According to the Kenya Education Statistics: Ministry of Education Statistical Section 2004, "In terms of literacy and access to education, women and girls are still far behind compared to men and boys. 30% of Kenyan women are illiterate, compared with 14% of men".

Occupation of respondents

There are several activities/occupations that the respondents are involved in, and they include farming, wage employment, self employment and business (Table 4.2.2).

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Table 4.2.2: Occupation of Respondents

Occupation	Male HH	Female HH %
Farming	20	35
Wage Employment	15	5
Self-Employment	8	8
Small Business	4	5
Total	47%	53%

Research findings show that 20% of the male respondents and 35% of female respondents are engaged in farming, 15% of male respondents and 35 % of the female respondents are engaged in wage employment as the main occupation, 8% of both male and female respondents are engaged in self employment , while 4% of male and 5% of female respondents are engaged in small businesses. The male and female daily calendars indicate time allocation for various tasks.

Religious affiliation of Respondents

Religion influences people's beliefs and decisions in life. These include, amongst others, eating habits and activities to engage in (Table: 4.2.3).

Table 4.2.3: Religious affiliation by Gender

Religion	No	%	No	%
	Males	Males	Females	Females
Catholic	65	17.85	85	23.3
Protestant	82	22.4	130	35.7
Muslim	2	0.5	0	0
Total	149	40.75	215	59

The results in (Table 4.2.2) indicate that there are two main faiths in the study area, Protestant and Catholic. 65 of the male respondents and 85 of the female respondents

were Catholics and 82 of the male and 130 of the female respondents were Protestants. Only two of the male respondents were Muslims. Results indicate that most farmers believe in God and traditions would affect their activities minimally. The farmers live and work together despite their religious differences. According to (Lawi, 2012), "People in this region have traditions of and needs to work to build their nations and regions without religious differences. And in agriculture Christians dominate food systems".

4.3 Influence of Gender Roles on Crop Production in N.W. Kisumu Location.

The daily Calendar schedule used in the study revealed that "gender roles for females and males vary. It emerged that indeed women work longer hours than men. The female wakes up at 5am eventually goes to bed at mid-night (Table 4.3.1).

The male on the other hand wakes up at 6 am and goes to bed at 9 pm (Table 4).

Table 4.3.1: Female's Daily Calendar

Time	Activity
5 am	-Wakes up -Does her reproductive duties
8 am	-Goes to the farm
11am	-Goes back home -Continues with her reproductive duties
2 pm	-Does off-farm duties week days (Attends Merry-Go-Rounds weekends)
6 pm	-Goes back home -Does reproductive duties
Midnight	-Goes to bed

Table 4.3.2: The male Daily Calendar

Time	Activity
6 am	-Wakes up -Walks round the home -Milks -Takes breakfast
8 am	-Goes to the farm
11 am	-Goes back home to rest
2 pm	-Tethers animals
3 pm	-Goes to the market place/Visits-Community duties
6 pm	-Goes back home. Milks, bathes, takes supper
9 pm	-Goes to bed

The study revealed that women have more activities to perform in any given day as compared to their male counterparts. According to Gender in Agriculture Source Book, "The multiplicity of roles played by females compared to males; time expenditure patterns by females compared to males; distances covered/effort required by males and females in undertaking the work; efficiency with which the work is done and the domestication or exposing potential of activities, give women less time to do enough in crop production".

4.4 Division of Labour between men and women in Crop Production

The findings show that in agricultural productivity, women are involved more in planting (70.5%), harvesting (79.94%), post harvest handling of produce (79.94%) and in identifying markets (55.21%), as well as being involved virtually in all the other processes to some level. Men are involved more in ploughing (54.94%) and marketing (79.94%) as well as in other activities, usually, but at a lower level than women (Table: 4.4.1).

Table 4.4.1: Division of labour between males and females

Activity	No males	% Males	No. Females	% Females
Ploughing	200	54.94	164	45.05
Planting	109	45.0	255	70.05
Weeding	182	50.0	182	50.0
Harvesting	73	20.05	291	79.94
Postharvest handling	73	20.05	291	79.94
Identifying markets	163	44.78	201	55.21
Marketing	291	79.94	73	20.05
All processes above	146	40.10	218	59.89

In many places in Africa, traditionally there is division of labor by gender in agriculture. This division of labor may be based on crop or task, and both types of division of labor by gender may occur simultaneously. Women may mobilize male labor for some tasks involved in their crops and men frequently mobilize women's labor for crops that they control. These divisions are not static and may change in response to new economic opportunities. According to Udry, [1996] and Hoddinott et al. [1995], "In some areas, men and women may tend to grow different crops. One frequently made distinction is that cash crops and export crops are "male crops," while subsistence crops are "female crops" (Kumar, 1987, Randolph, 1988, Koopman, 1993). In most parts of the world, men and women tend to work at different tasks. Numerous time allocation studies have examined the issue of which household members perform which farm tasks (McSweeney ,1979, Pala,1983.

Roles of a males and females in the Community

The role of a woman in the community is largely defined along raising children and managing household chores. Most respondents in this study felt that women's sole role is with respect to household maintenance, bringing up children (39%), as well as involvement in agricultural production (15%). Gender bias in the community is affirmed by the general attitude that a woman's work is of no value neither can it be perceived as a potential source of income in the family because it is associated with work she does naturally as part of her role as wife and mother. Generally, the man in the community is seen as a provider for the family.

Table : 4.4.2 Roles of a woman

Total	182	100%
Duty	No	%
Bringing up children	42	39
Grazing	5	3
Providing for the family	71	23
Planting of crops	27	15
Earning family income	2	1
Looking at the family properties	13	7
Milking	7	4
No specific duty	7	4
Cleanliness of the house	13	7
Family business	9	5
Taking care of the community	0	0
No response	2	1
Total	182	100%

Table : 4.4.3 Roles of men

Duty	No	%
Provide basic need	67	37
Purchase land/livestock	2	1
Act as the head of the family	13	7
Handle and carry out farming activities	40	20
Earn family income	15	8
Take care of the family	9	5
Provide security	25	14
Pay school fees	4	2
No specific duties	5	3
Participate in community projects	0	0
Fishing	2	1
No Response	2	1

According to NFS (Nairobi Forward Looking Strategies) for the advancement of women, Gender equality is a core value of the ministry of agriculture in which it endeavours to promote gender sensitive practices. In conformity with socially expected roles and responsibilities, some women affirm the role of men/spouses in their homes as one of providing “security”. He is seen as the one responsible for management of farming activities and provides security to the family amongst other duties (Jorge, 1999)(Table 4.4.3).

4.5 Influence of Socio-Cultural Practices on Crop Production.

The research findings (Table 4.5.1), indicates that Religious affiliation, according to both men and women affects crop production the least at 2% women and 5% men. Behaviour patterns affect crop production more according to men at 13% and women at 10%. Wife inheritance influences crop production at 12% for women and 10% men. Apathy influences crop production at 16% for women and 2% for men. Early marriages influence crop production negatively at 10% for women and 20% for men. The young wives depend on their husbands to cater for all their needs due to age and some are just from school(From Focus Group Discussion).Both men and women accept that gender based violence influence crop production at 20% for both males and females and Retrogressive Cultural Practices at 30% for both men and women.

Table 4.5.1: Influence of Socio-Cultural Practices on Crop Production

Practice	Women		Men	
	No	%	No	%
Religious affiliation	4	2	9	5
Behaviour patterns	18	10	24	13
Wife Inheritance	22	12	18	10
Apathy	29	16	4	2
Early Marriages	18	10	36	20
Gender based Violence	36	20	36	20
Retrogressive Cultural Practices	55	30	55	30
Total	182	100	182	100

The practices and norms that discriminate against women are shaped and conveyed through cultural and social practices and are supported and perpetuated by a web of relationships characterized by differences in power. The power relations captured in cultural practices within communities determine important factors relating to access, control and ownership of property. They reveal several issues such as, who gets what, what counts, who does what and who decides on access and control of property. It is only when power relations are relatively equal that one can effectively participate in making decisions affecting one's life. Cultural norms making women vulnerable vary from one ethnic community to another, for instance among the Luo community, cultural practices such as "golo kodhi" have to be taken into account before a woman can be allowed to plant. This limits initiative and makes women slaves to cultural practices that slow down uptake of knowledge and farming activities. This has greatly affected female headed households especially kinship systems. Cultural practices and rituals play a significant role in farming activities in the Luo community Kiragu, April 2006). According to the World Bank 2003," Retention of retrogressive cultural values and practices has structurally marginalised women, youth and disabled persons for a long time".

4.6 The influence of Gender Distinction in Access, Control and Ownership of Crop Production Resources on Crop Production

This study affirms that land is predominantly owned by men. Land ownership is mainly through inheritance (36%), purchase (28%), inheritance and purchase (9%). Most of the agricultural land, 89% owned by the farmers is under the family use with 12% having leased out some of the land for extra income. During a focus group Discussion female respondents had these to say, "A whole acre I planted cassava for two years, sold it and kept the money. No one would touch it. I used it to educate my daughter when she went to secondary school .Now she is in a Teacher's Training College."A widow in the group had this to say too, "My family's life even became better after my husband passed away, since I could not make any decisions before. Today I have built a brick house, and have dairy cows and poultry in my farm which I have used to educate my children without much strain on the family". A male respondent also had this to say "Any product from there be it green maize, beans or cassava is hers. She can use proceeds from the farm to buy herself Lessos and inner-wear as well as goats and chicken which the husband has no right to claim".

Table 4.6.1: Ways of acquiring land

	%Males	%Females	%Total
Inheritance only	30	6	36
Purchase only	13	15	28
Lease only	6	6	12
All	0	12	12
Inheritance and purchase	4	5	9
Purchase and Lease	1	2	3
Total	54	46	100%

For most respondents land belongs to the man while a woman's ownership is linked to "small" household utensils and clothing. The ownership of land is important as it is considered a major capital asset which can be utilized as collateral for improving farming production and accessing additional assets for agricultural production. Subsequently key decisions around farming are influenced and controlled by men." In many countries, gender-biased inheritance and property and land tenure laws restrict women's ability to own assets. Even in areas where women do have use rights, gender biased social customs and norms often restrict their opportunities of gaining equal use of assets.

Challenges women face in land ownership

The study reveals an emerging change in attitude where women and some children are now considered as part of the inheritance as a result of empowerment and changing life styles. At a glance, the survey results show that only 1% of the respondents indicated that women find it difficult to own land because they lack interest, because they are not aggressive and also due to change in technology. 46 % of the respondents indicated that women don't own land because land is expensive and women do not have money. 51 % of the respondents indicated that the reason women do not own land is discrimination and traditions (Table 4.6.2).

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Table 4.6.2; Challenges women face in land ownership

Challenge	No.of respondents	% Respondents
Women lack interest and skills	4	1
Women are not aggressive	4	1
Change of technology	4	1
Purchase is expensive and women lack money	167	46
Discriminations and traditions	185	51
Total	364	100 %

Ownership of land affect both men and women but in different degrees. The low levels of ownership of land by women causes them to be insecure and reduce their incentives to actively participate in the decision making processes involving crop production because they have no permanent rights to the land. Conversely, men are able to make decisions as owners and can adapt/model new agricultural products without hesitation. Retrogressive cultures and discrimination are a big challenge to omen's ability to own land. According to Vigneri and Holmes, "The overall ability of women to utilize assets as productively, or more productively, than men when given opportunities to do so should not be doubted".

Those who can Own and Control Land in the Community

A key informant said, "After a woman is married she is no longer considered to be part of her own family. In the case of a man, however he is not limited by circumstances; even if he leaves town or the village he can come home with his children and is still the heir of the land "From the study results, 84% of the respondents said that the male household heads are the ones who can own land, 10% of the respondents said that women household heads can own land and 6% of the respondents said both males and females can own land (Table 4.6.3)

Table 4.6.3: Those who own and control land in the community

	%
Male household head	84
Female household heads	10
Both male and female	5
All of the above can own land	1

Assets owned by women in the community

A male key informant had this to say; "Initially we wondered why women continue to gossip in the name of 'chama's' today, we see that most of kitchen cutlery and home furnishings are bought with 'chama' money. The children have newer clothes, we eat more nutritious foods, though I cannot how much my wife saves from the 'chama'. Sometimes I can even get some little money for one beer! From the (Table 4.6.4) below, study results show that, a woman is considered to own small livestock like sheep and goats(20%), land bought by her(11%), subsistence crops like vegetables(12%),utensils (16%), poultry(16%) and what she buys (10%).

Table 4.6.4: Assets owned by women in the community

Asset	No	%
Small Livestock	72	20
Nothing	43	12
Land bought by her	40	11
Crops	43	12
Utensils	60	16
Anything bought by her or him	36	10
Poultry	58	16
Bank accounts	8	2
Radio	4	1
Business	0	0
House	0	0
All family members can own	0	0
	364	100

Perception of what a woman can own is specific to each community. Analysis of asset ownership by women indicates that women are more vulnerable than their male counterparts as poultry is considered their main asset. According to Vijfhuizen, 2001” Women’s lack of access to assets acts as a self-perpetuating cycle which only serves to strengthen already existing gender biases in crop production. Also, women’s limited means of attaining the use of key productive assets such as land, water and livestock minimizes their capacity to use what assets they do have access to in a productive way to improve on crop production.

Decision Making and Control of Assets by males and females

Male household heads have greater decision-making power in almost all the important issues in the household. Most of the decisions in the family are made by the male household head. The female household head makes major decisions on what foods to be bought and what to eat in the family. Youths and big children make decisions on the types of seeds to be planted and crops to be grown. The results also show that both males and females make decisions on the type of seeds to be planted.

Table 4.6.5: Decision making and Control of Assets

Decisions made on...	Male HH		Female HH		Youths and children		Males and females	
	No	%	No	%	No	%	No	%
Family issues	306	84	36	10	18	5	4	1
Crops grown	262	72	70	19	26	7	8	2
When to plant	244	67	80	22	0	0	30	
Planting seeds	73	20	87	25	36	10	163	45
Leasing land	292	80	40	11	16	4	4	1
Food to buy	58	16	288	79	0	0	4	2
What to eat	54	15	288	79	0	0	10	3

From the discussions with key informants, youths and big children make decisions on type of seed to be planted and crops to be grown when they are old enough to join youth groups or work on the small plots they access with permission from their fathers.

The control of assets and decision making in farming, particularly in agricultural farming is a preserve of men. Patriarchy is entrenched in the community whereby men dominate and determine families' social codes of behaviour. Women can only make decisions as widows/female household heads after their husbands die. According to Patricia, 2001, Gender considerations in Constitution making, Legal process 2001, "Customary laws most often determine ownership of property as well as succession and inheritance of productive assets. In most cases it is usually the male members of the community who are the owners and beneficiaries of these productive assets."

4.7 Hunger Gap and crop Production in N.W.Kisumu Location

Maize yields per acre range between ½-3 bags during long and short rains. The main crops grown are maize and beans and the yields are 5090 bags of maize and 500 bags of beans during the long rains and 1020 bags of maize and 400 bags of beans in the short rains (Table 4.7.1).

Table 4.7.1: Crop Yields

Crop	LongRains	ShortRains	Total
Maize	5090 Bags	1020 Bags	6110Bags
Beans	500 Bags	400 Bags	900 Bags

Long rains come between March and late May every year. Planting is done in March and crops are ready from June. Harvesting is usually between the months of July and August. Short rains on the other hand comes from late July and planting is done September. Harvesting comes between December and January. The yields as shown on the table above are below the required yields to shield the population from food insecurity. Crop yields in Table 4.7.1 indicate a deficit which leads to the six months without food in the household stores. The area gets a total of 5090 bags of maize and 500 bags of beans during the long rains (there are other minor crops such as vegetables), and 1020 bags of maize and 400 bags of beans during the short rains. This totals 6110 bags of maize per year and 900 bags of beans per year for a population of 6075 people. (NALEP, Report 2009, N.W. Kisumu Focal Area Baseline Survey Report, 2010). Each person requires 2bags of maize per year and ½ a bag of beans per year. This gives a deficit of 2040 bags of maize and 237 bags of beans thus creating a hunger

gap of approximately 6 (six) months every year (N.W. Kisumu Focal Area report, 2012).

Hunger Gap

Hunger Gap is the period/months when people do not have sufficient food. The results show that there are months when the households have food in their stores and can afford three meals in a day, though not necessarily balanced meals. These include January, February, July, August, September and December. These coincide with harvesting period and two months after the harvest. The rest of the months households lack food. Between March and June and between October and November, households lack food and depend on market purchases. Thus, there are hunger gaps in these months. (Table 4.7.2).

Table 4.7.2: Hunger Gap

Month	Ja	Fe	Mar	Apr	Ma	Jun	Jul	Au	Sep	Oc	Nov	De
Y=Have	Y	Y	N	N	N	N	Y	Y	Y	N	N	Y
N=Non												

The study results indicate a hunger gap of six months every year. This is attributed to unequal distribution of gender roles as one of the factors that influence crop production negatively. This is because women are over burdened yet they are the ones engaged in crop production activities majorly. This leads to less acreage worked and less, low yields that can not sustain the family and therefore food insecurity (N.W.Kisumu NALEP Baseline Survey, 2009)

Respondents' main source of income generating activities by gender

The research findings show that there are more men in pursuit of employed labour, formal or informal, than women. More men are engaged in fish farming as opposed to their women counterparts. Interestingly, more women have taken an interest in selling firewood/ charcoal and timber. However it was noted that for women, sales from firewood/charcoal/timber (63%), merry-go-rounds (60%), mixed farming (53%), and chicken breeding (75%) are considered as the main sources of income as compared to

their male counterparts. Fish farming on the other hand is considered a major source of income for men in fish farming families (The question received multiple answers).

Table 4.7.3: Income generating Activities

Source of Income	Male %	Female %
Casual labour/Piece work	55	45
Crop farming	32	68
Fish farming	67	33
Trading/Selling/Business	55	45
Selling charcoal/Firewood/Timber	38	63
Merry-Go-Rounds	40	60
Mixed farming	47	53
Chicken breeding	25	75
Formal employment/wage labour	60	40

Income from agricultural productivity plays a critical role in household income for farmers-both female and male. While both women and men are involved in income generating activities, there are disparities in the types of income generating activities undertaken by women and men (Gender and Economic Growth in Kenya, 2003).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the research findings, conclusions and recommendations per specific objective. This is based on surveys from 364 respondents at the household level.

5.2 Summary

Research findings on demography indicate that more males than females have gone to school at some level and the ratio gets wider with the rise in the levels of education. However, more females than males attained primary level of education. This was found to have a negative effect on crop production. Religious affiliation on the other hand does not affect crop production

The daily Calendars in the study were drawn by the respondents and generally revealed time allocation to tasks by females and males. It emerged that indeed women work longer hours than men. The study affirms that gender roles influence crop production. The study has revealed that women engage in reproductive, productive and community activities unlike their male counterparts who mainly engage in productive roles and community activities. Due to too much work for the females, they work less on the farms leading to low yields and food insecurity. In agricultural production, women are involved in virtually all the activities while men are involved more in ploughing and marketing. Gender division of labour which is division of labour between males and females was by crop and by task. These may occur simultaneously. The divisions are not static as they change in response to new economic opportunities. One frequently made distinction is that cash crops and export crops are male crops while subsistence crops are female crops. The standard explanation for the division of crops by gender is that women are responsible for feeding the family and thus prefer to grow subsistence crops for household consumption. Men and women tend to work at different tasks. Although tasks may be viewed as women's or men's, the study showed that the divisions are blurred. Relatively few tasks are done by men or by women only.

Socio-cultural practices that affect productivity affect both males and females but differently. The production processes, markets and changing technologies affect females and males differently because their roles, responsibilities, needs and wants differ. Women are affected based on cultural inclinations which dictate who makes decisions on issues affecting the family and those involved in crop production. The study revealed that there are practices and norms that discriminate against women which are shaped and conveyed through cultural and social practices and are supported and perpetuated by a web of relationships characterized by differences in power. The power relations captured in cultural practices within communities determine important factors relating to access, control and ownership of property. They reveal several issues such as, who gets what, what counts, who does what and who decides-access and control of property.

In access, control and ownership of production resources, this study affirmed that land is predominantly owned by men. Land ownership is mainly through inheritance and purchase. Most of the agricultural land owned by the farmers is under the family use with some households leasing out some of the land for extra income. For most respondents land is perceived to belong to the man while a woman's ownership is linked to "small" household utensils and clothing. The ownership of land is important as it is considered a major capital asset which can be utilized as collateral for improving farming production and accessing additional assets for agricultural production. Subsequently key decisions around farming are influenced and controlled by men.

Hunger Gap is the period/months when people do not have sufficient food or have none at all and may depend on purchases or get food from other sources. The study results indicate hunger gaps of six months every year. This is attributed to unequal distribution of gender roles as one of the factors that influence crop production negatively as less land is prepared mainly by the women. This is because women are over burdened yet they are the ones engaged in crop production activities majorly. This leads to less acreage worked and less, low yields that can not sustain the family and therefore food insecurity.

5.3 Conclusions

Education has a role to play in crop production and influences productivity. Therefore female and male farmers need to be educated on the benefits of fair allocation of roles. This can be done through policies and extension workers.

Gender roles have an influence on crop production. The study has revealed that women have more activities to handle in any given day as compared to their male counterparts and that women usually engage in reproductive, productive and community activities unlike their male counterparts who only engage in productive activities and rarely in community activities. This affirms that women work much longer hours than their male counterparts.

Socio-cultural practices influencing productivity affect men and women differently. Women are affected differently based on cultural inclinations which dictate who makes decisions in a variety of situations such as what crops to be grown, what animals are sold, when to plant and how to use resources for agricultural production.

Land and other family property can be accessed by all family members, be it limited access or liberally, but control and ownership lies with the male household head. Women do not freely own property until they are widowed. The low levels of land ownership by women makes them insecure and reduces their incentives to actively participate in the decision making processes involving crop production because they have no permanent rights to the land.

Hunger gap is a common feature due to poor harvests and women face multiple constraints in agriculture arising from the complex nature of agricultural production and from competing demands on their time. If women's access were equalized to the men's, female farmers could produce enough additional food to raise agricultural production and bridge the hunger gap.

5.4 Recommendations

The vulnerabilities that women experience within the agricultural sector influence negatively on crop production and can be eased through strengthening a variety of ongoing interventions. For instance, the Common Interest Group model of mobilizing and organizing to be intensified.

Kenya's education efforts must continue, both generally and agriculture-based, and must be expanded to reach more women, to ensure that women and girls are getting the knowledge and education they need to be more productive farmers, produce more and close the gender gap in agriculture which would put more income in the hands of women.

Gender sensitisation programmes are needed to encourage men and women to share tasks equitably. Kenya's education efforts be expanded to include attitude change programmes focussing on fair allocation of productive roles at the community to ease the burden on females.

Socio-cultural values and practices such as wife inheritance, decision-making being with the males' domain among others retard cohesion and development and should therefore be slowly discarded. Hence, taking into consideration the socio-cultural practices in crop production and adapting to the traditions and socio-cultural norms of the local population is important in fostering the process of social change.

In all agricultural programmes, gender sensitization should be amplified and intensified with a view to ease the various vulnerabilities that women are exposed to due to the unequal gender relationships influencing decision making, access, control and ownership over assets and farming activities.

Kenya must financially and technologically invest in providing better farming tools, seeds, fertilizers and machinery to enhance efficiency and effectiveness in crop production to bridge the hunger gap.

5.5 Area of Further Research

- 1.The different social and economic roles and workloads that women and men have implications and opportunities to increase gender equity.
- 2.Factors that influence gender equity, access to and control over crop production resources.

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