TOBACCO FARMING AND ITS IMPLICATIONS ON ALTERNATIVE CROPS IN KURIA WEST SUB-COUNTY OF MIGORI COUNTY, KENYA

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BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR REQUIREMENTS FOR THE DEGREE OF ARTS IN SOCIAL DEVELOPMENT AND MANAGEMENT

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

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ABSTRACT

Tobacco is grown in about 120 countries of the world, occupying over 4 million hectares of land despite its poor returns compared to alternative crops. The main objective of the study was to examine tobacco farming and its implications on alternative crops in Kuria West Sub County of Migori County, Kenya. Specifically, the study sought to explore the effects of socioeconomic factors on cultivation of tobacco and alternative crops; examine the implications of institutional factors on tobacco farmers and alternative crops; and to find out the attitudes of local farmers towards cultivation of tobacco and alternative crops. The study was guided by dependency theory developed in the late 1950 by Fernando and Falleto whose tenets include power, uncertainty, duration and degree. The study design was cross-sectional, involving both quantitative and qualitative research methods. The study population comprised 2000 farmers in Kuria West. Yamane (1967) mathematical formula was used to arrive at a sample size of 320 of which 291 respondents were involved. Simple random sampling was used to select questionnaires respondents. Purposive Sampling was used to get key informants and FGDs drawn from various stakeholder categories in tobacco sector. The findings were analyzed through content analysis and presented in textual descriptions and illustrations using verbatim quotations. Quantitative data was collected using questionnaires and it was analyzed using descriptive statistics by aid of Statistical Package for Social Sciences (SPSS) and presented in tables of frequencies and percentages. The study found that farming activities taking place in Kuria West Sub-County mainly relies on the family labor and the production of alternative crops suffered capacity and resource constraints. The study concluded that adoption of other crops would be necessary to increase the farmers' income. . The study recommended that farmers should allocate more land for alternative crops which will earn them more cash and use for home purpose. Farmers should practice modern farming which will yield high food crops and improve their living standards. The findings of the study will be useful to the Government, policy makers, NGOs and the farmers.

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CHAPTER ONE: INTRODUCTION

1.1 Background Information to the Study

Globally, it is estimated that 100 to 124 countries grow tobacco. World tobacco production peaked in 1997 at over 9 million tons and has since declined to 7.1 million tons in 2009. As a result, most productive farmland is used to grow tobacco rather than food crops (World Health Organization, 2012). This trend may have negative consequences on global food security. Currently, the major producers of tobacco are China, India, Brazil, the United States, Turkey, Zimbabwe and Malawi, which together account for over 80% of the world's tobacco. China is the largest tobacco producer with over 35% of world's production; thus, variability of production in China directly affects production and price figures internationally (World Health Organization, 2012).

In Tanzania, tobacco farmers acquire pesticides on loan from global leaf companies, effectively locking them in a cycle of poverty. Therefore the farmers face food insecurity but are enslaved by the US leaf companies to continue growing tobacco because of debts to tobacco companies despite low prices (Ochola et al.2007). Studies carried out in Malawi indicate that incentives in such as fertilizers and seeds, have led to allocation of more land for tobacco cultivation (Claude, 2003). Apparently, due poor yields occasioned by drought, most farmers were unable to pay back their loans leading to more poverty and famine. Tobacco growing has social detrimental effects on poverty and development. Despite dismal returns, many tobacco-growing households continue cultivating the crop due to lack of incentives for production of alternative crops (Kibwage et al.2009). This study therefore set to explore the factors that make farmers reluctant to adopt cultivation of alternative crops instead of tobacco farming.

In Kenya, tobacco is grown by over 35,000 small scale farmers in over 15,000 hectares of land, a trend that is raising a lot of concern among household food security stakeholders (Kenya Tobacco Control Situational Analysis Consortium, 2010). The World Health Organization (2012) maintains that if the land taken up by tobacco cultivation was devoted to food production using the current technology regime it could feed 10 to 20 million more

people. WHO states that hunger and malnutrition are exacerbated when countries use the scarce land for tobacco production instead of food crops. The impact of social and institutional factors on adoption of alternative crops by farmers are not clear and this study attempts to explain them.

Tobacco farming involves severe, arguably irreversible costs to farmers and their families. Some of these costs of tobacco farming are child labor, bonded labor and environmental degradation. This leads to impoverishment and economic underdevelopment of individual farmers as well as families, communities and countries (World Health Organization (2012). In a study by Chacha, (1999) it is noted that tobacco growing causes massive destruction of the soils in Kuria district. The crop diminishes all the soil nutrients leaving the soil infertile to sustain any other crop unless massive fertilizer application is embarked on. There is also high leaching effect of the nutrients in tobacco growing areas. Furthermore, with most of the fertile ground given over to tobacco, some farmers have tried to grow maize on the formerly forested hillsides but the heavy rains wash away soil, plants and all. The topsoil has eroded in some places, and rocks and boulders are already washing down toward the fertile fields. Therefore it remains unclear the factors that hinder adoption of environment friendly alternative crops instead of tobacco.

Like most governments, the Kenya government, treasures tobacco firms because of the revenue they generate (GOK, 2002a). In fact, between the tobacco firms, the farmers and the government, the latter is the greatest beneficiary (Oongo, 2004). A study carried out on tobacco farming in South Nyanza indicates that there is increased economic vulnerability to farmers. Tobacco companies generate huge externalities forcing farmers and consumers to pay the costs and concealing the actual cost of tobacco leaf and other tobacco products. Institutional factors that influences farming of alternative crops include lack of readily available market, accessibility to credits and technical supports have not been fully explored (Kibwage et al 2009). Tobacco farming in Kenya has been practiced since the introduction of the crop by BAT in 1925, yet there is little economic development relating to the crop. Kuria West Sub-County, which is the highest producer of tobacco, is ranked among the poorest Sub-County in the country (Government of Kenya, 2011). Tobacco farming

households experience many problems ranging from the unpleasant smell of tobacco due to storing, sun curing and wood fuel smoke to respiratory health problems. Pregnant women, have had miscarriages due to the smell from tobacco curing. Children of school going age often provide labour in the farms resulting into high rates of absenteeism and school dropout. The need for crop diversification or a shift to crops with higher returns cannot be overemphasized. However, the debate on the profitability of tobacco, and its socioeconomic costs vis-à-vis other viable commercial crops produced in these regions, has often taken place without credible and exhaustive data. Moreover, there is scanty literature on impacts of social, institutional factors and attitude of local farmers on cultivation of alternative crops in Kuria west Sub-County. This is the gap which this study attempted to bridge.

A study by Ochola et al (2007) in south Nyanza, Kenya and found out that tobacco exhibited the lowest return per acre in the study area when compared with commercial crops including passion fruits, soya beans, pineapple and pepper in one production cycle. In addition, it was realized that farmers were willing to shift from tobacco and would do so if the introduced crop had an assured market, the farmers have access to credit to purchase farm inputs, and technical support among others (Kibwage et al. 2012). Farmers' attitude towards alternative crops has been negative due to institutional factors that inhibit farmers from growing alternative crops. Unlike tobacco where the farmers have readily available market, provided with credits for buying chemicals, seeds, fertilizer and curing firewood as well as technical support, farmers of alternative crops have no access to these facilities. According to Kibwage, et al. (2012) farmers indicated that they would adopt commercial crops, which they would also use for home consumption. The research also found out institutions promoting production of alternative crops in the study area faced capacity and resource constraints, which affected negatively on their operations. Those farmers who shifted to other crops exhibited higher standards of living compared to those who continued to grow tobacco. This study therefore, aims at examining social economic factors, institutional factors and attitude of famers towards tobacco farming and alternative crop farming in Kuria west Sub-County of Migori County in Kenya.

1.2 Statement of the Problem

Studies indicate that tobacco farming closely relates to poverty and food insecurity at household levels. Kuria West is endowed with fertile land, adequate and consistent rainfall which supports most crops. Horticultural products such as tomatoes, onions and cabbages do well in this region; however, it remains economically poor due to lack of viable market for products, especially, when produced in large quantities (Kibwage et al. 2008). Few studies have attempted to explain why farmers continue to grow tobacco despite huge potential in alternative crops. While food security cannot be emphasized, it remains unclear what motivates farmers in the area to remain in tobacco farming despite the fact that tobacco does not give them sufficient income. It was therefore, important to examine tobacco farming and its implications on alternative crops in Kuria West Sub-County. The study sought to examine how the role of institutional factors such as market availability, accessibility to credits as well as technical support influenced the farmers' choices of crops in the area of study.

1.3 Objectives of the Study

The main objective of the study was to examine tobacco farming and its effects on alternative crops in Kuria West Sub -County of Migori County, Kenya.

1.3.1 Specific Objectives of the study

The specific objectives of the study were as follows:-

(i) To explore the implication of socioeconomic factors of tobacco cultivation on alternative crops in Kuria West Sub-County.

(ii) Examine the implication of institutional factors on farming of tobacco and alternative crops in the study area.

(iii)To find out the attitude of local farmers towards cultivation of tobacco and alternative crops in the study area.

1.3.2 Research Questions

The study was guided by the following research questions:

(i) What is the implication of socioeconomic factors of cultivating tobacco on alternative crops in Kuria West Sub-County?

(ii) How do institutional factors affect farming of tobacco and alternative crops in the study area?

(iii) What is the attitude of local farmers towards cultivation of alternative crops in the study area?

1.4 Justification

Success in poverty eradication in tobacco areas depends on specific efforts to promote appropriate and alternative farming methods and not just on the introduction of any crops and technologies in such areas. Despite the fact that research has been carried out in this area on agricultural production, knowledge on the availability of market, access to credits and technical support is necessary, as it remains inadequate. The study therefore focused on institutional factors such as the availability of market for alternative crops, accessibility to credits technical support to alternative crop farmers. It also examined social economic factors such as family labor, ownership of land, income and farmers' attitude towards alternative crops in Kuria West of Migori County, Kenya. The findings of this study are expected to contribute to the available knowledge that will help the government's effort in poverty alleviation and achieving Millennium Development Goal number one which is alleviating extreme poverty and hunger.

1.5 The Scope and Limitation of the Study

This research study was carried out on tobacco farming and alternative crops in Kuria west Sub County of Migori County, Kenya. The research was carried out within the context of social factors, Institutional factors and farmers attitude as possible obstacles to adaptation of alternative crops. The study targeted tobacco and alternative crop farmers in Kuria West Sub-County. It was carried in the months of January –June 2014. One major limitation of this study was financial limitations as some interviewees wanted to be paid in order to give information which was not available. However, the respondents were explained the importance of the study, which was to get findings that, would help to find a solution improving their earnings from farming. Some agreed and the interviews were carried out.

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1.6 Theoretical Framework

The study was guided by dependency theory developed in the late 1959 by Fernando and Falleto. According to dependency theory, the major argument is that underdevelopment is not the product of persistence of traditional society instead it is generated by the particular fashion the expansion of capitalism assumes in the 'periphery' (Fernando and Falleto, 1979). The theory implies that Africa's continued economic dependency continues to be a flourishing business to the West and their African ruling puppets because, "any attempt to transform the economy from colonial exploitation to a more autonomous and profitable development requires extensive help from developed Countries. The social origin of Africa's underdevelopment is the introduction of large scale commercial activities without the development of industry hence African nations became only buyers and sellers. They became great consumers of Western products, instead of being producers of their own Industrial outputs for export purposes and foreign exchange earnings (Fanarnd and Falleto.1979). Colonial and post-colonial periods were used to complete the destruction of Africa's industrial orientation because from the era of slave trade through colonialism Africa was never been encouraged to process the primary commodities it could produce.

Similarly, dependency theory has been used in this study to explain continual exploitation of tobacco farmers in Kuria west Sub-County by various buying Multinational Companies which dictate the price. Furthermore, dependency theory explains how the establishment of multinational tobacco companies such as BAT in Kuria West Sub-County, control local farmers who resort to borrowing of huge loans from these multinational companies and later become enslaved to these companies. Borrowing from the multinational companies and re-paying these loans has turned farmers into slaves of hard work and rigid from adopting alternative crops apart from tobacco. Therefore, tobacco farmers should embark on growing alternative crops as substitute so that they need not depend on tobacco which does not earn them enough money to purchase the manufactured products from the richer countries which exploit them. The poorer farmers would still sell their primary products on the world market, but their earnings would not be enough to purchase seeds for alternative crops. This study thus, will use dependency theory to explain this phenomenon

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter discusses literature related to Tobacco farming and alternative crops. This section is organized according to the research questions in order to ensure relevance to the research problem.

2.1 Global Tobacco Farming Situation

All over the world, the multidimensional nature of the farmer's decision has been an important area of study. Some of these studies, have found that growers often make diverse choices based on tactical issues such as complementary of crops, farmers education and experience rather than simple assessment of returns risk and other factors. In most developed countries, agricultural production of tobacco is carrying a very significant prominence (GOK, 2002a). Research carried out by World Health Organization (2002) indicate that tobacco companies are "Strangling the growers" and each year they come up with a new way to squeeze them tighter while attempting to put a "human face" though corporate social responsibility programs (WHO, 2002); Tobacco farming is labor intensive and capital intensive. It requires about 1,200 labor hours per acre, compared to maize, which takes only 107 hours per acre (Efroymson et al, 2001).

Tackling food insecurity problem on a global level poses critical dynamic challenges. Every country has its own challenges contributing to the overall food crisis in tobacco farming areas (Shah and Violate, 2002). Due to unprecedented subsidies given to tobacco farmers by tobacco companies in terms of seeds and fertilizers, they are easily enticed to use large portion of their land for cultivation of tobacco. As a result, no fertile land or productive land is left for food crops. Consequently, farmers have to either spend more on buying food or reduce their food consumption, which subject their families to malnutrition and starvation (Oongo, 2004).

Food security is a major global concern since food is the most basic human need and access to food is fundamental human right. The right to food is contained in the Universal Declaration on Human Rights that was adopted in 1948 by the General Assembly and re-

affirmed by the World Food Summit and Food and Agricultural Organization of the UN in 1996. In their solidarity, over poverty and hunger issue nations under the umbrella of the United Nation (UN) targets to have by the year 2015 the population of people who are not hungry (UNDP, 2003). For these reasons, it is interestingly being recognized that the food crisis in many low income developing counties in exacerbated by the serious lag in the production of what were termed as minor crops including roots and tubers. Development of the crops is more regarded as an essential element in improving food consumption and nutrition. Use of tobacco by marginal groups to deal with hunger further worsens their health and economic status (WHO, 2001). Earnings from tobacco farming are not commensurate with the input by the farmers. The effected farmers are, therefore not in position to feed, educate, and cloth their families adequately. The resultant effects in such areas are child labor, school drop-out, and exploitation (Oongo, 2004).

In Africa, evidence of tobacco farming, bonded labor exists in Nigeria, Tanzania, and Uganda. Anna White with global partnership for tobacco control in essential action in Washington-DC reported that a tobacco farmer in Nigeria did not earn a profit in four years. He explained that his indebtedness to BAT had prevented him from ending tobacco farming (White, 2004). In Tanzania, tobacco farmers require pesticides purchased on loan from global leaf companies, perpetrating farmers enter in a circle of poverty. Tobacco farmers in Tanzania are slave to tobacco due to debts to US leaf companies who try to reduce the price of tobacco, experience food insecurity, and continue to grow tobacco because of debts to tobacco companies (Claude, 2003).

Studies carried out in Malawi indicate that incentive in the form of farm input loans – fertilizers, seeds, etc have led to allocation of more land for tobacco cultivation Claude, (2003). This has caused a negative effect on household income and food security. During poor yields due the draught, most farmers could not be able to pay back their loans and ended up with no cash to buy food. This could not have been the case if variety of food crops were grown (Claude, 2003).

Heyer (1972), in a survey of farmers of Bendel Estate in Nigeria identified six farming objectives of the small holder farmers in order of priority as provision of food, education of children repayment of debts, profits maximization, empowerment, creation of family members and leisure. The study asserts that the range of pressure alternative activities that can be implemented and the constraints imposed by the limited availability of land, labour and capital resources, restricts the scope of the farmers' allocation making. Heyer (1972) in his analysis of peasant farming under condition of uncertainty, asserts that an important objective with small state farmers appear to be meeting the substance requirements That subsistence production would be given prominence by farmers with relatively law income and they would grow crop with lower profitability compared to other enterprises so long as they meet their subsistence level.

Nevertheless, a study carried out by Oongo (2004) reveals that tobacco farming is high labor intensive, involving almost every member of the family including school going children having no room for growing food crops. The effect is perpetual food shortage in tobacco growing zones where farmers suffer from famine especially among children (Oongo, 2004). This is a major problem in countries where governments are trying to increase foreign exchange by exporting tobacco and thus push farmers to produce tobacco rather than food crops. If a crop fails farmers may find themselves with high loans and without the resources revealed to purchase the food they otherwise would have grown (Efroymson et al. 2001).

In Africa, FAO estimated that if nothing is done to resolve the fund crisis then the cereals deficit which currently stands at between 25 and over 30 million tones, could reach 100 million tons by 2010. Under these circumstances, the cost of import currently is US dollar 10 billion would roar to US dollar 30 billion or double the estimated value of agricultural exports. Most African countries would not cope with such a situation. Chronic feminine and unbearable poverty would be the results (FAO, 1996).

In Kenya, what farmers earn from tobacco farming is not enough to buy sufficient food for the family while the family is engaged in tobacco farming throughout the year. Like most governments, the Kenya government, treasures tobacco firms because of the revenue they

generate though takes remittance (GOK, 2002a). In fact, between the tobacco firms, the farmers and the government, the government is the greatest beneficiary (Oongo, 2004). Studies carried out on tobacco farming indicate there is increased economic vulnerability to farmers. However, many tobacco-growing households continue cultivating the crop due to little support for production of alternative crops In fact the amount of land currently under tobacco would wide, could instead be used to feed 10 to 20 million people (Kibwage et al.2009).

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WHO (2004) state that hunger and malnutrition are made worse when countries use scarce land for tobacco production. Given the delicate nature of tobacco, it requires many chemicals, in terms of pesticides etc, during its growth. From the day the nursery is laid, to the day the pay cheque is collected, the farmer inhales an assortment of chemicals, which does not do him any good. To make matters worse, the farmer has no protective gloves, gas masks, gumboots or dustcoats. Thus, at the end of the farming season, the farmer spends all he earned from the crop, sometimes more, to seek medication. Infant mortality is also on the increase as are the incidents of unexplained miscarriages, just to mention but a few.

During the tobacco-curing period, there is massive deforestation. The land is increasingly becoming bare and barren, unproductive, caked, ugly and blistering. BAT claims to be engaged in reforestation programs. In any case, the rate of deforestation is far too fast to be equal to the rate of reforestation. On the environmental front, during the curing season, the whole district becomes one big furnace emitting fumes into the atmosphere making everyone an unwilling smoker of unrefined tobacco. Tobacco has therefore polluted the land, water and air resources of Kuria area to a point of disgrace. Due to the twin fact that a lot of valuable land space and quality time are allocated to tobacco growth, food production suffers. Furthermore, the strained land is becoming ever more unproductive as repeated farming of tobacco has sucked any nutrients there may have been in the land.

2.2 Impact of Social Factors on Cultivation of Alternative Crops

If there is one single crop that has subjected children to excruciating, mostly forced, labour, it is tobacco. At the peak of the season, children are withdrawn from school to work on the

tobacco farms. Tobacco farming costs increase poverty and economic underdevelopment of individual farmers as well as families, communities and countries. Children of school going age are used in agricultural operation. This has kept them away from school and end up dropping out of school (WHO2008).

Men control the household resources and it is women and children who suffer most when men spend earning on tobacco instead of food (Efroymson et al. 2001). Clande (2003) reveals that while the main drive for men in farming is money, women focus more on food crops and can easily plant up to 10 different crops in a given growing reason. This confine the available labour to uneconomic farming leading to inadequate production of households' food crops and nutrition Ellen and Chan (1998) also concur that income in kind, that is, to say substance food production is more likely to be used for farming consumption than cash income.

Tobacco growing has social detrimental effects on poverty and development. Studies carried out on tobacco farming in Kuria Sub-County indicate there is increased economic vulnerability to farmers. However, many tobacco-growing households continue cultivating the crop due to little support for production of alternative crops (Kibwage et al. 2009). Developing countries that experienced an expansion of tobacco growing in the 1970s witness economically active people turning to tobacco growing and land transformed into tobacco farms, diverting valuable human and environmental resources. Unfair contract arrangements, bonded labor, and child labor push vulnerable, primarily rural, populations deeper into economic disenfranchisement. However, despite the fact that tobacco does not benefit farmers as much, they continue growing it due to available market unlike alternative crops. Communities and countries experiencing poverty, high unemployment, and economic reliance on tobacco growing are vulnerable to predatory tobacco industry behavior. This analysis presents a cross-national survey of social disruption in tobacco farming to illustrate the association between tobacco companies and tobacco-related child labor, poverty and environmental destruction (Oongo, 2004).

2.3 The Impacts of Institutional Factors on Farming Alternative Farming

Institutional factors that influence farming of alternative crops include lack of readily available market, accessibility to credits and technical support. Ochola et al. (2007) carried out research on tobacco farming in south Nyanza, Kenya and found out that Tobacco exhibited the lowest return per acre in the study area when compared with commercial crops including passion fruits, soya beans, pineapple and pepper in one production cycle. In addition, it came out that farmers are willing to shift from tobacco and would do so if the introduced crop has an assured market, the farmers have access to credit to purchase farm inputs, and technical support among others (Kibwage et al. 2012).

The farmers believe that the inputs given to them as a loan in the form of seeds, pesticides and fertilizers as incentive tend to be overpriced. Farmers are losing money once deductions are made for the loan, labour, fuel and costs. In fact one farmer said that if labour was provided by tobacco buying companies like inputs, after deductions the farmer would literary get zero in return. They are not ensured against hazardous chemicals and other negative effects coursed by tobacco. The farmer is not educated regarding the hazards of tobacco farming. He is not educated on the importance of having a say in the industry.

According to Magati etal. (2009), most of the farmers spent a lot of their time in tobacco farming. This is at the expense of food crop, which they eventually buy from other areas at very high prices. Since statistics reveals that tobacco is not essential for our economy, instead we should concentrate on building a market system for food crops (Christian, 2002).

2.4 The Farmers' Attitude towards Cultivation of Alternative crops

Farmers' attitude towards alternative crops has been negative due to institutional factors that inhibit farmers from growing alternative crops. Un like tobacco where the farmers have readily available market for tobacco, provided with credits for buying inputs such as chemical, seeds, fertilizer, curing firewood and technical support, farmers of alternative crops have no access to these institutions (Ochola et al. 2007).

However, from the research carried out by Kibwage, et al. (2012) had very interesting findings. Farmers indicated that they would adopt commercial crops, which they would also use for home consumption. The research also found out that, institutions promoting production of alternative crops in the study area faced capacity and resource constraints, and there is no ready market which affected negatively on their operations. Interestingly, those farmers who shifted to other crops exhibited higher standards of living compared to those who continued to grow tobacco alone (Kibwage et al. 2012).

According to Abila (2006), the production of crops such as cassava, sorghum and millet have gone down in Kuria Sub County in recent years as tobacco output increased. This is due to competition for farmland and labour between these crops and tobacco. According to Kweyuh (1994), tobacco ranked 19th in agricultural land use and 14th in importance in the category in temporally industrial crops. This survey established that on the average, six hectares holding in Migori Sub County, farmers cultivate four hectares of tobacco leaving only two hectares for all food crops. In some cases farmers with small scale have planted all their land with tobacco relying on tobacco income to buy food. Village leaders say while many food crops including maize, beans, sweet potatoes, sorghum, cassava and millet, are still cultivate, their quality have suffered due to those crops being neglected as efforts are largely concentrated in tobacco farming.

Okoth (2009) mentioned that as tobacco replaces food crops in many farms, the heavy coast paid by communities is becoming more apparent. For meager returns of 70,000 per harvest, tobacco farmers are paying a heavier price, poisoned, and food shortage, which have transformed to them into perpetual baggers. With contracted farms increasing, tobacco acreage, the spread of tobacco cultivation is making it difficult for locals to grow cassava and potatoes, as they are susceptible to mosaic deceases as common in tobacco. Maize yield in the area fell in 2008, a 45% drop a mid massive crop in 1999, three to nine bags from ten to six bags per acre of farmland due to soil degradation.

Statistics conducted on tobacco activities in the larger South Nyanza Region by Kibwage et al. (2005), revealed that 50.4% of the farmers in that area attributed low maize production to massive cultivation of tobacco. This contributes to food insecurity since maize is the stable food crop in the area. With an effort to cope with the situation of food security, farmers tend to buy or borrow food from relatives, neighbors or seek relief food from the Government or non- government organizations (Ingham et al., 2000). Despite farmers position in household food production, it was revealed that majority of farmers grow tobacco due to poor food crop production technologies and insufficient information about cost and returns of alternative crops. Farmers attributed low food crops yields to poor soils where tobacco was, once grown Kibwage et al. (2007). This is because tobacco as a plant extracts nutrients from the soils, which are lost as the leaves are harvested, hence no organic matter is returned to the soils (Ingham, et al, 2000).

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in this study. It gives a description of the study design, study area, study population, sampling procedures, and methods of data collection. It further explains the methods of data analysis and presentation. In addition, it presents the ethical considerations.

3.1 Study Design

The study adopted cross-sectional study design. This type of study utilizes different groups of people who differ in the variable of interest, but share other characteristics such as socioeconomic status, educational background, and ethnicity. It aided in achieving a snapshot picture of what was happening in the study area hence was useful in capturing information within a short period of time. Both quantitative and qualitative research techniques were incorporated in the design (Creswell, 2003). Cross-sectional design was used to capture both qualitative and quantitative data within one and a half month on the topic of study. Tobacco farmers were the unit of analysis in the research.

3.2 Study Area

The study was carried out in Kuria West Sub County of Migori County Map on (Appendix4). It is in the southern end of Nyanza Region. It is majorly inhabited by the Kuria speaking, and other minor tribes. Kuria West boarders Kuria East to the east, Tanzanian to the south Lake Victoria to the west and Migori Sub County to the north in the republic of Kenya. Kuria West Sub County covers about 110 sq. kms with a population of 145,592 (KNBS, 2009). Refer to Appendix 4 (Kuria West Map). Kuria West sub County was purposively selected because it is one of the leading tobacco producing sub counties in the country yet it is ranked the poorest district in the country (GoK, 2011).

3.3 Study Population

Kuria West Sub-County has approximately 2000 famers of whom 1300 are tobacco farmers while about 700 engage in alternative crop production (Aid 2002). The study population also

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included area leaders, administrators, agricultural officers, teachers, social workers and other actors in tobacco sector.

3.4 Sampling Procedures

Random sampling procedure was used to select the sample from the study population. Farmers were stratified into two groups; tobacco farmers and those who grow alternative crops. Simple random sampling was then used within each stratum to select household from the target population Purposive Sampling was used to get key informants who included; Agricultural extension officers, chiefs, ward representatives, teachers, prominent farmers and NGO representatives.

3.5 Sample Size

The sample size was determined using the Yamane formula. The study assumed a margin error of 5% and a confidence level of 95%. The sample size calculation is based on Yamane (1967:886) which provides a simplified formula to calculate sample sizes. A 95% confidence level and P = .05 is assumed for the formula below:

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

Where **n** is the sample size, **N** is the population size, and **e** is the level of precision. When this formula is applied to the above sample, it leads to the following Equation;

$$n = \frac{2000}{1 + 2000(0.05)^2} = 320$$

A total of 320 farmers were expected to be included in the study.

Purposive sampling was used to select 30 key informants from a cross-section of categories of stakeholders in the sector. Therefore the total sample size was 330 respondents.

3.6 Tools of Data Collection

3.6.1 Questionnaires

The questionnaire was the main tool for collection of data in this study. The questionnaire was used to gather socio-demographic information relating to production of tobacco and alternative crops in the area of study. The questions were directed to both 200 tobacco and 120 alternative crop farmers in Kuria West Sub-County.

3.6.2 Focus Group Discussion Guide

This is a special type of group in terms of its purpose, size, composition and procedures. It is usually composed of individuals who share certain characteristics, which are relevant for the study. The group was assembled by first identifying the participants of eight (8) of three groups one from each Administrative Unit within the research area. The participants were then asked to share their thoughts, feelings, attitudes and ideas on the subject. A recording list should be made of the discussion (Kombo, 2006; Tromp, 2006). A total of 4 FGDs were conducted in this study.

3.6.3 Key Informant Interviews

A key informant is defined as someone who is likely to have knowledge or experience that is relevant to the topic under investigation (Bernard, 1995). Three agriculture officers, three tobacco farmers' leaders were targeted for key informant interviews. They shed light on the impacts of institutional factors and attitude of local farmers on cultivation of alternative crops in Kuria West Sub-County. Additionally, 3 chiefs, 3 ward reps, 4 teachers, 4 prominent farmers and 3 NGO representatives were also targeted for the interviews.

3.7 Piloting of the Tools

Questionnaires were tested by administering the questionnaire to the tobacco farmers in villages neighboring the study area to ascertain reliability before putting it in use. The test enabled the review of the tools to by adjusting the areas that were not clear.

3.7.1 Reliability and Validity

According to Mugenda and Mugenda (2004), validity is the degree to which the results obtained from the analysis of data actually represents the phenomenon under the study.

Reliability is a measure of degree to which a research instruments yields consistent results or data after repeated trials. An analysis of the test responses necessitated little adjustment in the tools to enhance comprehension by the respondents.

3.8 Data Analysis and Presentation

The quantitative data obtained from the 291 respondents was analyzed using descriptive statistics by the aid of Statistical Packages for Social Science (SPSS) version 17-computer program and presented in tables, frequencies and percentages. Qualitative data from FGDS and key informants interviews were analyzed by creating patterns and themes then creating meaning out of the emerging themes. Qualitative data were presented in textual descriptions and illustrations using verbatim quotations

3.9 Ethical Considerations

Permission to conduct this study and to guarantee respect for human subjects was obtained from the department of Sociology & Anthropology in Maseno University. The purpose of the study was explained to eligible respondents and informed consent sought before their participation. Confidentiality and anonymity was assumed to the respondent especially in the area of gender issue. Ethical consideration was born in mind throughout the exercise. Confidentiality was guaranteed to the respondents at all times throughout the interview. Moreover, respect for human privacy and dignity was maintained throughout the data collection and analysis process.

CHAPTER FOUR: FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the findings of the study guided by the objectives of the study. Though 320 questionnaires were sent out to farmers, 291(90.9 %t) were actually received and analyzed.

4.2 Demographic Characteristics of the Respondents

Table 4. 1: Gender Distribution of the Respondents

		Frequency	Percent	Cumulative Percent
Valid	Male	216	74.5	74.5
	Female	75	25.5	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

The Table 4.1 revealed that the majority of the respondents were male with 74.5% while 25.5% were female. This finding indicated that there was gender parity in the tobacco farmers in Kuria West Sub County, Migori County. These results implied that majority of the farms in Kuria West were owned by men and hence, they determine the allocation of land in farming which is a socio economic factor.

Table 4. 2: Level of Education

		Frequency	Percent	Cumulative Percent
Valid	Primary	141	48.5	48.5
	Secondary	90	30.9	79.4
	Tertiary College	36	12.4	91.8
	University	14	4.8	96.6
	Never	10	3.4	100.0
	Total	**291**	**100.0**	

Source: Research Data (2014)

The findings on the Table 4.2 revealed that 48.5 percent of the respondents attained Primary Education, followed by Secondary (30.9 percent), Tertiary college (12.4 percent), University (4.8 percent) and finally the Never (3.4 percent). This implied that the respondents were able to make an informed decision on adoption of alternative crops.

4.3 Impact of Social factors on Cultivation of Alternative Farming

In order to explore the impact of social factors influencing cultivation of alternative crops by tobacco farmers in Kuria West Sub-County, this study looked at composition of household heads; source of labour and reasons for cultivating tobacco.

Table 4.3: Head of Household

		Frequency	Percent	Cumulative Percent
Valid		17	5.8	5.8
	Man	246	84.5	90.4
	Woman	27	9.3	99.7
	Both	1	.3	100
	Total	**291**	**100.0**	

Source: Research Data (2014)

The Table 4.3 showed that the households were headed by men with 84.5 percents while household headed my women constituted 9.3 percent and finally the household headed by both the man and the woman were 0.3 percent. This was confirmed by Efroymson et al. (2001) indicating that where the household's resources are controlled by the men, Women and children do suffer. The study by Clande (2003) revealed that the main drive for men involving in farming was cash, however women are majorly focused on the food crops and therefore they grow a number of different types of crops for subsistence purpose. The study found out that a majority of households in Kuria West Sub County were headed by men with 84.5 percents response. This was confirmed by Efroymson et al. (2001) indicating that where the household's resources are controlled by the men, Women and children do suffer. Therefore, male dominance is also a factor that determines adoption of alternative crops by tobacco farmers in Kuria.

Table 4.4: Source of Labor

		Frequency	Percent	Cumulative Percent
Valid	Family	212	75.7	75.7
	Hired	60	21.4	97.1
	Both	8	2.9	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

Table 4.4 indicated that the major source of labour was the family with a 75.7 percent response while 21.4 percent was hired labor. To some extent the farmers used both family and hired labor with a 2.9 percent response. This study finding implied that the farming activities taking place in Kuria West sub County is mainly relying on the family labor. The main reason for the family labour was that it was cheap and convenient. On the other hand, hired labor tends to be expensive hence they could hinder alternative farming in the area. Tobacco farming in developing countries occurs in remote rural areas. Tobacco companies

benefit from low cost tobacco in developing countries and the lack of or inadequate enforcement of social, health and environmental laws in developing countries Marty, (2008).

Table 4.3: Whether Labor is Sufficient

		Frequency	Percent	Cumulative Percent
Valid	Yes	115	39.8	39.8
	No	176	60.2	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

The Table 4.5 showed that labor provided was insufficient with a 60.2 percent response while 39.8 percent of the respondents cited labor to be sufficient. This finding of the study could be concluded that labor provided by the family was inadequate and therefore there was need to outsource labor from other sources. However, the hired labor was expensive compared to the family one. Hired labor could reduce the earnings from tobacco as mostly what farmers earn is the labor cost which is provided by the family. This could be a social factor that has inhibited the farmers in Kuria West Sub County from adopting alternative farming since the available labor was not enough.

Table 4. 4: Person Receiving Payment

		Frequency	Percent	Cumulative Percent
Valid	Man	215	73.8	73.8
	Wife	29	9.8	83.6
	Children	4	1.4	85.0
	All	11	3.8	88.8
	Man and Wife	32	11.0	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

The Table 4.6 revealed that payments were majorly received by men; this was supported by 73.8 percent respondents, followed by man and wife (11.0 percent), wife (9.8 percent), All (3.8 percent) and finally the children with 1.4 percent response. This study finding could be concluded that men dominated the social role of receiving the payments that are earned from the farm produce. Men who earned the payment made from the farm produce could use the money earned from the tobacco for other things rather than food (Efroymson et al.2001).This has led to the farmers unable to engage in alternative farming because the money which could be used to support the social needs of the family sometimes get misappropriated.

Table 4.7: Crop that Earned More Money

		Frequency	Percent	Cumulative Percent
Valid	Tobacco	171	58.6	58.6
	Maize	67	22.9	81.4
	Soya beans	7	2.5	83.9
	Sweet potatoes	13	4.3	88.2
	Maize and sweet potatoes	8	2.9	91.1
	Pineapple	3	1.1	92.1
	Sugarcane	2	.7	92.9
	Cassava	1	.4	93.2
	Tomatoes	6	2.1	95.4
	Banana	7	2.5	97.9
	Watermelon	2	.7	98.6
	Sukuma wiki	3	1.1	99.6
	Millet	1	.4	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

Tale 4.7 revealed that the crop that earned more money for the farmers in Kuria West Sub County was Tobacco with a response rate of 58.6 percent, followed by Maize (22.9 percent) and the remaining percent covered the rest of the crops . According to Kibwage et al. (2009) tobacco was the favorite crop being cultivated in Kuria West Sub County, despite causing the farmers to wallow in poverty and the cash earned could hardly support other farming.

Table 4.5: Reasons for Cultivating Tobacco

		Frequency	Percent	Cumulative Percent
Valid	ready market	140	48.1	48.1
	earn more than other crops	84	28.7	76.9
	Healthy	3	1.1	78.0
	plant twice a year	17	6.0	84.0
	plant thrice year	8	2.6	86.6
	only cash crop	37	12.7	99.3
	do well in my land	2	.7	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

The findings in Table 4.8 showed that tobacco was grown because it had ready market with 47.0 percent, earned more cash than other crops (28.7 percent), only cash crop (12.7 percent) and the remaining catered for the other reasons. This study finding implied that farmers in Kuria West Sub County preferred cultivating tobacco due to its ready market and earned more cash than alternative crops. This could be concluded that framers would prefer to continue growing tobacco because of the readily available market for tobacco compared to the other crops.

The study found out that households in Kuria West Sub County were headed by men with 84.5 percents response. This was confirmed by Efroymson et al. (2001) indicating that where the household's resources are controlled by the men, Women and children do suffer. The study by Clande (2003) revealed that the man drive for men involving in farming was cash, however women are majorly focused on the food crops and therefore they grow a number of different types of crops for subsistence purpose. The research revealed that major source of labor was the family with a 75.7 percent response while 21.4 percent was hired labor. The farmers used both family and hired labor with a 2.9 percent response. This study finding

implied that the farming activities taking place in Kuria West Sub County is mainly relying on the family labor. The main reason for the family labour was that it was cheap and convenient. On the other hand, hired labor tends to be expensive hence they could hinder alternative farming in the area. Further, the study revealed that labour provided was insufficient with a 60.2 percent response while 39.8 percent of the respondents cited labor to be sufficient. The study also noted that those payments were majorly received by men with 73.8 percent respondents. The research also revealed that tobacco was the crop that earned more money for the farmers in Kuria West Sub County was Tobacco with a response rate of 58.6 percent response, followed by Maize (22.9 percent) and the remaining percent covered the rest of the crops. According to Kibwage et al. (2009), tobacco was the favorite crop being cultivated in Kuria West Sub County, despite causing the farmers to wallow in poverty and the cash earned could hardly support other farming. The study showed that tobacco was grown because it had ready market with 47.0 percent and earned more cash than other crops (28.7 percent). This study finding implied that farmers in Kuria West Sub County preferred cultivating tobacco due to its ready market and more cash earned from it.

A key informant supported the findings, he noted that:

> *Actually farmers in Kuria West prefer tobacco farming than any other thing because they earn a lot from the tobacco. You know farmers prefer this tobacco to an extent that they give other crops a small portion of land* (Tobacco leader, 45 years old).

The study recommended that the government should create ready market for the alternative crops rather than concentrating on the tobacco only. The price of the food crops should also be improved so that farmers can be encouraged to cultivate alternative crops instead of crops. The study recommended that as much as the man is the head of the family, man should take his correct responsibility and ensure that the family social order is not eroded through the forced labor and mismanagement of the earned money from the crop production.

4.4 Impact of Institutional Factors on Cultivation of Alternative Crops

In order to examine the impact of institutional factors on cultivation of alternative crops in Kuria West Sub-County, the study examined at income level of the farmers; whether tobacco farmers got enough food with the monthly income and preferred crop for food insecurity.

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Table 4.9: Factors influencing adoption of Alternative crops

n=291	SA	A	NC	DA	SDA
I prefer to grow tobacco because it has ready market	46.7%	28.9%	7.3%	7.0%	10.1%
Tobacco pays enough money for family need	27.6%	22.4%	13.6%	21.7%	14.7%
Tobacco has better price	33.8%	23.2%	12.3%	15.5%	15.1%
Alternative crops have no readily available market	30.2%	31.3%	7.2%	15.1%	16.2%
Tobacco pays in lamb sum	29.1%	34.9%	11.5%	13.3%	11.2%
Alternative crops have no credit facility	28.7%	36.2%	9.7%	10.8%	14.7%
Tobacco has credit facility	48.2%	25.5%	9.0%	5.8%	11.5%
There is no market for alternative crops	26.1%	28.3%	10.1%	15.6%	19.9%
Tobacco has technical support	44.6%	25.7%	10.1%	8.7%	10.9%
Alternative crops have no technical support	32.7%	30.5%	9.1%	11.3%	16.4%

Source: Research Data (2014)

Key: SA-strongly agreed, A-agreed, NC-No comment, DA-Disagreed, SDA-Strongly Disagreed

The findings in Table 4.9 revealed the influence for the adoption of the alternative crops by the farmers in Kuria West Sub County, Migori County. Tobacco farmers in Kuria West Sub County cultivated tobacco because it has ready markets with 46.7 percent strongly agreed while 28.9 percent agreed. On contrary, 30.2 percent strongly agreed and 31.3 percent agreed that alternative crops have no ready markets. Furthermore, 26.1 percent of the respondent strongly agreed while 28.3 percent agreed that the alternative crops had no markets .The result further showed that tobacco had better price compared to the alternative crops with 33.8 percent strongly agreed while 23.2 percent agreed. It was evident also that tobacco had technical support with 44.6 percent strongly agreed while 25.7 percent agreed. On the other hand, alternative crops had no technical support with 32.7 percent strongly agreed while 30.5 percent agreed.

The other factor that influenced adoption of alternative crops was that tobacco had credit facility compared to alternative crops. 48.2 percent of the respondents strongly agreed while 25.5 percent agreed that tobacco had credit facility. Meanwhile 28.7 percent strongly agreed and 32.8 percent agreed that alternative crops had no credit facility. Moreover, tobacco could enable farmers to obtain lump sum cash compared to alternative crops with 29.1 percent strongly agreed and 34.9 percent agreed. Finally, the tobacco farmers could continue cultivating the same crop because it provided money that could cater for the family needs with 27.6 percent strongly agreed and 22.4 percent agreed. According to Kibwage et al. (2012), farmers resorted to cultivate tobacco because they could access credit facility to purchase farm inputs and available technical support for the tobacco farmers from the tobacco companies in the area. This clearly indicated that farmers had no choice for other alternative crops but to cultivate tobacco as the main source of earning, even though it has a lowest earning per acre compared to alternative crops (Ochola, 2007).

Table 4.10: Income Levels of the respondents

	Income in Kes					
n=291	Less than 500	501-1000	1001-3000	3001-5000	5001-10000	Over 10000
Daily Income	69.3%	19.1%	6.5%	3.6%	1.1%	0.4%
Weekly Income	16.2%	18.4%	32.5%	19.1%	10.5%	3.2%
Monthly Income	0.7%	12.4%	14.5%	7.8%	30.5%	34.0%

Source: Research Data (2014)

Table 4.10 showed that majority of farmers earned less than 500Kes daily with 69.3 percent response, followed by farmers earning 501 - 1000Kes(19.1 percent), 1001 - 3000 Kes (6.5 percent), 3001 - 5000Kes(3.6 percent), 5001 - 10000Kes(1.1 Percent) and finally daily income over 10000Kes(0.4 percent). Also the table 4.10 revealed that 16.2 percent of the respondents earned less than 500Kes per week with 16.2 percent response, 501 - 1000Kes(18.4 percent), 1001 -3000 Kes (32.5 percent), 3001 - 5000 Kes (19.1 percent), 5001 - 1000 Kes (10.5 percent) and the weekly earning over 10000 Kes with 3.2 percent response. Further, the table 4.10 showed that only 34.0 percent of the respondents earned Over 10000 Kes per month, followed by 5001 - 10000 Kes (30.5 percent), 1001-3000 Kes (14.5 percent),

501 – 1000 Kes (12.4 percent), 3001 – 5000 Kes (7.8 percent) and finally less than 500 Kes (0.7 percent). These study findings implied that the tobacco farming could yield low return compared to alternative crops and therefore, the farmers hardly had enough money to venture into alternative farming (Ochola, 2007).

Table 4.11: Whether tobacco farmers get enough food with the monthly income

		Frequency	Percent	Cumulative Percent
Valid	No	67	23.0	23.0
	Yes	63	21.6	44.6
	Sometimes	154	52.8	97.4
	not sure	4	1.5	98.9
	Others	3	1.1	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

Table 4.11 showed that 52.8 percent of the respondents sometimes got enough food with their monthly income, 23.0 percent hardly had enough food while 21.6 percent had enough food. This research finding implied that the majority of the respondents had no enough food from their monthly income. The earning from the tobacco farming generally low especially after the deductions are made for the loan, labor, and fuel cost. According to Magati (2009) tobacco farmers spent a lot of money and time at the expense of food crop and eventually end up in poor to the level that they cannot afford to buy enough food for the family because low monthly income and the high price of the food crops.

Table 4.12: Preferred crop for food security

		Frequency	Percent	Cumulative Percent
Valid	Maize	48	17.1	17.1
	Cassava	37	13.2	30.2
	sweet potato and cassava	54	19.2	49.5
	tomatoes and cassava	5	1.8	51.2
	maize, sorghum, cassava and millet	116	41.1	92.5
	groundnut, carrots, bananas, maize	6	2.1	94.7
	Sorghum	1	.4	95.0
	Cabbage	1	.3	95.4
	Potato	11	3.9	99.3
	Tobacco	1	.4	99.6
	Soya beans	1	.4	100.0
Total		**291**	**100.0**	

Source: Research Data (2014)

Table 4.12 revealed that farmers in Kuria West Sub County preferred adopting alternative crops to secure food security in the area. Majority of the respondents 99.6 percent said they would prefer to cultivate alternative crops to secure food security in the region. According to a research done Kibwage (2012) it revealed that farmers who shifted to other crops shown improved and higher standards of living compared to those who continued to grow tobacco.

Table 4.13: Replaced tobacco with other crops

n=291		Frequency	Percent	Cumulative Percent
Valid	Yes	199	68.4	68.4
	No	92	31.6	100.0

Source: Research Data (2014)

Table 4.13 showed that 68.4 percent of the respondents said that they had replaced tobacco with other crops. On the hand, 31.6 percent had not replaced tobacco with other crops. This study results implied that farmers were willing to adopt other commercial crops which they would also use for home consumption (Kibwage, 2012). The farmers who had replaced

tobacco with other crops said that tobacco's delicate nature of the need of chemicals during its growth compelled them to run away from the crop and begin cultivating the food crops which were much cheaper to grow. Tobacco required intensive labor compared to other crops, and it normally prompt children to be subjected to forced labor by their parents.

Table 4.14: Alternative farming

n=291	SA	A	NC	DA	SDA
I prefer to grow tobacco only	4.7%	5.0%	3.6%	48.0%	38.7%
I practiced mixed farming	56.2%	33.8%	2.1%	5.7%	2.1%
I don't grow tobacco	14.4%	7.6%	6.1%	51.3%	20.6%
Income from tobacco is more reliable compared to other alternative	35.1%	25.%	14.1%	13.05	12.7%
Alternative crops have better returns	38.0%	29.2%	8.9%	18.1%	5.9%

Source: Research Data (2014)

Key: SA-strongly agreed, A-agreed, NC-No comment, DA-Disagreed, SDA-Strongly Disagreed

The findings in Table 4.14 revealed that 90.0 percent of the respondents practiced mixed farming while 60.1 percent said that income from tobacco was more reliable compared to alternative crops. The study result also noted that 67.2 percent of the respondents confirmed that alternative crops have better returns. These findings implied that farmers were willing to adopt the alternative crops .The study found out that the production of alternative crops suffered capacity and resource constraints and therefore negatively affected its production (Kibwage et al. 2012).

Furthermore, the study found out that 75.6 percent of the respondents cultivated tobacco because it had ready market. The alternative on the other hand had no ready market. In addition, tobacco was a preferred crop in Kuria West Sub County because it had better price compared to the alternative crops with 57.0 percent response. From the study findings it was also evident that tobacco had technical support with 70.3 percent response. On the other hand, 63.2 percent of the respondents indicated that alternative crops had no technical

support. Furthermore, the study revealed that tobacco farming attracted had credit facility compared to alternative crops with 72.7 percent response. 63.5 percent of the respondents cited that alternative crops had no credit facility. Moreover, tobacco could enable farmers to obtain lump sum cash compared to alternative crops with 64.0 percent response.

Finally, tobacco farmers could continue cultivating the same crop because it provided money that could cater for the family needs with 50.0 percent response. According to (Kibwage et al. 2012), farmers resorted to cultivate tobacco because they could access credit facility to purchase farm inputs and available technical support for the tobacco farmers from the tobacco companies in the area. This clearly indicated that farmers had no choice for other alternative crops but to cultivate tobacco as the main source of earning, even though it has a lowest earning per acre compared to alternative crops (Ochola et al. 2007). The study also found out that the majority of farmers earned very low income. Only 34.0 percent earned over 10000 Kenya shillings per month while the rest earned less than 10000 Kenya shillings per month. This clearly implied that majority could not afford to engage in other farming because all that was earned was inadequate to support their extra farming practice.

During FGD with the farmers, it emerged that the farmers earned very low from tobacco. The sentiment below affirms this.

> *We farmers have no alternative choice to crops but to cultivate tobacco, however, tobacco earns us very low and sometimes it takes long to get our payment. Tobacco is just good because we could access credit facility to purchase farm inputs and available technical support for the tobacco farmers from the tobacco companies in the area. In fact this is the only thing that maybe we can say hinder us from farming other crops (34 years old, FGD participant).*

The study concluded that the money earned from the tobacco is inadequate to support the purchase of food and other social amenities (Ochola et al., 2007). The study further concluded that farmers would engage in tobacco farming compared to other crops because there are ready markets, access to credit facility to purchase farm inputs and also the availability of technical support on tobacco farming.

4.5 The Attitude of Local Farmers towards Alternative Crops

The third specific objective of this study was to find out the attitude of local farmers towards cultivation of alternative crop in Kuria West Sub-County. Farmers most preferred alternative crop was during the questionnaires survey.

Table 4.15: Farmers attitude towards alternative crops

n=291	SA	A	NC	DA	SDA
I prefer to growing tobacco	41.1%	21.4%	3.9%	18.2%	15.4%
I grow tobacco because it is what everybody grows here	4.3%	5.4%	6.8%	39.9%	43.5%
I grow tobacco because it is men's crop	2.2%	1.4%	5.0%	43.0%	48.4%
Food crops are for women	1.4%	2.2%	5.15	43.7%	47.7%
Alternative crops are not reliable	5.0%	27.2%	15.4%	27.6%	24.7%

Source: Research Data (2014)

Key: SA-strongly agreed, A-agreed, NC-No comment, DA-Disagreed, SDA-Strongly Disagreed

Table 4.15 revealed that 41.1 percent of the respondents strongly agreed and 21.4% agreed to prefer growing tobacco. 39.9 percent of the respondents disagreed and 43.5 percent strongly disagreed that they grow tobacco because everybody is growing it. Similarly, 43.0 percent of the respondents disagreed that they grow tobacco because it is men's crop while 48.4 percent strongly disagreed. Also from the table 4.15 it showed that 43.7 percent of the respondents disagreed that the food crops are for women while 47.7 percent strongly disagreed. Further, the study findings in table 4.15 revealed that 27.6 percent of the respondents disagreed that alternative crops are not reliable, followed by agreed (27.2 percent), strongly disagreed (24.7 percent), No comment (15.4 percent) and finally Strongly agreed (5.0 percent).This study results implied that 62.5 percent of the farmers preferred growing tobacco. According to Abila (2006), in the recent years the cultivation of crops such as cassava, sorghum and millet gone down while tobacco output increased in Kuria West Sub County. It was noted that farmers have allocated much portion of their lands to growing of tobacco rather than other crops. Some farmers have resorted to grow tobacco in their lands because there has been low maize production (Kibwage et al. 2008). In addition, the farmers considered growing tobacco

because low food crops yields to poor soils where tobacco was (Kibwage et al(2007). The study also revealed that 52.3 percent of the respondent denied that alternative crops were not reliable. The study literature noted that the alternative could do well if they are accorded the necessary care. The neglect of the food crops had resulted to heavy cost of food prices in the area (Okoth, 2009).

Moreover, the study revealed that 90.0 percent of the respondents practiced mixed farming while 60.1 percent said that income from tobacco was more reliable compared to alternative crops. The study also found that 67.2 percent of the respondents confirmed that alternative crops have better returns. These findings implied that farmers were willing to adopt the alternative crops. The study found out that the production of alternative crops suffered capacity and resource constraints and therefore negatively affected its production (Kibwage et al.2012).According to Abila (2006), in the recent years, the cultivation of crops such as cassava, sorghum and millet gone down while tobacco output increased in Kuria West Sub County. It is noted that farmers have allocated much portion of their lands to growing of tobacco rather than other crops. Some farmers have resorted to grow tobacco in their land because there has been low maize production (Kibwage et al.2008). In addition, the farmers considered growing tobacco because low food crops yields to poor soils where tobacco was (Kibwage et al.2007). The study also revealed that 52.3 percent of the respondent denied that alternative crops were not reliable. The study literature noted that the alternative could do well if they are accorded the necessary care. The neglect of the food crops had resulted to heavy cost of food prices in the area (Okoth, 2009).

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

5.2 Summary

The study found out that most households in Kuria West Sub County were headed by men as shown in Table 4.3. Patriarchal domination had an implication on choice of alternative crop to be grown in the study area. Moreover, payments were majorly received by men who in turn spent the money for tobacco farming because it had ready market compared to the alternative crops such as maize.

Notably, the study revealed that majority of the respondents preferred tobacco farming because of the financial institutions (Table 4.9). Tobacco attracted funds and farmers could easily get credit facility compared to alternative crops which was mentioned by majority of farmers that had no credit facility. Moreover, farmers resorted to cultivate tobacco because they could access credit facility to purchase farm inputs and available technical support for the tobacco farmers from the tobacco companies in the area. This clearly indicated that farmers had no choice for other alternative crops but to cultivate tobacco as the main source of earning, even though it has a lowest earning per acre compared to alternative crops.

The study revealed that the farmers' attitude influenced allocation of land for cultivation of alternative crops. Farmers allocated larger portion of their lands to growing of tobacco rather than other crops. Some farmers resorted to growing tobacco in their land because there had been low maize production in the study area. This had created negative attitude towards maize and other cash crops, thus perpetuating tobacco farming in the area.

5.3 Conclusion

The study therefore concluded that male domination acted as a central social factor that impacted negatively on adoption of alternative crops in Kuria West Sub-County. Additionally, tobacco farming was preferred because it enabled farmers secure credit facilities and market was readily available as compared to alternative crops. Farmers therefore had to cultivate tobacco at the expense of alternative crops which were viewed as low earner for credit facilities.

Lastly, negative attitude towards cultivation of alternative crops influenced land allocation patterns for cultivation of alternative crops in Kuria West Sub-County. Therefore, there was low growth of alternative crops.

5.4 Recommendations

The study recommends that as much as the man is the head of the family, he should take his correct responsibility and ensure that the family social order is not eroded through the forced family labor and mismanagement of land allocation and the earned money from the crop production.

The study recommends that the government and other intervening agencies introducing alternative crops should create ready market, offer financial and technical support and farmers should be facilitated to form Cooperative societies to collect and market their crops.

Finally, the study recommends that farmers in Kuria West Sub-County should allocate more land for alternative crop which will help to improve their income and improve their living standard.

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