

**EFFECTS OF FLOWER FARMING ON WORKERS WELFARE IN KITENGELA  
AREA, KAJIADO COUNTY, KENYA**

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**DECLARATION**

This project is my original work and has not been presented for an award of a degree or any other award in any university or elsewhere:

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This project has been submitted for examination with my approval as the University Supervisor

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## **DEDICATION**

I dedicate this research project to my loving wife Winnie and lovely children, Gitonga and Wanjiru; and my parents Francis and Jennifer for their inspiration throughout my studies.

## ABSTRACT

The Kenyan flower industry is the 3rd largest flower supplier in the world and is among the country's three top foreign exchange earners. Floricultural exports are Kenya's biggest export earning, surpassing tourism as of the year 2008. The flower industry has a much higher proportion of women than other sectors, making women's issues particularly sexual harassment in the industry rampant (Muthoka, 2007). The negative impact that the global crash had on the flower sector can be clearly catalogued. The profitability of the sector for established exporters nose-dived following the financial downturn in the autumn of 2008 as purchasing power and, thus, consumer demand for African flowers in Europe, Africa's biggest export market, quickly dissipated. Floriculture presents a threat to the workers of Kitengela area; if unaddressed, the consequences are not only environmental, but also social and economic. Chapter 2 provided literature review the effects of flower farming on the economic perspective, working conditions, social interaction and on facilities and services as it reviews the theoretical framework, discussion of the conceptual framework and the operational definitions. Agriculture continues to be the most important economic sector in many sub-Saharan African countries (Raikes 1997) and the regions relation to the world economy is persistently shaped by agro food commodities and minerals (Gibbon and Ponte 2005). The chapter outlined the overall methodology that was used in the study. This includes the study size and population, research design, sampling design, data collection, data analysis and ethical issues. The study used descriptive research design since the study gathered quantitative and qualitative data that describes the impacts of flower farming on the livelihood of workers in Kitengela area. Chapter three outlined the overall methodology that was used in the study. This includes the study size and population, research design, sampling design, data collection, data analysis and ethical issues. Chapter four presents analysis of data obtained from the respondents in the survey carried out in flower firms in Kitengela. Three firms were visited 100 interviewee were interviewed from the three firms but only 95 respondents filled the questionnaire which is 95% of the respondent. The results have been presented in tables, figures and content delivery to highlight the major findings. Chapter five presents summary of findings as discussed in chapter four and interpretations of the data analysis, conclusions and recommendations based on the findings.

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# CHAPTER ONE

## INTRODUCTION

### **1.1 Background of the study**

The Kenyan flower industry is among largest flower supplier in the world and is among the country's three top foreign exchange earners. It contributes to the country's prominence as a key African economy and has provided a source of income for many Kenyans. The industry has, however been the focus of several damaging media exposés and academic research articles documenting extensive human rights and environmental abuses (Bruno, 2010). Furthermore, changes in consumer behavior in Western countries, the major importers of Kenyan flowers, are pressuring for a transition to more ethical business practices and towards credible accreditation. Industry stakeholders, NGO's and accreditation bodies have therefore taken steps to improve farms' conditions.

The flower industry promises to make important contributions to Kenya's economic development by providing rural employment, attracting foreign investment, and improving domestic technology and infrastructure. However, for this development to be sustainable, environmental impacts and social abuses must be addressed effectively in order for the industry to fulfill its potential positive effects (Bruno, 2010). The Kenyan flower industry has been the focus of extensive media and academic research attention regarding its impact on the workers' livelihoods, environmental sustainability and on the Kenyan economy. The conditions of workers in the flower industry have come under persistent attack in media and NGO reports. They range from the sensational articles to serious investigations (Becht, 2005).

Floricultural exports are Kenya's biggest export earning, surpassing tourism as of the year 2008. The value of the exports rose from Ksh. 1 billion in 1990 to a record over Ksh. 43 billion. In the year 2007, the sector has averaged over 10% for the past five years and is projected to continue. Hence, the economic stability of the country is dependent on the continued success of the industry (HCDA, 2008). Floriculture in particular is estimated to employ over 100,000 workers directly, while indirect employees in transport, packaging, inputs etc. are approximately 1.2 million workers who derive a livelihood from the export industry. The fact that these employments are in the rural areas is very important, as it not only stems rural urban migration

but also contributes to poverty alleviation, a major focus of the government (Kenya Economic Survey, 2009).

The Ethical Trading Initiative (ETI) in Kenya carried out an extensive investigation from 2002-2004 following accusations of abuses on farms supplying ETI companies (ETI, 2005). Similarly Working Women Worldwide (also involved in the ETI report) carried out research between 2005-2007 focusing on specific abuses against women (Muthoka, 2007). These investigations focused on several principal concerns: Wages that are too low to live a decent life, as well as other inadequate working conditions; serious sexual harassment and discrimination; limits on freedom of association; the high proportion of casual workers and poor health and safety conditions especially regarding pesticide spraying.

The flower industry has a much higher proportion of women than other sectors, making women's issues particularly pressing. Working Women Worldwide (WWW) called sexual harassment in the industry rampant (Muthoka, 2007). Ogodo and Vidal (2007) argue that the nature of the work is to blame as women often work in very isolated conditions, in huge greenhouses where workers are spaced far apart and no one can hear or see what is happening" (Growing Pains 2007). Furthermore WWW argues that women are kept trapped in low-pay positions due to lack of training and education and negative cultural stereotypes, while management remains dominated by men (Muthoka, 2007).

Trade union membership has been shown to be low, with the Kenya Plantation and Agricultural Workers Union (KPAWU) membership at just 17% of total flower farm workers (Nelson, 2007). The ETI report raised concerns that workers are prevented from joining the trade union and that those who are able to join face discrimination by being moved from less senior positions. Growing Pains (2007) also argues that the use of casual labour makes increasing membership particularly difficult and a research funded by the UK Department for International Development (DFID) gives an extensive set of conditions where casual workers are worse off than permanent workers (Nelson, 2007). They had less material wealth, lower pay and rent allowances, lower housing quality, and less medical care.

Concerns have been raised over the use of chemicals in greenhouses and their effects on worker health, allegedly causing "skin lesions and allergies, respiratory problems, fainting, headaches,

eye problems...chronic asthma...and repetitive strain injuries” and that those workers who fall sick or are injured are subsequently dismissed (Williams, 2007). A particular focus of concern is the lack of appropriate Personal Protective Equipment (PPE) during pesticide spraying, picking and sorting and that workers have not been adequately trained for those tasks. Furthermore farms have been accused of not leaving enough time between spraying and workers re-entering the greenhouse.

Concern has also been shown with the potential negative externalities of CO<sub>2</sub> emissions from the high frequency of flower produce transport from Kenya to Europe and all over the world. Thus, local production and consumption has been advocated to European consumers. On the other hand, scientific studies have shown that in reality the use of heating in greenhouses used for flower production in Europe, uses up more energy and CO<sub>2</sub> emissions than transporting flowers from Kenya, where they grow at an ideal climate (Bruno, 2010).

Some flower farms have been accused of setting up their grounds over protected wetlands and with dire consequences for the original habitats (Kiptum, 2005). Environmental NGOs, self-regulating organisations, such as Lake Naivasha Riparian Organisation and the KFC, and government bodies, such as NEMA, have been called upon to increase pressure and encourage the industry to tackle problems related to water usage, waste disposals, leakage of harmful chemicals and pesticides into the ground and into water bodies (Kiptum, 2005).

## **1.2 Statement of the problem**

The negative impact that the global crash had on the flower sector can be clearly catalogued. The profitability of the sector for established exporters nose-dived following the financial downturn in the autumn of 2008 as purchasing power and, thus, consumer demand for African flowers in Europe, Africa’s biggest export market, quickly dissipated. The effect on export earnings was so severe in Kenya, dropping by as much as 15% in 2010, that, although profits improved in 2011, it will take some time for the country to recover. Moreover, in Tanzania, within a year of the credit crunch, prices had tumbled by between 30% and 50% and growth continued to be lacklustre into 2012 (Gathoni, 2012).

Concerns about the potential impact of climate change on floriculture in Africa have been rising. According to Raikes (1997), where Europe appears to be getting colder at different times of the

year compared to 10 years ago, the same is occurring with the flower seasons and inconsistent rainfalls and extreme climatic conditions are also affecting the ability to plan the seasons with comfort. We see many changes in the weather: in the past we used to have relative heat or rainfall over a period, we now experience extreme heat and or rainfall (Raikes, 1997). In East Africa, according to Ngige (2010), some operating in the floriculture industry report that the drought that has ravaged the region didn't affect the quality of flowers but the cost of production increased due to the adoption of measures to use less water thus affects the neighbouring community.

Floriculture being a relatively new industry in Kenya, not so much research on the effect of flower farming on workers livelihood in this industry has been carried out. This means that the morbidity pattern of the workers in floriculture industry may not be known therefore unavailable for proper planning of the wellbeing of these workers. Wages are significantly below a living wage, leaving workers and their families with no or limited disposable income, trade union membership is often discouraged and undermined (Kiptum, 2005).

Economic indicators show a steady rise in importance of the flower industry for the Kenyan economy. However, according to Muia (2010), without the necessary incentives and regulations, the benefits are likely to be felt significantly only by medium and large producers and not by small-scale producers, many of which have had to abandon the business. Rising consumer concern in Europe, has led increasingly more flower farms in the right direction: in raising social and environmental standards by joining various accreditation bodies which will allow for a sustained presence of Kenyan flowers in western markets.

Floriculture presents a threat to the workers of Kitengela area; if unaddressed, the consequences are not only environmental, but also social and economic. These are for example: CO<sub>2</sub> emissions, source of pollution, poor health and safety conditions especially regarding pesticide spraying, lack of adequate housing, unfair dismissal excessive overtime, deductions from pay, and lack of severance pay (Riungu, 2006). Concerns have been raised over the use of chemicals in greenhouses and their effects on worker health, allegedly causing skin lesions and allergies, respiratory problems, fainting, headaches, eye problems chronic asthma and repetitive strain injuries and that those workers who do fall sick or are injured are subsequently dismissed (Williams, 2007).

### **1.3 Research Questions**

The study will seek to address the following questions:

- a) How are flower farms handling and disposing of chemicals and chemical wastes affects livelihoods of the workers of Kitengela?
- b) What are the benefits of flower farming on the livelihoods of the workers of Kitengela?
- c) How does the working condition in flower farming affect workers livelihoods of the workers of Kitengela?
- d) How do government policies on floriculture impact on livelihood of workers of Kitengela?

### **1.4 Objectives of the Study**

#### **1.4.1 Main objective**

To establish the effects of flower farming on livelihood of residents of Kitengela area in Kajiado County.

#### **1.4.2 Specific objectives**

- a) To examine effects of working conditions of flower farms workers in Kitengela area;
- b) To establish the effects of flower farming on welfare to the larger community in Kitengela;
- c) To examine affirmative actions taken by workers and the community against flower farms in the study area and;
- d) To examine effects of government policies and regulations on floriculture and their workers.

### **1.5 Significance of the Study**

The study is important as it will contribute to the generation of knowledge and the impact of flower farming on livelihood of workers in Kitengela area. Research information will also provide data to assist researchers, academicians, policy makers, as well the society at large which experiences these effects of flower farming. The findings of this study will be useful to the



ministry of agriculture, NEMA and Kenya Flower Council in formulating policies relevant to the impacts of the flower farming to the workers of the flower-growing regions

### **1.6 Scope and Limitations of the Study**

The study will focus on the effects of flower farming on livelihood of residents of Kitengela area in Kajiado County. The study is confined in the flower farming sector in Kitengela in Kajiado County. Kenya is a big country with geographical, economic, social and cultural differences within the country. Thus, the situation in one county may not be generalized to other counties of the country. To carry out such a study, one needs ample time to cover the area well therefore time would be a limitation as well as financial resources.

The flower industry in Kenya remains a closed sector. There is a lot of secrecy based on fear of certain information getting to competitors. Consequently, the owners and managers of flower farms are generally reluctant to grant access to their precincts and workers (Bruno, 2010) it will therefore take repeated requests, making of trips to physically seek appointments, and seeking the intervention of government ministries or close associates of some of the farms.

### **1.7 Definition of Significant Terms**

**Ethical trading initiatives:** The Ethical Trading Initiative (ETI) exists to identify and promote good practice in the implementation of codes of labour practice, including the monitoring and independent verification of code provisions.

**Kenya Vision 2030:** is the country's development blueprint covering the period 2008 to 2030. Its objective is to help transform Kenya into a, "middle-income country providing a high quality life to all its citizens by the year 2030".

**Stakeholders:** A person, group, organization, member or system who affects or can be affected by an organization's actions

**Water abstraction:**

Water abstractions refer to freshwater taken from ground or surface water sources, either permanently or temporarily, and conveyed to the place of use.

**1.8 Organization of the study**

Chapter one of the study contains introduction, giving a background of the study while putting the topic of study in perspective. It gives the statement of the problem and the research questions. This chapter also outlines the objectives, scope, limitations, and the assumptions of the study.

Chapter two gives scholars' work on the effects of flower farming on workers' life. It critically looks at the economic perspectives, environmental factors, social issues and infrastructural effects of flower farming on workers' livelihood. It also outlines the theoretical framework as well as the conceptual framework of the study.

Chapter three consists of research methodology which will be used in the study. It covers the study size and population, research design, sampling design, data collection, data analysis techniques, and ethical considerations. References will be at the end of the paper.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter covers the effects of flower farming on the study objectives that is, on the economic perspective, working conditions, social interaction and on facilities and services. Further the study reviews the theoretical framework relevant to the study. The chapter finalizes with a discussion of the conceptual framework and the operational definitions.

#### 2.2 Economic perspective

Agriculture continues to be the most important economic sector in many sub-Saharan African countries (Raikes 1997) and the regions relation to the world economy is persistently shaped by agro food commodities and minerals (Gibbon and Ponte 2005). Over the last two decades many African countries have turned to non-traditional agricultural exports reflecting their comparative advantage as a strategy for achieving growth (McCulloch and Ota 2002). One example of non-traditional agricultural exports which is considered a major success story in African agriculture is the Kenyan cut flower industry (Gabre-Madhin and Haggblade 2004). This industry, which in many ways is characteristic for economic globalisation, has experienced phenomenal growth rates when the Kenyan economy as a whole was declining. Interestingly, the global cut flower producers and especially Kenyan ones have also been at the forefront of embracing ethical trading initiatives.

The floriculture sector of Ethiopia is an important generator of employment. Based on data from the Ministry of Trade and Industry, the sector had generated 15,200 permanent and 8,800 casual jobs by June 2007. A 2008 survey (Mulu 2008) puts the figure even higher at 25,000 permanent workers. Most workers (60–70%) are women who, according to the growers interviewed, are preferred as they are more committed and work neatly. In addition, according to MOTI data, more than 10,000 labourers were engaged in construction of greenhouses as of March 2006. Due to the fact that most flower farms are located in rural areas, they become an important source of livelihood for many local workers, and inhabitants are able to diversify their sources of income and escape from severe poverty. Most of the workers are unskilled.

The floriculture sector also generates foreign exchange. According to the National Bank of Ethiopia (NBE), Ethiopia does not fully benefit, as the selling price reported by exporters is below the price which Ethiopian flowers actually fetch in export markets. As a result, the country loses significant amounts of foreign exchange revenue.

The cultivation of Kenyan flowers for export markets was initiated by European settlers in the 1960s (Hughes 2004). During the last two decades the production and export of Kenyan flowers have experienced phenomenal growth rates. Floriculture is today the fastest-growing sector of the Kenyan economy and is after tea the second largest source of foreign exchange generating more than \$250 million a year (DFID 2007). The main types of flowers cultivated for export are roses, statice, alstroemeria and carnations (KFC 2007). The overwhelming majority of Kenyan flower exports are destined for the European Union with the Netherlands as the most important market followed by the UK and Germany (Hale and Opondo 2005).

The economic success of the Kenyan flower industry can be attributed to several factors. Bolo (2006) classifies the industry's key success factors into climatic, contextual, policy and infrastructural factors. The climatic conditions in Kenya are ideal for floriculture and its location on the equator allows for year round production. The contextual success factors include the availability of agricultural land, fresh water and an unlimited supply of cheap labour. The policy factor is mainly characterized by the Kenyan government's non-interference in the industry. The industry is an important source of employment with estimates ranging from 40,000 (Hale and Opondo 2005) to 100,000 workers (DFID 2007) directly employed.

However, the vulnerability of temporary workers in the Kenya horticulture industry is highlighted by several authors and studies. Barrientos et al. (2005) point out that insecure workers in the horticultural industry are highly vulnerable to poverty, a feature which is especially salient for temporary female labour which often has to combine productive and reproductive roles. Smith et al. (2004) provide figures which showed that 65 percent of the workforce in the Kenya flower industry is temporary, seasonal or casual. One factor which could explain the high prevalence of temporary work arrangements is the seasonality of the flower business with annual peaks of production around Christmas, Valentine's Day, Easter and Mother's Day. Smith et al. (2004) report in a study on ethical trade in African horticulture that wage levels in the Kenya cut flower industry exceed statutory minimum wages. However, they

also point out that most workers covered by their field study were living in precarious economic circumstances. An observation which was also confirmed by Hughes (2001, p85).

Kenya has attracted substantial investment in floriculture for a number of key reasons: its ideal weather and natural condition for flower cultivation, concentration of expertise and years of experience in fresh produce exports, and increasingly favored access to European markets. Kenya is the top supplier to the Dutch flower auction, accounting for 36.7% of total supplies in 2009. On a global level it accounts for 6% of flower supply worldwide and comes third in the world after the Netherlands (54%), Columbia (16%) and Ecuador (Bruno, 2010).

Thus, the Kenyan cut-flower industry according to Ngige (2010) represents a rich and well-established contribution to the Kenyan economy, and even despite the financial crisis, in fact, Kenyan farms' sales in Dutch auctions in 2009 amounted to £200 million. The Icelandic volcano eruption in March 2010, however, highlighted the vulnerability of the Kenyan flower industry to the global climatic conditions, as flights were cancelled, the produce could not neither reach retailers nor the Dutch auction. In addition, (Ngige, 2010) the repercussions of the financial crisis were felt as western consumers' financial stability was threatened and therefore chose to buy less luxury goods such as flowers. There is criticism of an increased dependency of Kenya's exporting industries on European and Western markets and academicians suggest that Kenya, as well as other African countries should concentrate on production for domestic consumption rather than export (Ngige, 2010). Over 95 percent of the Kenyan flower production is destined for the European Union (Bolo, 2006). Developments in the European market are therefore decisive for the future growth prospects of the Kenyan cut flower industry. A recent market survey by the Centre for the Promotion of Imports from Developing Countries (CBI, 2005) found that total cut flower consumption was relatively stable in the EU between 2002 and 2004.

According to the same study most of the larger European markets including Germany, France, Italy and the Netherlands show clear signs of market saturation. The exception to this is the United Kingdom where the consumption of cut flowers is still increasing. This market is of special importance for Kenyan producers as the UK is the second largest importer of Kenyan flowers in the EU (Hale and Opondo 2005). Another important aspect of the market prospects for Kenyan flowers is the development of the international price for cut flowers,

### **2.3 Working conditions**

In a study of Kenya, Uganda, Tanzania and Zambia by Women Working Worldwide (WWW, 2007) found out that in Tanzania and Kenya, the use of non-permanent labour has reduced significantly in recent years. However in Uganda and Zambia the problem remains serious. In Uganda research interviewees were sampled at random – only 33% were on permanent contracts (lack of access to the farms makes it hard to ascertain the figure for workers as a whole). In Zambia only 26% of workers had permanent contracts on the farms studied.

In all countries, many non-permanent workers were found to be suffering from similar difficulties: Lack of employment benefits including sick leave, annual leave, medical benefits, housing allowances; Lack of opportunity for promotion; Low income levels. In Zambia and Tanzania there were cases found where some casual workers were being paid less than permanent workers for the same work; With the exception of Zambia, non-permanent workers were not unionized on the horticulture farms. In Tanzania and Uganda, some non-permanent workers were not given proper protective equipment; Lack of maternity leave meant that many non-permanent workers could not afford to have a baby and unfair dismissal (WWW, 2007).

Salary levels in all countries were found to be much lower than was necessary to sustain a decent standard of living for workers. The lowest monthly salary was approx 24 United State Dollars (USD) and the highest was 54USD. Many workers complained of being unable to finance basic needs such as medical costs, clothing and a decent house. Women were largely found to be occupying the lower paid jobs on the farms whereas top management and supervisory positions were dominated by men. In Zambia and Tanzania the societal attitude that women were less suited to more responsible job was said to be preventing women from accessing promotions. In all countries except Zambia, promotion was found to be highly dependent upon relations with management (WWW, 2007).

The union situation on the horticulture farms remains problematic in Uganda. At the beginning of the project by (WWW, 2007), 77% of workers were not union members. The establishment of a new union in the intervening period has seen the unionization of 2,000 workers but has complicated the labour movement. In Tanzania workers on six farms have not been unionized. In

Kenya, the union KPAWU was not adequately reaching the workers, although it was improving its activities in the horticulture sector.

Permanent status did not necessarily mean that all rights and entitlements were being granted. In Uganda it is thought that lack of payment for sick leave, lack of union representation and access to child care are problems that are affecting all workers, regardless of their employment status. Many workers were also not receiving contracts that stipulated their benefits. In Tanzania and Kenya there were cases of maternity leave not being properly observed the reports from Uganda and Kenya both specifically complained about long working hours, often longer than those stipulated by national law. The fact that workers work overtime in order to meet set targets was also cited as a problem. Workers in all countries complained of overtime on some farms being obligatory, excessive and sometimes poorly remunerated. When announced at short notice following a late order it can mean that children are left unattended at home (WWW, 2007).

#### **2.4 Social interaction perspective**

According to Gibbon (2005), North Americans may be buying funeral flowers with a heavy social cost for floriculture industry workers. Internationally, flower growers sometimes use child labor and frequently fail to pay workers a living wage. In addition, flower industry workers are often insufficiently protected from the effects of extensive exposure to pesticides. Over half of the Costa Rican and Ecuadorian flower workers exhibit at least one symptom of pesticide poisoning, and female Colombian flower workers experienced moderate increases in the rate of miscarriages and birth defects (Smith, et al, 2004).

In a study done in Ethiopia by Afro Gadaa (2010), Workers have no collective bargaining power because they have been forbidden from forming trade unions according to Ato Tariku, General Secretary of the Ethiopian Confederation of Labour Unions. He described one instance where workers were even fired from one flower farm when they tried to form a union to ensure safe working conditions. The expanding rate of the flower farm and compensation since the beginning of flower production in the year 2000 hundreds of farmers of the ethnic group of the Oromo near the capital Addis Ababa have lost their land without adequate compensation for the plantations (Afro Gadaa 2010). The tiny money will be enough only to survive months, then the tragedy of family crisis starts to prevail in their life. Children have to go on street and support

themselves, when they fail to do so they will resort to begging. Female children including minors will be exposed to either forced marriage or prostitution. The family will be laborers or will be guards to the farm in case they are accepted by the managers (Afro Gadaa 2010).

The Kenyan cut flower industry has been at the forefront of embracing ethical trading initiatives, both by adopting overseas initiatives and by developing its own programmes (Dolan and Opondo 2005). The most common starting point for ethical trade initiatives is the development of codes of practice regulating the social and environmental aspects of production (Blowfield 1999). Today a multiplicity of such codes is in use in the Kenyan cut flower industry to the point that the industry has become one of the world's most codified agricultural sectors (Dolan et al. 2003). However, despite this abundance of codes of practice critical reports about the social and environmental impacts of the Kenyan cut flower continue to surface which raises serious doubts about the effectiveness of ethical trading initiatives.

The Kenya flower industry mostly depends on migrant and female labour (Dolan et al. 2003). As the majority of the workforce on Kenyan flower farms is female (75% according to Smith et al. 2004), many labour rights issues have a specifically gendered dimension. Barrientos et al. (2005) point out that gender segregation is a common feature in the Kenyan horticulture industry, with women mainly occupying insecure and temporary positions and men being concentrated in more permanent and senior positions. According to Barrientos et al. (2005) two factors account for the high levels of female employment in African horticulture. The first factor is that women are perceived as having better “skills” and “dexterity” to handle delicate produce like flowers. A perception, which the authors point out, is largely socially constructed. The second factor is that women are seen as docile and as more ready to accept poor working conditions than their male counterparts.

The capacity of the Kenyan flower industry to treat its workforce with respect of established labour rights and social codes seems to be limited by several factors, some internal to the industry and some external resulting from systemic features of the value chain. The issues of abusive supervisors and sexual harassment points to severe management deficiencies internal to the industry (Williams, 2007). These problems, particularly this of sexual harassment could be remedied by a significant increase of female personnel in more senior positions.



According to the report (ETI, 2005) the labour rights issues facing workers on Kenyan farms are the following: low pay, lack of adequate housing, unfair dismissal, excessive overtime, and sexual harassment in particular by supervisors, deductions from pay, lack of severance pay, lack of maternity leave, lack of freedom of association and social security payments not met.

#### **2.4.1 Benefits of flower farms to Workers wellbeing**

Flower farming is an economic meant to generate profits to the investors, pay wages to workers, maintain good business practices and give back to the community. Flower farming investors try to practice good business practices by providing their workers with educating and caring for their children and giving back to the future of their community which they consider as their most important mission Flower farms pays its staff above minimum wage, and there are rigorous procedures in place that assure a safe working environment. Other benefits include cheerful dining facilities that provide nutritious meals for all the employees (where the owners eat as well), quality medical and dental care, and a new program that helps employees build their own homes.

#### **2.4.2 How government policies on floriculture impact on livelihood of workers**

In a recent World Bank Technical Paper (Jaeger 2010), it is argued that a commercial horticulture sector needs government policies that provide an environment in which the sector can thrive. It does not need direct intervention from the government in its activities; rather government should recognize the need for a vigorous private sector as the engine of commercial growth. In June 2011, the Kenyan government made public its final draft of the *National Horticultural Policy*, which is tabled for approval by the parliament in the course of 2012. The new policy shows continued government recognition of the role of horticulture (and more specifically floriculture for Kenya. It offers policy interventions for production, support services financing the industry, research and extension, marketing local, regional and export markets, infrastructure as well as regulatory and institutional arrangements. It is the responsibility of every employer to ensure the safety, health and welfare of all employees at work working in his/her workplace. The Occupational Safety and Health Act, No. 15 of 2007 and revised in 2010, provides for the safety, health and welfare of workers and all persons lawfully present at workplaces. The responsibilities of the employer as per section 6 include to: Provide and

maintain the plant and systems and procedures of work that are safe and without risks to health, make arrangements for ensuring safety and the absence of risks to health in connection with the use, handling, storage and transport of articles and substances, provide for information, instruction, training and supervision as is necessary to ensure the safety and health at work of every person employed, maintain the workplace in a condition that is safe and without risks to health and provide and maintain necessary means of access to and egress outlet from it that are safe and without risks to health and provide and maintain a working environment for every person employed that is safe, without risks to health, and adequate as regards facilities and arrangements for the employees' welfare at work.

#### **2.4.3 Effects of Flower farming on workers' health**

Although Kenya has attracted some foreign dollars through these export-based flower and tea industries, a majority of Kenyans remain mired in poverty (Dotan, C. Opondo, M, and Smith, S. 2003). It is quite true that most workers don't eat flowers. But they are an important source of food security because of the income they bring to thousands of workers most of them women are still remain poor. The main issues raised were a lack of provision of protective clothing for workers handling chemicals, the non-observance of re-entry periods, and the exposure of pregnant women to chemicals. In some cases, the perception of risk among workers exceeds actual risk, suggesting that companies may not be providing sufficient training and/or accurate information to workers on where the dangers of chemical exposure lie. Lack of access to adequate maternity leave creates anxiety about income security and can lead women to seek abortions and/or hide their pregnancies, both of which can carry long-term health implications

#### **2.4.4 Effects of flower farming to the larger community**

Flower farms have long been a key employer in Kenya, providing jobs in areas where there are few other alternatives and ensuring a valuable source of export revenue for the country. With more than half of Kenya's population of 37 million living in poverty, the cut flower industry plays an important role in providing employment and alleviating poverty. Around 55,000 workers, mainly young women, are directly employed in the industry, while 2 million workers indirectly depend on the flower industry for their livelihoods. Flower farming impacts on an area they are with high youth unemployment and where the local populations are mostly subsistence farmers, growing maize and rearing cattle and goats.

Most flower farming companies like Oserian flowers, Finlays provides free healthcare to permanent workers, a small dispensary, and a canteen with lockers. Some companies do not provide housing, but it does provide a housing allowance. Around 50% of employees are migrant workers who boost the local economy by renting accommodation in the town. Local workers live in nearby villages.

## **2.5 Facilities and Services**

Farm infrastructure for workers according to Ndlela (1999) includes housing, water provision, sanitation, and health, educational and recreational facilities. Although clinics, housing and schools can be found on nearly all commercial farms in Zimbabwe and are therefore not a result of cut-flower production, flowers provide farmers with ready cash to develop infrastructure. Ndlela asserts that on all the farms in Zimbabwe, several improvements had been made since the rose project began. While some of these improvements were essential to satisfy labelling requirements, others such as recreational facilities were voluntary changes that farmers made to improve workers' way of life (Ndlela 1999).

One of the larger farms has actually built four crèches and employed child-care workers in different areas of the farm to cater to the needs of all farmworkers not just cut-flower workers. Every child 3 months or older can be left at the crèche when its mother is at work. However, they were not erected to satisfy any international standards of labour regulations. They were built before labelling because the farmer perceived they were sensible given the female labour intensive nature of cut-flower production (Ndlela 1999).

According to Export Flower Growers' Association of Zimbabwe (*EFGAZ* 1996), recreational facilities on farms provide workers with activities to keep them entertained when they are not working, and improve their standard of living generally. Nearly all farms in Zimbabwe have a community hall, a beer-hall and a soccer club for their employees. Although flower-labelling programmes do not have specific clauses for the provision of recreational facilities, it appears that some cut-flower farms have given more attention to employee recreation since the initiation of such schemes. These improvements range from building a new beer-hall to developing a farm library. Other activities include farm development committees, women's clubs, netball clubs and

provision of television. Despite the improvements made on these farms, many women employees still feel that there are no leisure activities designed for them (EFGAZ 1996).

In Kenya, the farmers utilize high levels of technology, for example, computerized drip irrigation and fertigation systems, computerized greenhouses ventilation systems, net shading, pre-cooling and cold storage facilities, grading and banqueting, fertilizer recycling systems to prevent wastage, wetlands for waste water treatment, artificial lighting to increase day length, grading/packaging sheds, and refrigerated trucks have been adopted (Ngige, 2010).

There is a need to provide institutional infrastructure through which the funds could flow back to the basin and be used in environmental protection, watershed management, support of farmers to improve their water management and community development. Fair-trade organisations can be instrumental in making sure that funds rose at the consumer end flow back to the watershed for the support of local programmes for improved watershed management and support to farmers to reduce their water footprint. (Ngige, 2010).

## **2.6 Theoretical Framework**

### **2.6.1 The community development perspective**

Warburton (1998) suggested that the notion of community relates to two dimensions of workers and place. It emphasizes the relationships among workers and between workers and the place or locality in which workers live (Worpole and Greenhalgh 1996). A community, upon which this contemporary development philosophy is founded, could be construed as comprising the web of personal relationships, group networks, as well as traditions and patterns of behaviour that develop against the backdrop of the physical locality and its social, economic and political situations (Flecknoe and McLellan 1994). In this context, participation is good for the residents of the locality, allowing them as principal stakeholders to influence the development path of their locality. The 'good' of the community is intrinsically linked with community-wide social, economic, political and environmental good, as studies on agency have demonstrated the interconnectedness of individuals and the societies or communities to which they belong. Community development is supposed to reflect workers's actions and attributes of self-consciousness. Hence, commitment to community development should recognize interconnectedness between individuals and the societies to which they belong. As Giddens and

Pierson (1998) argued: Society is a structural phenomenon and that the structural properties of a group or a society have effects upon the way workers act, feel and think. But when we look at what those structures are, they are obviously not like the physical qualities of the external world. They depend upon regularities of social reproduction, that society only has effects on workers in so far as structure is produced and reproduced in what workers do. It follows that community development has its logical and epistemological basis in the social obligations that individuals have towards societies that nurture their talents. Participation or self-help spirit is inspired by awareness among individuals and the communities they belong to and the recognition that individuals become who they are agents through relationship with others (Nyamnjoh 2002). As much as community life is constituted by interacting, non-independent and by mutually susceptible human beings (Barnes 2001), the notion of community participation draws on independent power of individual human beings to intervene in the ongoing flow of events in their community to make a difference, to create and change social order so that collective accomplishments transcend individual hopes. The challenge is: why is voluntary participation rarely intrinsically derived? Page (2002) notes that in Anglophone Africa 'community development' is partly based on colonial tradition of self-help, which became the main British strategy for implementation of welfare-oriented colonial development policy in the 1950s. Community development was during colonial time based on coercion and control. The native was perceived as lazy and irresponsible and had to be whipped into action. In the late 1940s and 1950s native farmers were forced to adopt draconian soil and water conservation measures. Farmers who were reluctant to follow recommended measures had their crops destroyed and sometimes were imprisoned (Nambote 1998). An alternative approach named the Master Farmer system was adopted after native resistance that were inspired by nationalist sentiments that resented anything colonial. Master farmers were usually prominent native farmers who were quite influential in particular area. The colonial government provided such farmers with seeds, fertilizer, implements such as ploughs, and advisory services. The assumption was that once the master farmers had adopted and implemented the innovations then neighbouring native farmers would follow suit. The intended demonstrative effect did not bear expected fruits; hence on attaining independence the concept of master farmer was abolished but the notion of community development remained intact and ingrained in the independence and later multiparty democracy rhetoric of home-grown development.

### **2.6.2 Social Ecology Theory**

Individuals' assessments of how their jobs affect their health can be ascribed to a combination of true health effects of work, the nature of which will depend on the particular attributes of the respondent's job (in conjunction with individual attributes moderating employment effects), and individual attributes leading to differential reporting behavior. Thus, to isolate the influence of work environment, we must control simultaneously for those individual attributes that may skew the reporting of job effects on health. Social ecology, given its joint focus on both the person and the environment, provides a valuable framework not only for this study but also for advancing our understanding of the complex association between work and health (Stokols, 1992, 1996). For the present study, the social ecological principle of identifying the effects of flower farming on livelihood is particularly relevant. Leverage points, identified through theory and research from various fields, can be used to apportion the relative effect of reporting behavior versus actual health effects in examining individuals' responses to questions about how their jobs affect their health.

### **2.6.3 The Sustainable Livelihood Approach (SLA)**

Sustainable Livelihood Analysis (SLA) has since the 1990s become the dominant approach to the implementation of development interventions by a number of major international agencies. It is defined in terms of the ability of a social unit to enhance its assets and capabilities in the face of shocks and stresses over time (Yudelman, 1976).. SLA first seeks to identify the important assets in livelihood, their trends over time and space as well as the nature and impacts of shocks and stresses (environmental, economic and social) upon these assets. Following this, and after taking cognizance of the wider context (e.g. political, legal, economic, institutions, infrastructure etc.), interventions are designed to address any vulnerability of enhance livelihoods perhaps by diversification of income streams. Thus SLA could be said to be a practical framework for evidence-based intervention and has much logic resting behind it, especially in a world undergoing rapid change and where resources to support development interventions are inevitably limited. However, putting SLA into practice is not as easy as it may so often appear, and there are many overlaps with the problems long-reported of making policy in general more evidence-based. Surprisingly there are relatively few reported attempts to take a more critical

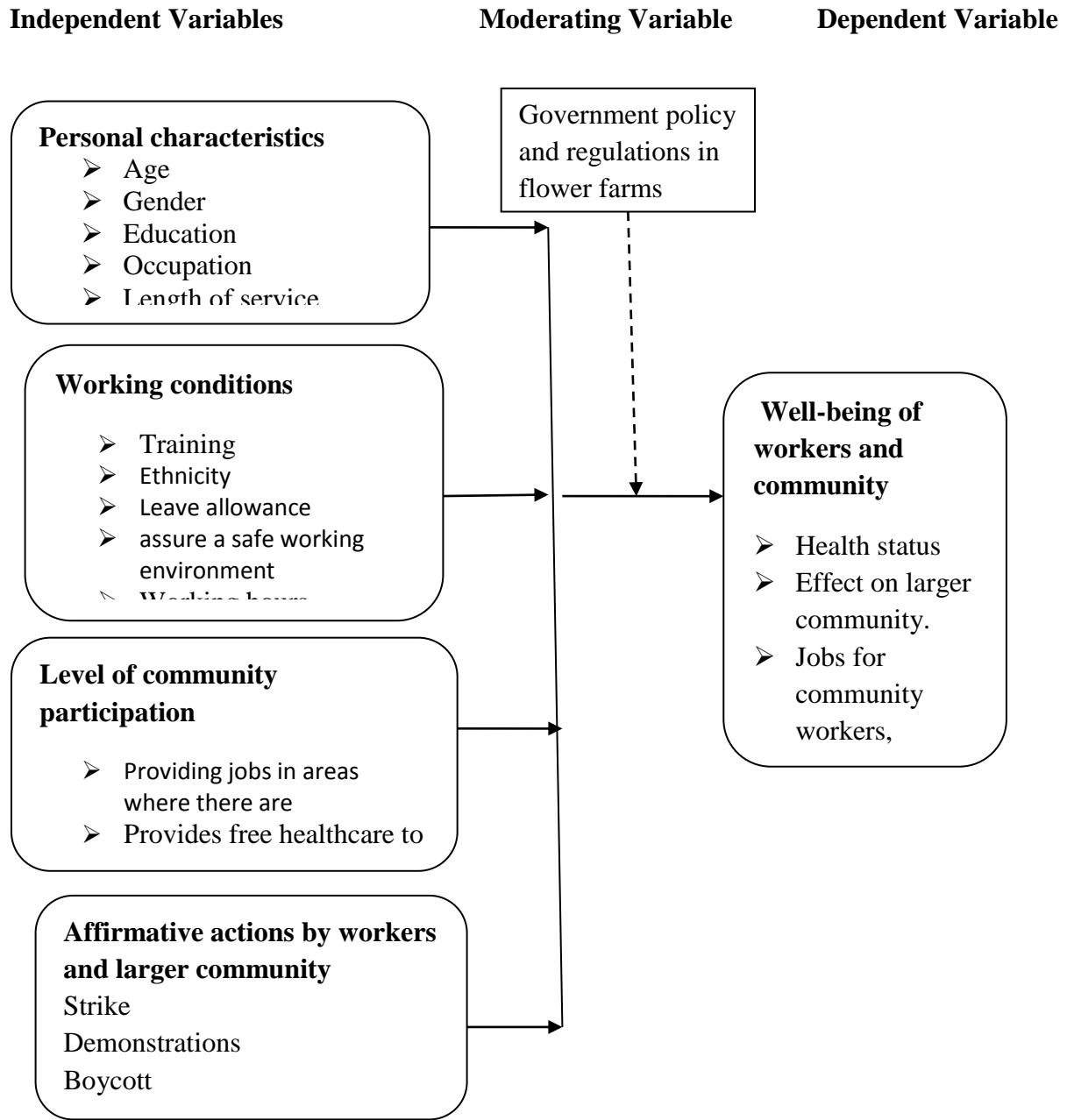
stance as to the feasibility of SLA and its ability to help deliver real change for workers in the developing world (Scoones, 1998)

The Sustainable Livelihood Approach (SLA) to development intervention has been in vogue since the late 1990s and formed a central concept of the UKs Department for International Developments (DFID) strategy during the early years of the New Labour government in the UK. The call for emphasis on sustainable livelihoods was set out in the 1997 White Paper on international development as follows: refocus our international development efforts on the elimination of poverty and encouragement of economic growth which benefits the poor. We will do this through support for international sustainable development targets and policies that create sustainable livelihoods for poor workers, promote human development and conserve the environment. This research adopted SLA despite the advantages the implementation of SLA posed many problems and issues, and questions need to be asked as to whether the approach really is a feasible basis for intervention or whether it is nothing more than a convenient label (Scoones, 1998).

## **2.7 Conceptual Framework**

The Independent variables in this research are the personal characteristics, working conditions, facilities and services and the affirmative actions. The dependent variable is the well-being of Kitengela residents. Government policy is the moderating variable.

**Figure 2.1 Conceptual Framework**





## 2.8 Operational definitions

**Personal characteristics:** These includes all the attributes of the respondent, that is age, gender, occupation, educational level of the respondent and the length of service of the respondent at the flower farm.

**Well-being of workers:** General terms for the condition of an individual or group, for example their social, economic, psychological, spiritual or medical state. In the study the well-being of the workers includes among others their livelihood and their health status. Other factors to look at the well-being include type of housing provided for the workers, the school attended by workers children, the workers' health status, food availability and transports availability.

**Working conditions:** The conditions in which an individual or staff works, including but not limited to such things as amenities, physical environment, stress and noise levels, degree of safety or danger, and the like such as the remunerations and the working hours.

**Workers perception of working conditions:** This are the views the workers have in regards to their working conditions which includes the place, environment. In the floriculture industry, exposure of workers to pesticides is of particular concern; more especially due to different chemicals that are used in enclosed spaces, increasing the risk of exposure through the skin and by inhalation.

**Levels of community participation:** This is the magnitude of community member's engagement in interaction with flower farms. Community's members are a rich source of knowledge about their community and of energy and commitment to that community. When professionals envision a program to address community issues in a particular community, tapping into the community's expertise and enthusiasm is frequently an essential issue. Genuine participation by community members, including youth, is the key. Community members control the project

at the same time that professional partners build the community's capacity to make informed decisions and to take collective action.

**Government policy and regulations:** Regulations are issued by various involved government departments and agencies to carry out the intent of legislation enacted by parliament. Administrative agencies, often called the bureaucracy, perform a number of different government functions, including rule making. The rules issued by these agencies are called regulations and are designed to guide the activity of flower farms agency and also the activity of the agency's employees. Regulations also function to ensure uniform application of the law.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter outlines the overall methodology that was used in the study. This includes the study size and population, research design, sampling design, data collection, data analysis and ethical issues.

#### **3.2 Study site**

The study was located in Kitengela area of Kajiado County in Kenya. With the decentralization of the Government structures and services to the counties, Kitengela is expected to grow rapidly as indicated by the influx of many investors in the area which includes around 20 flower farms in the area. As compared to other flower farms in Kenya, Kitengela farms are among the newest hence drawing the attention and interest of the researcher to determine the effects of flower farming to the workers' livelihood in Kitengela area. The agronomy of flower farming in Kitengela area and social condition of flower workers in Kitengela area are overriding for economic empowerment to the community livelihood

#### **3.3 Research Design**

The study adopted a descriptive research design since the study intends to gather quantitative and qualitative data that describes the impacts of flower farming on the livelihood of workers in Kitengela area. Descriptive research portrays an accurate profile of persons, events, or situations (Robson, 2002). It allows one to collect qualitative data which can be analyzed quantitatively using descriptive and inferential statistics (Saunders et al., 2007). According to Mugenda and Mugenda (2003) descriptive research is used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables or conditions in a situation. The researcher considers this design appropriate since it facilitates gathering of reliable and accurate data that clearly describes the impacts of flower farming on the livelihood of workers in Kitengela area.

### 3.4 Sampling Procedure

Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Orodho, 2002). It was however agreed that the larger the sample the smaller the sampling error (Gay, 1992).

#### 3.4.1 Flower Farms

There are over 20 flower farms in Kitengela area. Of all these flower farms, only 3 farms registered members of the Kenya Flower Council (KFC) were to form the target population of the study. The study area of this study is Kitengela area of Kajiado County.

#### 3.4.2 Workers

The study population consists of 1500 employees from the three registered flower farms in the area. Systematic sampling was used to select 90 workers from the population of 1500 workers in the 3 flower farms systematic. The sampling method gives equal opportunity of being selected (Table 3.1)

**Table 3.1: Target Population and Sample size**

<b>Flower farms</b>	<b>Target Population</b>	<b>Sample size</b>
Prima Rosa Farm limited	650	40
Sian Roses- Maasai Flowers Farm	450	30
Charm Flowers limited	400	20
<b>TOTALS</b>	1500	90

### **3.4 Key informants**

These included a total of 6 supervisors, 2 from each flower farms. The supervisors were selected randomly by use of simple random sampling. The two other key informants included the chief, elders and leaders of self-help in the study case

### **3.6 Data collection**

The study collected both primary and secondary data. The primary data that was collected was mainly analysed qualitatively and was collected through questionnaires and interview schedules. The interviews scheduled were administered to the selected employees and interview guides to the key informants. To further enrich the study secondary data were collected and used in this used in this report. All this data was carefully analysed by the researcher.

### **3.7 Data Analysis**

The data collected was examined and checked for completeness and clarity. Numerical data collected using interview schedules was coded and entered in the computer and analyzed using appropriate computer packages. Results of interviews were critically assessed in terms of each response and examined in accordance with the main objectives of the study and thereafter presented in narrative excerpts within the report. Stake (1995) describes this method of data analysis as a way of analysing data by organising it into categories on the basis of themes and concepts. This is known as coding. The procedure assists in reducing and categorising large quantity of data into more meaningful units for interpretation.

### **3.8 Ethical Issues**

The study was conducted in an ethical manner. The respondents were explained the purpose of the study and they were assured that the information given was treated as confidential and their names were not be divulged. The researcher recognized that the issue under study was sensitive because it involved the relationship between an employee and the employer. Therefore, there was need to protect the identity of the respondents as much as possible. This means that the questionnaires did not require the respondent's names or details that may reveal their identity.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND DISCUSSION

#### 4.0 Introduction

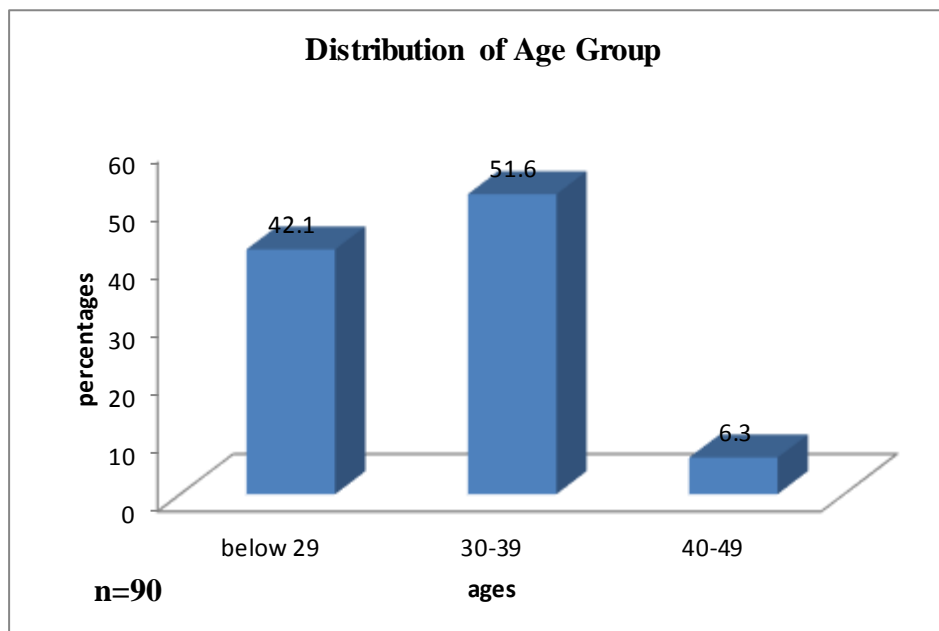
This chapter presents analysis of data obtained from the respondents in the survey carried out in flower firms in Kitengela. Three firms were visited 90 interviewee were interviewed from the three firms but only 90 respondents filled the questionnaire which is 100% of the respondent. The results are presented in tables, figures and content delivery to highlight the major findings

#### 4.1 Personal Characteristic of the flower farm workers

##### 4.1.1 Distribution of Age Group

The respondents were asked to disclose their ages. The figure below shows the study findings

**Figure 1: Distribution of Age Group**



The results presented in figure 1 show that a large proportion of 51.6% of the respondents were aged from the ages of 30 to 39 years; this was followed by a significant percentage 42.1% that were aged below 29 while 6.3% of the respondents were aged above 40 to 49 years. The age composition shows that most of the respondents were of the 30 to 39 years and therefore had rich experiences, could also appreciate the importance of the study.

#### **4.1.2: Gender of respondents**

The percentage distribution of gender of respondents is presented in Table 1

**Table 1: Gender of respondents**

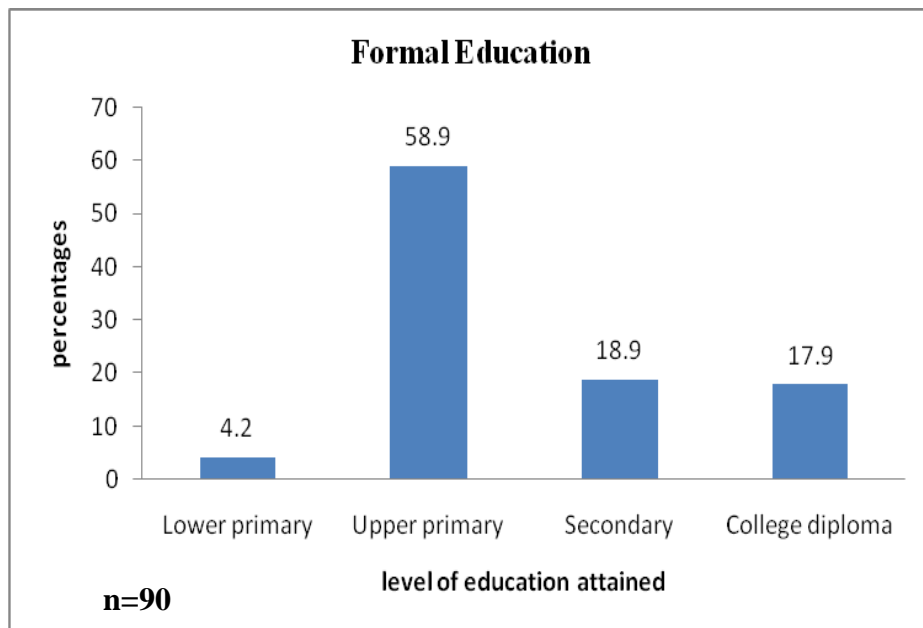
<b>Gender</b>	<b>Number</b>	<b>Percentage</b>
Male	14	15.6%
Female	76	84.6%
Total	90	100.0%

The results as in the table 1 shows that majority of the respondent were female at 99% while male was 1% implying that most of the workers were female

#### **4.1.3 Education**

The respondents were asked to indicate their academic background. Figure 2 shows the study findings.

**Figure 2: Levels of Formal Education Attained**



From the figure, majority of the respondents 58.9% indicated they had upper primary. This was followed by those who indicated they had a secondary 18.9%. 17.9% of the respondents indicated they had a college diploma while 4.2% indicated they had attained a lower primary education

#### **4.1.4 Length of service in the farm**

The respondents were asked to indicate their length of service in the flower farm. The findings are presented in the figure below.



**Figure 3: Length of service in the farm**

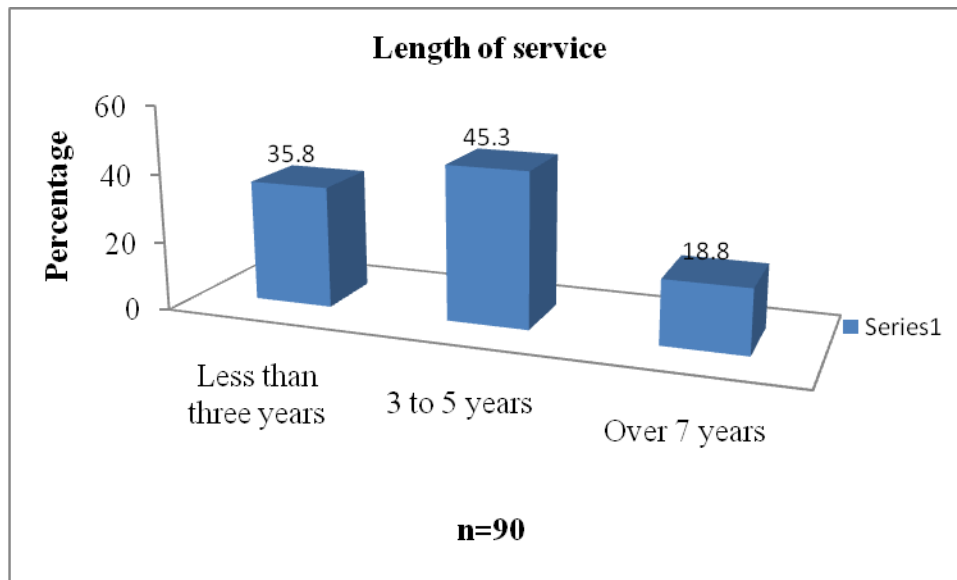


Figure 3 above presents the findings on length of service of the respondents in the farm. From the figure, 45% indicated that they had been in the farm for 3 to 5 years which is the majority. 35.8% indicated a period of less than three years, while 18.9% indicated that they had worked for a period over 7years

#### **4.1.5 Membership to Workers Union or Trade Union**

Respondent were asked to indicate whether they belong to a workers or trade union. The findings are presented in the figure below.

**Table 2: Membership to Workers Union or Trade Union**

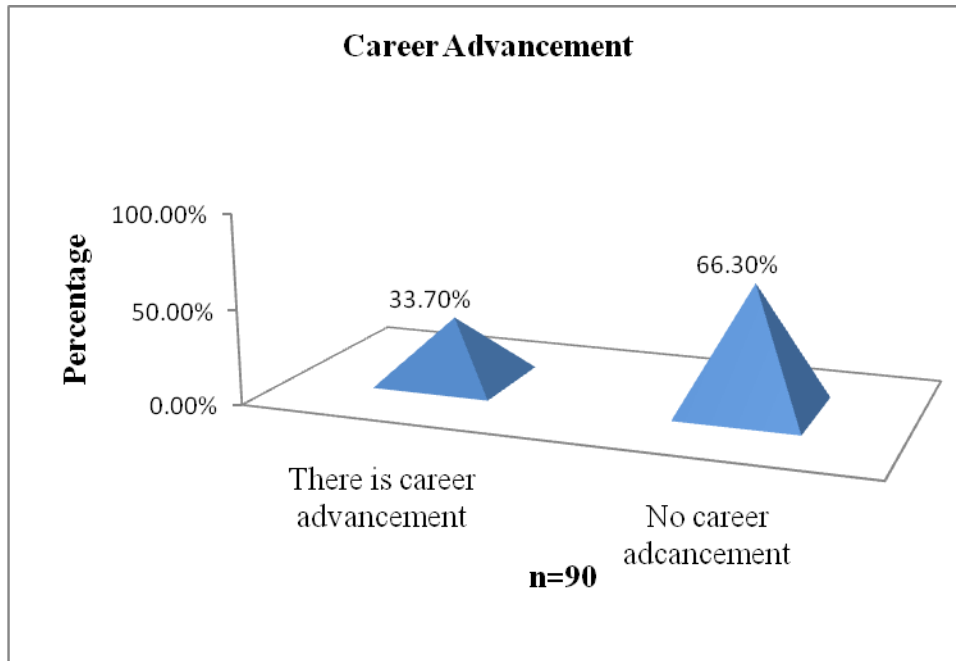
<b>Membership to the union</b>	<b>frequency</b>	<b>Percentage</b>
YES	0	0
NO	90	100
Totals	90	100

The result presented in the table 2 above shows that the entire respondent indicated that they don't belong to any union or trade union and thus there was no relevance get to know the respondent belong to or what benefits do they get from the union.

#### 4.1.6 Career advancement or promotion in flower farms

The respondents were asked to indicate whether the flower farm promotes career advancement or promotion or not. The findings are presented in the figure below

**Figure 4: Career advancement or promotion in flower farms**



The results presented in figure 4 above show that a majority of the respondents at 66.3% indicated that there is no career advancement or promotion in flower while 33.7% percent of the respondents indicated that the flower farm offers career advancement or promotion

#### 4.1.7 Ownership Structure of the Flower Farm

The respondents were asked to indicate the ownership structure of the farm. The findings of the research questions are presented in the table below.

**Table 3: Ownership Structure of the Flower Farm**

Type ownership structure	Frequency	Percentage
Local ownership	1	1
Foreign ownership	80	89
Both local and foreign ownership	9	10
Totals	90	100

The result as in the table 3 above indicated that ownership of the flower farms are dominated by foreign at rate of 89%, both local and foreign ownership of the flower farms was rated at 10% by the respondents while local ownership of the flower farms was rated at 1% by the respondents. This implies that foreigners have invested a lot in flower farms compared to local investors.

#### **4.2 Effects of flower farming on workers welfare**

Majority of interviewee held that most workers who worked in flower farms have either no or little formal or technical training and it would have been otherwise difficult for them to earn a living had there not been flower industry and thus they have secured casual jobs. Majority of the interviewee also agreed that flower farms has promoted improvement of infrastructure of the workers occupied such as roads have been done and Hospitals erected near the farms. Majority of the said that flower farms has reduced the community grazing lands and also there is related factors on crime reduction due to flower farming in Kitengela area.

##### **4.2.1 Worker’s perspectives of their work conditions**

The respondents were asked to indicate the extent they concur with the statements below using a Likert scale of 1-5, with **5** being ‘strongly agree’, **4** being ‘agree’, **3** being ‘neither agree nor disagree’, **2** being ‘disagree’ and **1** being ‘strongly disagree’, on effects related to flower farming working conditions in Kitengela area.

**Table 4: Worker’s perspectives of their work conditions**

<b>Effects Under Consideration</b>	<b>N</b>	<b>N</b>	<b>percentage</b>
	<b>YES</b>	<b>NO</b>	
Flower growers sometimes use child labor in their farms	39	51	43.79
Flower growers frequently fail to pay workers their living wages.	60	30	66.5
Flower industry workers are often insufficiently protected from the effects of extensive exposure to pesticides	64	26	71.5
The mostly low-wage workers who grow these flowers frequently show symptoms of toxic chemical poisoning	61	29	68
Workers have no collective bargaining power because they have been forbidden from forming trade unions	63	27	70
Workers receive an annual bonus from the flower farm employers	31	59	35

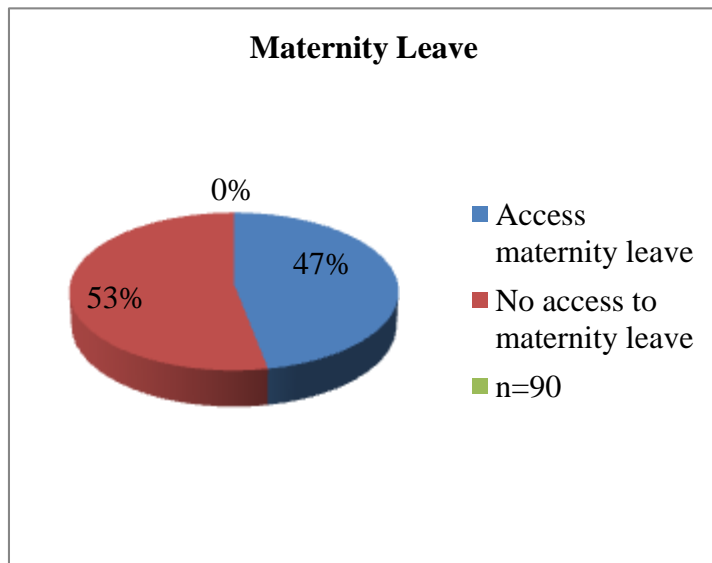
The results in the Table 4 above show that 71.5% of the respondents were indecisive whether flower industry workers are often insufficiently protected from the effects of extensive exposure to pesticides. 70% of the respondents neither agreed nor disagreed when asked whether workers have no collective bargaining power because they have been forbidden from forming trade unions. 68% of respondents were indecisive when they were asked whether the mostly low-wage workers who grow these flowers frequently show symptoms of toxic chemical poisoning. 66.5% of respondents also neither agreed nor disagreed when asked whether flower growers frequently fail to pay workers their living wages. 43.79% of the respondents disagreed that flower growers

sometimes use child labor in their farms while 35% of the respondents strongly disagreed that workers receive an annual bonus from the flower farm employers

#### 4.2.2 Access to maternity leave allowance

Respondents were asked to indicate whether they access to paid maternity leave or not. The findings are provided in the figure below

**Figure 5: Access maternity leave allowance**

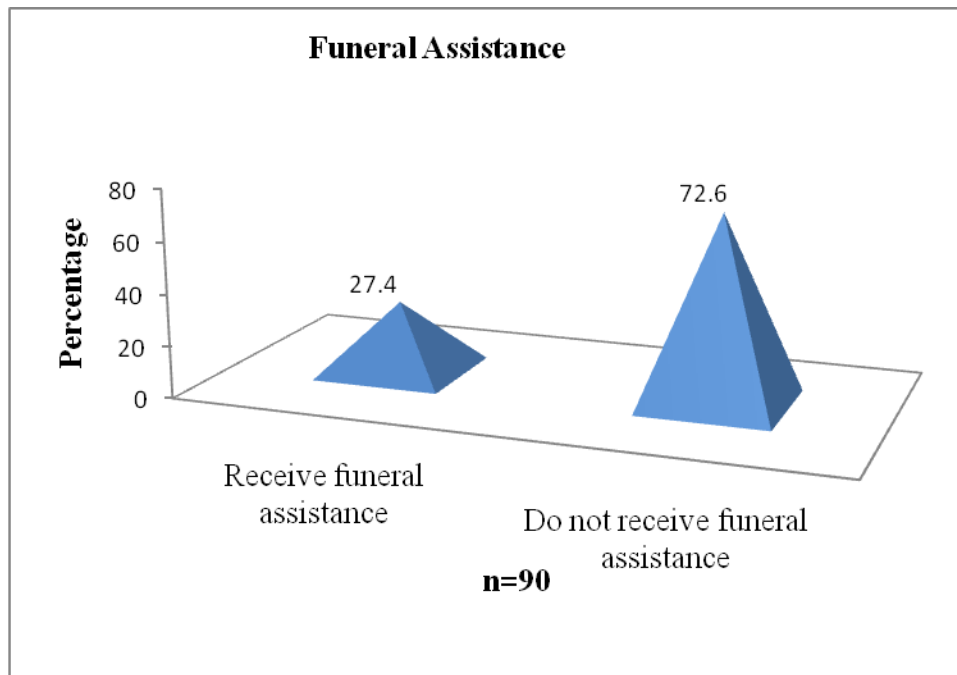


The results presented in figure 5 above show that a large proportion of 53 percent of the respondents indicated that they don't access paid maternity leave while 47% percent of the respondents indicated that they access paid maternity leave.

#### 4.2.3 Funeral assistance

Respondents were asked to indicate whether they receive funeral allowances or not. The findings are provided in the figure below.

**Figure 6: Funeral assistance**



The results presented in figure 6 above show that a majority of the respondents at 72.6% do not receive funeral assistance while 27.4% percent of the respondents indicated that they receive funeral assistance.

#### **4.2.4 Food assistance/discounts/rations**

Respondents were asked to indicate whether the flower farm provides food assistance/discounts/ration or not. The findings of the research question are present in the table below

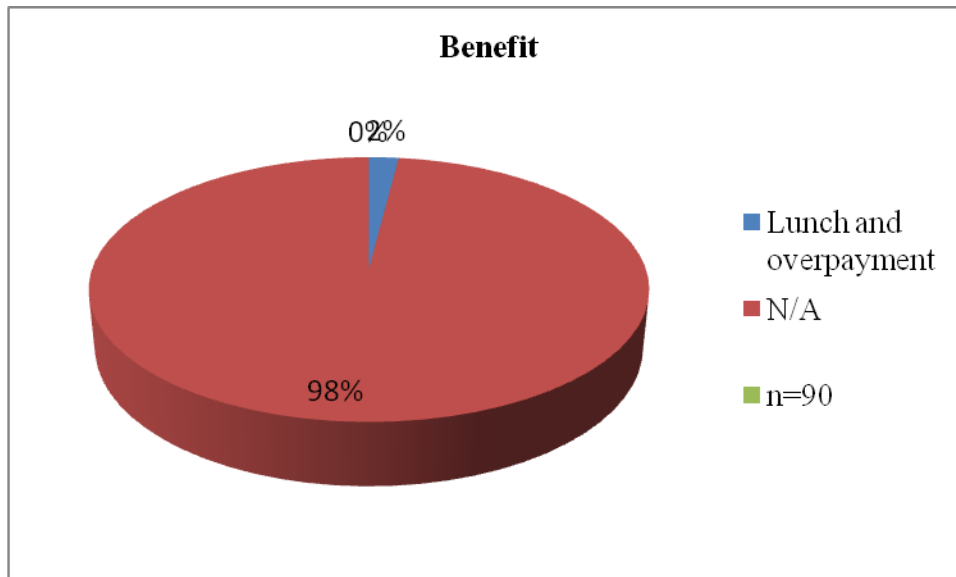
**Table 5: Food assistance/discounts/rations**

response	Number	Percentage
Receive	2	2.3
Don't receive	88	97.7
Total	90	100

The results presented in Table 5 above show that a majority of the respondents at 98% indicated that they do not receive assistance such as food, discounts or, and ration while 2% percent of the respondents indicated that they receive assistance such as food, discounts or, and ration.

The respondent who agreed that they receive Food assistance/discounts/rations were asked to provide details of the assistance. The results are presented in the figure below.

**Figure 7: Types of assistance**

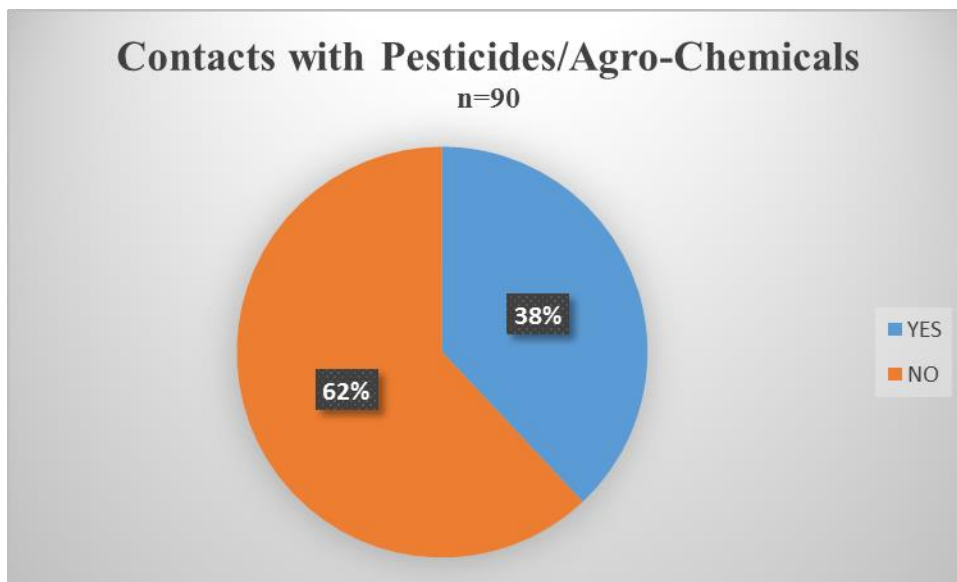


The results presented in figure 7 above show that a majority of the respondents at 98% indicated that they do not receive any assistance such as food, discounts or, and ration while 2% percent of the respondents indicated that they get lunch and overtime payment as assistance

#### 4.2.5 Contact with Pesticides/Agro-Chemicals

Respondents were asked to indicate whether they do come into contact with Pesticides/Agro-Chemicals. The findings of the research are in the figure below

**Figure 8: Contacts with Pesticides/Agro-Chemicals**



The results presented in figure 8 above show that a large proportion of 62% percent of the respondents indicated that they don't come into contact with Pesticides/Agro-Chemicals while 38 percent of the respondents indicated that they come into contact with Pesticides/Agro-Chemicals

The respondents who indicated that they come into contact with the Pesticides/Agro-Chemicals were asked to indicate the type of Pesticides/Agro-Chemicals. The findings of the research are presented in the figure below



**Figure 9: Type of Pesticides/agro-chemical commonly found in flower farm**

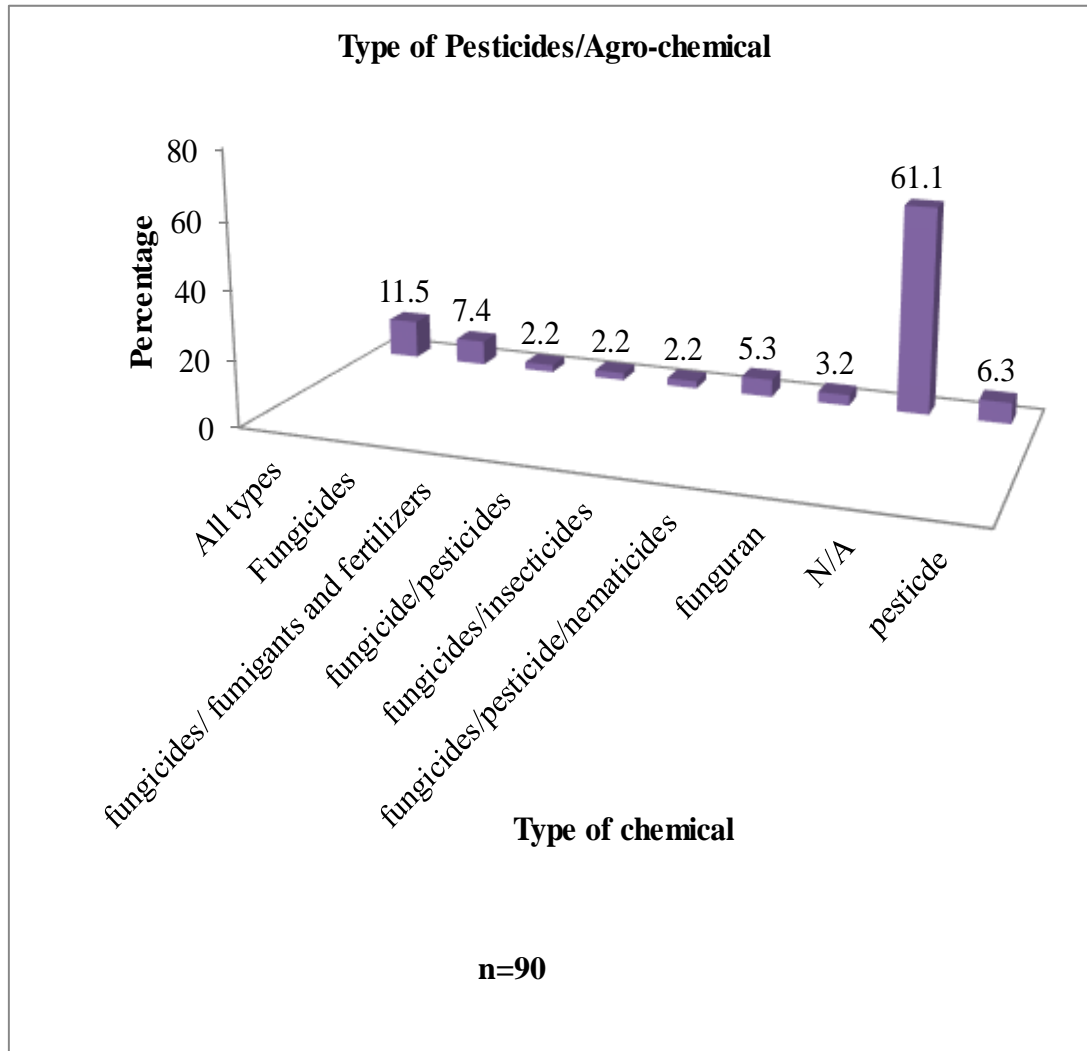


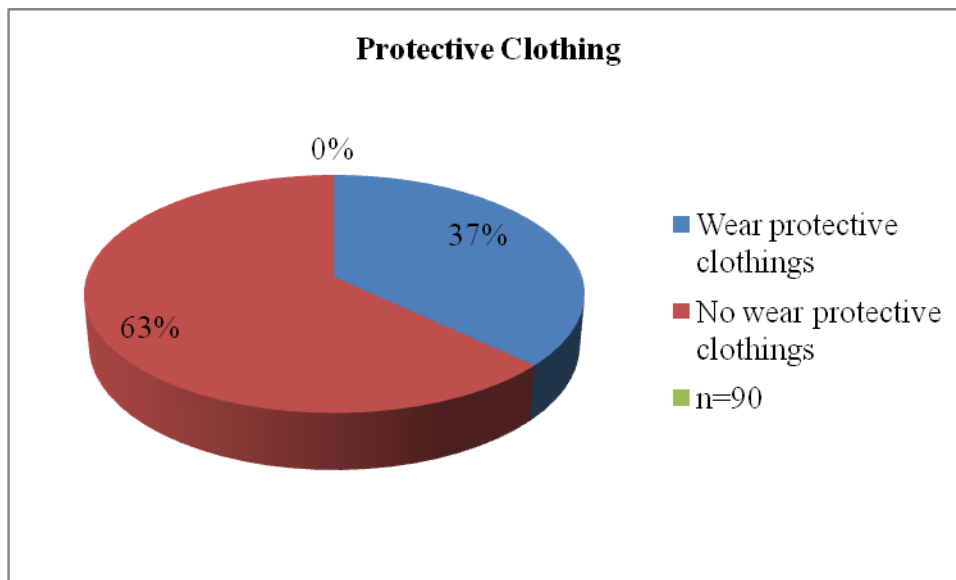
Figure 9 above presents the findings on Type of Pesticides/agro-chemical commonly found in flower farm, 61.1% of the respondents indicated that they inappropriate to indicate the type Pesticides/agro-chemical since the don't come into contact to any of Pesticides/agro-chemical in the farm. From the figure, 11.5% indicated that they come into contact with all types of Pesticides/agro-chemical. 7.4% indicated that they contact fungicides in the farm, 6.3% indicated that they come into contact with pesticides, 5.3% of the respondents indicated that they come into contact with fungicides, pesticides and nematicides, 3.2% of the respondents indicated that

they come into contact with figurant while 2.2% was indicted trice by three groups of few respondents indicating that they come into contact with fungicides/insecticides or fungicides/pesticides or fungicides/fumigants/fertilizer.

#### 4.2.7 Wear of protective clothing's

The respondents were asked to indicate whether they wear protective clothes when working in the flower farm. The findings of the research are presented in the figure below

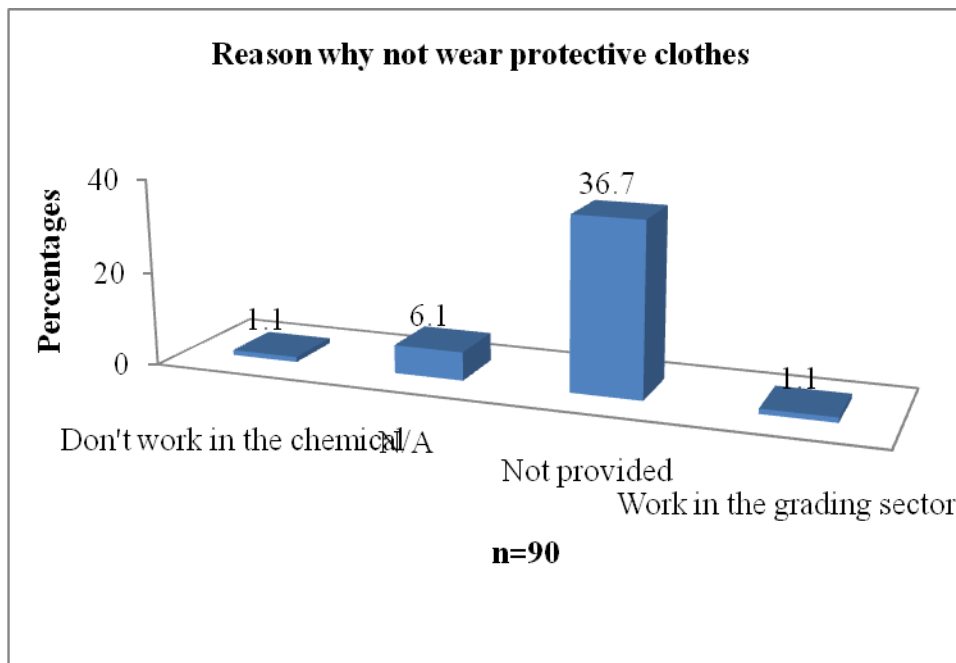
**Figure 10: Wear of protective clothing's**



The results presented in figure 10 above show that a large proportion of 63 percent of the respondents indicated that they wear protective clothes since majority don't come into contact with Pesticides/Agro-Chemicals while 37% percent of the respondents indicated that they wear protective clothing's due to contact with Pesticides/Agro-Chemicals

The respondents who said they don't wear protective clothes were asked to give reasons why they don't wear. Figure 11 below presents the findings

**Figure 11: Reasons why not wear protective clothes**

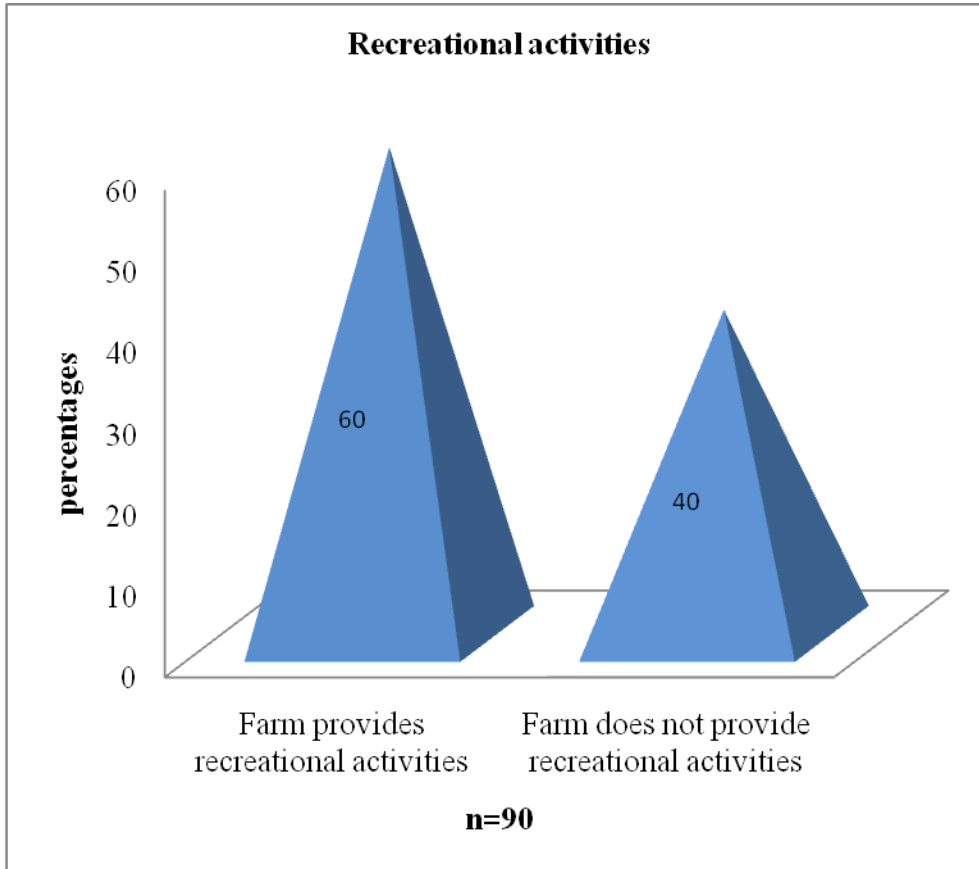


From the figure 11 above shows that majority of the respondents 36.7% indicated that they don't wear protective clothing's because they are not provided. This was followed by 6.1% of the respondents who indicated not applicable for them to wear, 1.1% of the respondents indicated they don't wear protective clothing's because they don't work in chemical in the farm while another 1.1% indicted they don't wear protective clothing's because they work in grading sector.

#### **4.4.2 Recreational Activities**

The respondents were asked to indicate whether the flower farm has any Extra-Curricular/Recreational Activities or not. The findings are provided in the figure below.

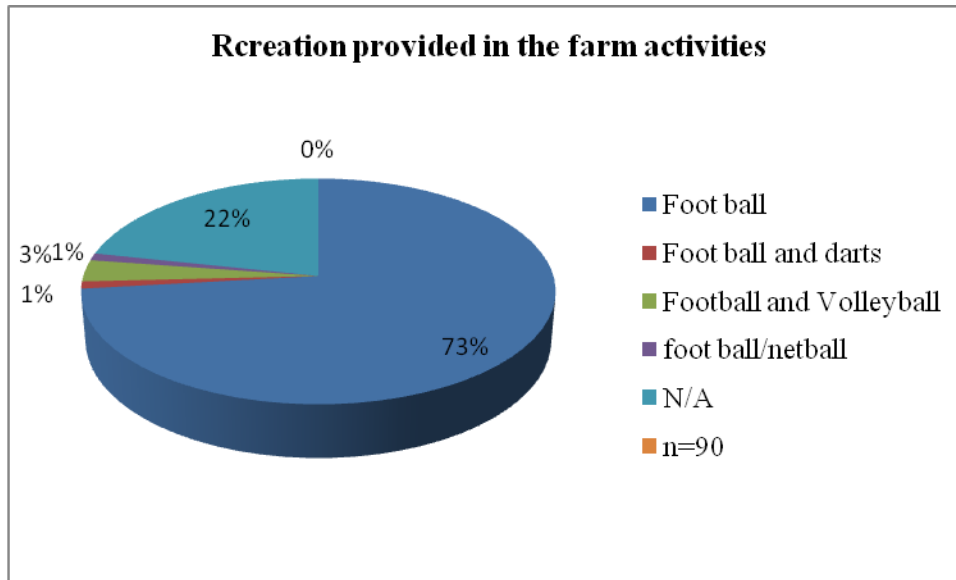
**Figure 12: Recreational Activities**



The results presented in figure 12 above show that a majority of the respondents at 60% indicated that the farm provides recreational activities while 40% percent of the respondents indicated that the farm doesn't provides any extra-curricular activities.

The respondent who agreed that the farm provides some extra-curriculum activities were asked to provide the details of the extra-curriculum activities. The findings are presented in the figure below.

**Figure 13: Type of Recreational Activities provided in the farm**



From the figure 13 above shows that majority of the respondents 74% indicated that football is the extra- curriculum provided in the farm. This was followed by 21% of the respondents who indicated not applicable in giving any type of extra-curricular activity, 3% of the respondents indicated that football and volley ball are the extra-curriculum activities that that are provided by the farm. 1% of the respondents indicated that football and darts are the extra-curriculum activities provided in the farm while another 1.1% indicted that football and netball are the extra-curriculum activities provided in the farm.

#### **4.3 Effects of flower farming to the Welfare of the Community**

The respondents were asked to indicate the extent they concur with the statements below using a Likert scale of 1-5, with 5 being ‘strongly agree’, 4 being ‘agree’, 3 being ‘neither agree nor disagree’, 2 being ‘disagree’ and 1 being ‘strongly disagree’, To establish the effects of flower farming on welfare to the larger community in Kitengela.

**Table 6: Community effects from flower farming**

<b>Effects Under Consideration</b>	<b>N</b>	<b>N</b>	<b>percentage</b>
	<b>YES</b>	<b>NO</b>	
Many workers have lost their land to flower farm owners without adequate compensation for the plantations	39	51	43.3
Flower farms contributes to the eradication of poverty since it offers employment	61	29	67.6
Flower farming has resulted to an increase in crime rate in the region	63	27	70.7
Social vices such as prostitution, alcoholism are on the increase as a result of flower farming in the area.	68	21	76
Determination of implications to the human society distribution, demographic details and settlement patterns	65	25	72

The results in the Table 6 above show that 76% of the respondents were indecisive whether social vices such as prostitution, alcoholism are on the increase as a result of flower farming in the area. 72% respondents neither agreed nor disagreed when asked whether flower farming has effects in determination of implications to the human society distribution, demographic details and settlement patterns. 70.7% of respondent also were indecisive when they were asked whether flower farming has resulted to an increase in crime rate in the region and also whether flower farms contributes to the eradication of poverty since it offers employment. 67.6% respectively while a 43% of respondents disagreed that many workers have lost their land to flower farm owners without adequate compensation for the plantations.

#### **4.3.1 Impact of flower farms to community welfare**

Majority of interviewees said that flower farms have made life easier due to provision of income to individual households and young workers have jobs. Majority of interviewees said that flower

farms have impacted increase of vices like social evils or rise in crime rate such as school children has left school to work in farms, many school girls are getting impregnated at an early age. Majority of interviewees said that flower farms have caused social impacts such as slums develop, sanitation not properly not taken care-of and different communities have settled in the area resulting to conflicts

#### **4.3.2 Economic value of flower farms in the community**

Majority of the interviewee said that as a result of workers earning regular wages and salaries a lot of Small and Medium Enterprises S.M.E.s has been able to come up and thus changing the economy levels of locals in Kitengela. Majority of interviewee indicated that through flower farming workers are employed and they now have cash for basic needs and business development. Majority of interviewee indicated that economic level of residents doing farming has gone up due to earning from flower farms. Interviewees have also noted flower farms have been a Source of revenue for improvement of health facilities, roads and education facilities

#### **4.3.3 Corporate social responsibility provided by the flower farms**

Majority of interviewees said that majority of flower farms disregard corporate social responsibilities and they offer support for the betterment of the flower farm workers. Interviewees also agreed that some flower farms have social chamas, Saccos and groups organized to cater for their workers emergencies.

#### **4.3.4 Benefits of flower farms to the community**

Majority of interviewees said that flower farms have helped in provision of employment to the locals and young workers have daily jobs. Majority of the interviewees also held that Members of the community are more occupied in farms and thus crime reduced since many workers are busy. According to interviewees floriculture has encourages infrastructure development and growth such as road development and repair. Majority of interviewee also acknowledge benefit from flower farms to areas such as banks, schools, hospitals and sustainable lives

#### 4.3.5 Facilities and services

The respondents were asked to indicate the extent they concur with the statements below using a Likert scale of 1-5, with **5** being ‘**strongly agree**’, **4** being ‘**agree**’, **3** being ‘**neither agree nor disagree**’, **2** being ‘**disagree**’ and **1** being ‘**strongly disagree**’, on effects related to flower farming working conditions in Kitengela area

**Table 7: Facilities and services**

<b>Effects Under Consideration</b>	<b>N</b>	<b>N</b>	<b>Percentage</b>
	<b>YES</b>	<b>NO</b>	
Flower farming in the area has improved the state of physical infrastructures such as roads, bridges	54	36	59.8
Housing sector has expanded since the introduction of flower farming in the area	72	18	80
Public facilities like health centres, schools have benefited from the flower farming business in the area.	47	43	51.8
Transport is provided by the flower farms	50	40	55.8

The results in the Table 7 above show that 80% of the respondents agreed housing sector has expanded since the introduction of flower farming in the area. 59.8% of the the respondents disagreed that flower farming in the area has improved the state of physical infrastructures such as roads, bridges. 55.8% of the respondents disagreed that transport is provided by the flower farms while 51.8% of the respondents disagreed that public facilities like health centres, schools have benefited from the flower farming business in the area.



#### 4.3.6 Community facilities and services from flower farms

Majority of interviewees said that there are schools, dispensaries, mobile clinics, Credit facilities, Shopping malls, Training facilities to worker and Chiefs camp to report crime that have been set up as a result of growing populations around areas with flower farms. Majority of interviewees said that some flower farms are offering protective clothing's, medical cover to the farmers, Transports, accommodation for workers and even sunk boreholes that provides clean to flower farm worker and neighbourhood.

#### 4.3.7 Environmental effects of flower farming

The respondents were asked to indicate the extent they concur with the statements below using a Likert scale of 1-5, with **5** being 'strongly agree', **4** being 'agree', **3** being 'neither agree nor disagree', **2** being 'disagree' and **1** being 'strongly disagree', on effects related to flower farming environmental effects in Kitengela area.

**Table 8: Environmental effects**

<b>Effects Under Consideration</b>	<b>N YES</b>	<b>N NO</b>	<b>Mean</b>
The flower farm industry impacts water resources by causing a noticeable drop in the water table	48	42	52.8
Most flowers and foliage produced by the "floriculture industry" are grown in hothouses, and are typically treated with over 30 different pesticides	63	27	70
Flower growers are able to apply a wide range of chemicals classified as highly or extremely hazardous	66	24	73
Some large-scale flower hothouses discharge their pesticide residues directly into natural waterways	54	36	60
Flower farms let too much inorganic fertilizer into soil so that the soil develops salinity	78	11	86.7
Even if the chemical containers are sealed and then buried, this probably only delays a huge future environmental catastrophe	64	26	70.7

The results in the Table 8 above show that 86.7% of the respondents strongly agreed that Flower farms let too much inorganic fertilizer into soil so that the soil develops salinity. 73% the respondents were indecisive whether Flower growers are able to apply a wide range of chemicals classified as highly or extremely hazardous, 70.7% of the respondent also were indecisive Most flowers and foliage produced by the floriculture industry are grown in hothouses, and 70% of the respondents indicated that flower farms are typically treated with over 30 different pesticides and Even if the chemical containers are sealed and then buried, this probably only delays a huge future environmental catastrophe at mean of respectively. 60% the respondents neither agreed nor disagree that some large-scale flower hothouses discharge their pesticide residues directly into natural waterways while 52.8% of respondent disagreed that the flower farm industry impacts water resources by causing a noticeable drop in the water table.

#### **4.3.8 Challenges of flower farming to the community**

Majority of interviewees associated the floriculture to development and held that every aspect of development anywhere in the world has a black side attached to it. Flower farming according to majority of interviewees has brought about the mushrooming of shanties and informal settlement in a bid to accommodate large number of families in want of accommodation. Majority of interviewees said that vices like prostitutions, Crimes such as theft has cropped up, many families are breaking up as a result of the wives working for long hours, land for grazing has reduced, sometimes there is oversupply of the commodity which leads to low demand and hence less or no profit, many workers have abandoned other activities e.g. farming food and animals, many have used borehole that draw water, pollution is much due to chemicals, Increase of insecurity, crimes such as prostitution increase of slums health risks due to poor sanitation, chemicals harming the area and sometimes the farmers payment are delayed though proving a livelihood to flower farm workers.

#### **4.4 Affirmative action's taken by workers and larger community to air their grievances**

Respondents were asked to indicate affirmative action's that is taken by workers and larger community to air their grievances. The findings of the research question are present in the Figure below

**Figure 14: Affirmative action's taken by workers and larger community**

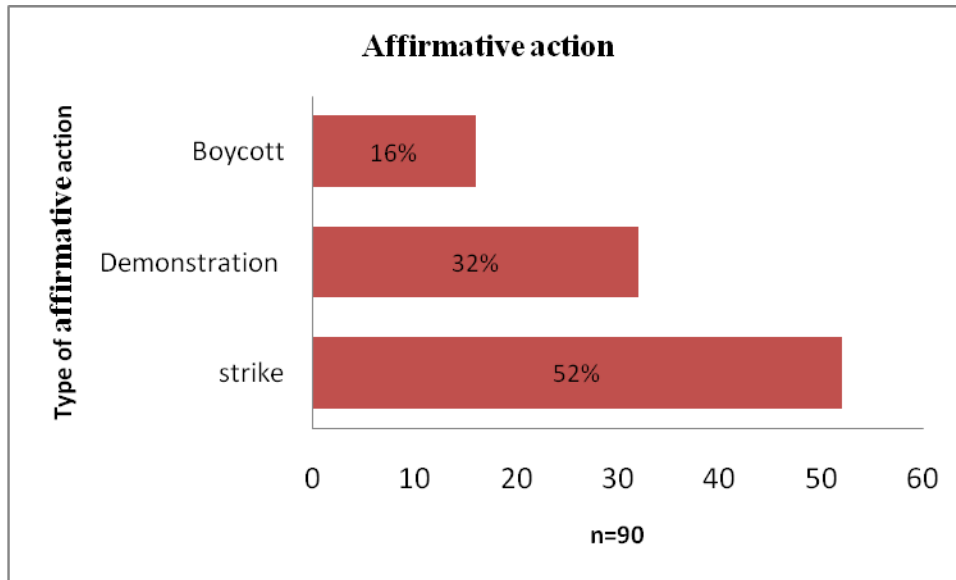


Figure 14 above presents the findings on affirmative action that are taken by workers and larger community to air their grievances against the farm. From the figure, 52% indicated that strike is the effective affirmative action to air grievances against the flower farm, 32% indicated that demonstration is the effective affirmative action to air grievances against the flower farm while 16% indicated that boycott is the effective affirmative action to air grievances against the flower farm. This implies that flower farm workers are exploited and only through strike they can be listened to.

#### **4.4.1 Strategies to avoid flower farms manipulation**

Majority of interviewees said that the wages for flower farms are too low and should be adjusted as well as improve working conditions, training of workers and adherence to fair pay policies on labour laws. Majority of interviewees said that social welfare in general for the flower farms workers should also be positively considered in house-sing as well as for the government should come in to set rules and regulations for the investors insight to safeguard workers interest. Majority of interviewees said that insecurity be addressed to ensure flower farms worker and community security need not be compromised and strict observation of disposals of chemical as well as empowering positively the local community.

#### **4.6 Effects of government policies and regulations on floriculture and workers wellbeing**

The Ministry of Agriculture is the lead agent in agricultural transformation in the country. The ministry provides overall policy, regulation and operational direction. Other ministries whose mandates directly impact on horticulture include Water and Irrigation, Health, Environment and Natural Resources, Local Government, Cooperatives development and Marketing, Trade and Regional Development Authorities.

In June 2011, the Kenyan government made public its final draft of the National Horticultural Policy, which is tabled for approval by the parliament in the course of 2012. The new policy shows continued government recognition of the role of horticulture (and more specifically floriculture) for Kenya. It offers policy interventions for production, support services (financing the industry, research and extension), marketing (local, regional and export markets), infrastructure as well as regulatory and institutional arrangements. The policy document states that the broad objective of government intervention is to accelerate and sustain growth and development of the horticultural industry in order to enhance its contribution towards food security, poverty reduction, employment and wealth creation.

Interviewees indicated that there are set government policies but there is a general feeling that the policies of the government largely do not favour the workers who tirelessly labour on these farms, the interviewees said that there no commensurate pay and working hours in this farms. Majority of interviewees held that the most enforced policies in these farms are those that enhance benefits that go direct to the government such as taxes and policies associated with chemical usage for safeguarding environmental impact flora and fauna

In a recent World Bank Technical Paper (Jaeger 2010), it is argued that a commercial horticulture sector needs government policies that provide an environment in which the sector can thrive. It does not need direct intervention from the government in its activities; rather government should recognize the need for a vigorous private sector as the engine of commercial growth. Infrastructure, investment, institutional, innovation and human capital development are areas identified in which government policy can provide an active support to commercial horticulture

#### **4.6.1 Public Sector Partners and policy regulatory agencies**

##### **4.6.1.1 Kenya Plant Health Inspectorate Services (KEPHIS)**

Interviewees indicated that KEPHIS is responsible for regulating plant health issues relating to Phytosanitary and seed matters. In order to effectively fulfill its mandate, KEPHIS has formed the Plant Variety Protection, Seed Certification, and Phytosanitary Services, Agro and Agri-input Formulation Analysis and Farmer Advisory service units.

##### **4.6.1.2 Horticultural Crops Development Authority (HCDA)**

Interviewees indicated that HCDA has the mandate to facilitate the development, promotion, facilitation and regulation of the horticultural industry in Kenya. The organisation is divided in six divisions: Finance and Administration, Human Resources, Information Technology, Strategic Planning and Marketing, Extension and Training, and Nursery Services and Pilot Projects. Over the years, changing government policy and international market requirements have necessitated a re-orientation in the regulation of the industry. Currently HCDA focuses on its regulatory duties. The organization has prioritised its horticultural information services, and is the main provider of horticulture production and trade data.

##### **4.6.1.3 PCPB, KEBS, EPC and NEMA**

According to majority of interviewees the functions of the Pest Control Products Board (PCPB) are to regulate the importation, exportation, manufacturing, distribution and usage of pesticides. The primary function of the Kenya Bureau of Standards (KEBS) is to promote standardisation in commerce and industry. The Export Promotion Council (EPC) is established with the mandate of developing and promoting Kenya's exports. EPC's primary duty is to identify and address constraints facing exporters and producers of export goods and services. The National Environmental Management Authority (NEMA) is the principal instrument of government in the implementation of all policies relating to the environment.

#### **4.7 Conclusion:**

Majority of interviewees said that flower farms have made life easier due to provision of income to individual households and young workers have jobs. Majority of interviewees said that flower farms have impacted increase of vices like social evils or rise in crime rate such as school children has left school to work in farms, many school girls are getting impregnated at an early

age. Majority of interviewees said that flower farms have caused social impacts such as slums develop, sanitation not properly not taken care-of and different communities have settled in the area resulting to conflicts. From the findings, the respondents indicated that strike is the effective affirmative action to air grievances against the flower farm. Interviewees indicated that HCDA has the mandate to facilitate the development, promotion, facilitation and regulation of the horticultural industry in Kenya. Finally, interviewees indicated that the wages for flower farms are too low and should be adjusted as well as improve working conditions, training of workers and adherence to fair pay policies on labour laws

## **CHAPTER FIVE**

### **SUMMARY OF FINDING, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents summary of findings as discussed in chapter four and interpretations of the data analysis, conclusions and recommendations based on the findings.

#### **5.2 Summary**

Poor implementation of laws, lack of awareness on different aspects of sound chemicals management, inadequate monitoring together with the lack of respect of workers' rights had negatively impact on the flower farms in Kitengela. The poor implementation of laws and the inadequate guidance and nurturing of the young flower industry has led to increased risk of pollution and to the numerous negative social and health risks to the workers and communities in surrounding areas to flower firms. The overall objective of the study was to establish the impacts of the flower industry on the environment and workerss livelihoods in Kitengela area. Specifically, the study assessed and documented the status and impacts of flower firms on the environment, identified how flower firms handled and disposed of chemicals, and attempted to describe how the industry is organized in Kenya. Finally, the study attempted to find out how flower firms are addressing the challenges of workers' rights, their health as well as that of the communities around them.

In order to achieve the above objectives a research was and data was collected from employees of flower firms and various stakeholders were involved in interviews and discussions. A number of documents on the subject matter were reviewed, which helped to compliment the data collected from the field by the research team. The findings from the study indicate that some of the current practices in the growing flower business are harmful to the workers and to the environment. The study findings also show that institutions that are responsible for regulating the industry are inadequately facilitated and funded to enable them effectively do their work. On the other hand, the majority of flower firms do not cooperate with local leaders, the workers and the CSOs working in the area of environment and workers' rights. Seemingly, flower firms are defiant regarding the implementation of laws on workers' rights, the environment and labour

laws. The flower industry is known in the country for being an important employer. The salaries/wages paid to the workers differ from farm to farm. However, overall most of the workers on flower farms are paid poorly in relation to the risks that they get exposed to. All flower firm workers who participated in this study said the money were being paid was too little in comparison with the work they do and the risks they were exposed to. The study found out that many flower firms were not providing adequate protective gear to their workers thereby, exposing them to chemicals risks. It was found that management of flower farms were not encouraging their workers let alone allowing them to join trade unions. Most flower firms did not. The study also found that indeed large flower farms in Kitengela were chemical intensive

While it was the responsibility of government and its line ministries to oblige and ensure that flower firms adhere to national policies, laws and regulations; on the environment, human health and workers' rights, it was becoming apparently clear that this was not the case. The study found government institutions and its staff don't effectively carry out the required monitoring and enforcement of compliance among flower farmers.

### **5.3. Conclusions**

Majority of workers on the flower firms that constituted the study are not adequately protected from the hazards of the chemicals and injuries. Kitengela soils and climate can favour the growth of the variety of flowers that do not need chemicals and artificial fertilizers, hence higher potential for organic flower farming in Kitengela. The floriculture and Allied Workers union, department of crop protection and NEMA and other regulatory bodies are inadequately funded to do the monitoring to track compliance of chemical use and management of the flower industry. Since the flower farms do not allow access to their farms and information. It is difficult to tell whether they comply with the code of conduct as laid down by various regulatory authorities.

Flower farming industry has brought important positive changes to rural areas. As described in this study, Flower farming industry has improved the lives of farmers and workers. Major achievements of Flower farming industry are for example huge infrastructure projects in Kitengela, which brought about positive changes for all community members and promoted rural development. Another very important achievement of Flower farming industry are the unlimited contracts workers at flower farms and Kitengela farmers cooperatives are given, workers who



formerly worked as day laborers. These unlimited contracts give important rights and security to the workers and allow them to plan their future. This way, investments in education and housing are more probable, and the demand for additional services will increase. Thus, the improved situation of workers also promotes rural development. These examples show that Flower farming industry not always has direct impacts, but it has a considerable indirect impact on rural development because it lays the essential foundation for successful and sustainable rural development.

This impact logic is also seen in the social, economic, and ecologic sectors of Flower farming industry are listed and the necessary activities and outputs to achieve these impacts are defined. Following this logic, it can be stated that Flower farming industry implements the right activities and has achieved the necessary outputs in order to provoke the expected impacts in the assessed cases. For example, in the economic area of rural development this means that Flower farming industry successfully protects the producers from international markets' fluctuations and often enables them to invest in business agriculture or others and education. However, the expected impact on rural development beyond the community-wide impacts on sustainable poverty reduction through sustainable farm livelihoods could not be proven. Accordingly, farmers control larger parts of the production chain, thanks to Flower farming industry. They also employ workers and secure better working conditions for them. But since the number of Flower farming industry and workers employed by them in a community is rather small, Flower farming industry does not have any impact at a higher level in the cases investigated, that is, Flower farming industry in these cases does not raise the development level of whole communities.

#### **5.4. Recommendations**

By virtue of the flower industry being chemical intensive, from the research findings the following recommends and measures to be observed in order to improve the industry;

- a. Employees in flower farms be subjected to periodic medical examinations (as provided for by national legal framework) to ensure their health status is not compromised, and should not work for more than two years to minimize risks due to chemicals exposure. A study to establish the effects of the flower industry on the reproductive health of women working in the flower firms need be carried out. Flower farms that do not comply with

the required safety measures for their employees be closed until they comply and open their doors for workers union and other regulatory bodies civil society organizations launch an intensive campaigns that will compel flower firms to provide appropriate protective gears to their workers.

- b. Flower farming industry should promote corporate social responsibility and provide its child labour and child protection training directly to flower workers at the field and farm levels and draw on best practices from other Flower farming producers taking proactive approaches to address these issues and enhance community development. The training and awareness on the worst forms of child labour must include Flower farming industry specifics on child protection and must be accompanied by appropriate policies and procedures at the family level to ensure children extricated from these forms are ensured prolonged safety and not replaced with new children.
- c. The Ministry of labour and International Labour Organization (ILO) should address the affirmative action towards child labour, workers safety and health in the flower farms to enforce the labour laws NGOs intensifies campaigns to promote alternatives to chemicals pesticides. An independent body need be instituted and empowered to work with Civil Society to monitor compliance and code of conduct / mandate of flower farms.
- d. A comprehensive environment Impact assessment of the flower industry need be carried out by the government and other regulatory bodies on a regular basis. Flower industry is a chemical intensive and there were no initiatives in place to look for alternatives as is recommended under the Strategic Approach to International Chemicals Management (SAICM). An integrated pest management approach in the flower industry would offer such opportunity as minimizing on excessive use of chemicals by adopting an integrated pest management approach. When implementing another Flower farming industry impact study, a focus should be either on comparable areas of impact or on similar cases or similar countries. As there are already quite a number of case studies, a possible approach could be focusing on a possible area of impact such as worker empowerment aspects of rural development and investigate the impact in this area among various cases

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## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

SAMUEL GITONGA

P.O BOX 56780 00200

NAIROBI

Dear Sir/Madam,

#### **RE: REQUEST FOR YOUR PARTICIPATION IN M.A. RESEARCH PROJECT**

I am a student at the University of Nairobi pursuing a **masters of arts in rural sociology**. As part of my coursework, I am required to carry out and submit a research project report **Effects of Flower Farming on Workers Livelihood in Kitengela area, Kajiado County, Kenya**

To achieve this objective, I kindly request for your assistance in completing the attached copy questionnaire. I assure you the information you provide is purely for academic purposes and will be treated with utmost confidentiality. Should the finding of this Research Project be of interested to you or your organization, a copy would be available at the University of Nairobi Library.

Yours faithfully,

**SAMUEL G. GITONGA**

**C50/69332/2011**

**APPENDIX II: RESEARCH QUESTIONNAIRE**

**Instructions**

**Please tick (✓) the box that matches your answer or fill the space provided**

**Name..... flower farm.....**

**Personal Characteristic of the flower farm workers**

1. Gender? (tick one)

Male  Female

2. Age(tick one)

Below 29 (  ) 30 -39 (  ) 40- 49 (  ) 50 and above (  )

3. Level of formal education attained?

Lower primary (  ) Upper primary (  ) Secondary (  ) College diploma (  ) University (  )

4. What is the ownership structure of your flower farm company

Local (  ) Foreign (  ) Both local and foreign (  )

5. How long have you been working in the flower farm?

Less than 3 years (  ) 3 to 5 years (  ) 5 to 7 years (  ) Over 7 years (  )

6. (a) Do you belong to a worker's union/trade union? (Yes) (No)

If yes, which one? .....

7. Are there prospects for career advancement or promotion? (Yes) (No)

**PART B: Effects of flower farming on workers welfare**

Using a scale of Using a Likert scale of 1-5, with **5** being ‘strongly agree’, **4** being ‘agree’, **3** being ‘neither agree nor disagree’, **2** being ‘disagree’ and **1** being ‘strongly disagree’, kindly rate the following factors on the workers condition.

**8. Worker’s conditions**

<b>Effects Under Consideration</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Flower growers sometimes use child labor in their farms					
Flower growers frequently fail to pay workers their living wages.					
Flower industry workers are often insufficiently protected from the effects of extensive exposure to pesticides					
The mostly low-wage workers who grow these flowers frequently show symptoms of toxic chemical poisoning					
Workers have no collective bargaining power because they have been forbidden from forming trade unions					
Workers receive an annual bonus from the flower farm employers					

9. Do you come into contact with pesticides/agro-chemicals? (Yes) (No)

If yes, which ones? .....



10. Do you wear protective clothing? (Yes) (No)

If not, why not? .....

11. Do you have access to paid maternity leave? (Yes) (No)

12. Do you receive assistance for funerals? (Yes) (No)

13. Does the flower farm provide food assistance/discounts/rations? (Yes) (No)

If yes, please provide details: .....

.....

14. Does the farm have any extra-curricular/recreational activities? (Yes) (No)

If yes, please provide details: .....

.....

**PART C: Effects of flower farming on community welfare**

Using a Likert scale of 1-5, with 5 being ‘strongly agree’, 4 being ‘agree’, 3 being ‘neither agree nor disagree’, 2 being ‘disagree’ and 1 being ‘strongly disagree’, to what extent do you concur with the following statements related to the effects of flower farming on welfare of workers in Kitengela area.

**15. Community effects**

<b>Effects Under Consideration</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Many workers have lost their land to flower farm owners without adequate compensation for the plantations					
Flower farms contributes to the eradication of poverty since it offers employment					

Flower farming has resulted to an increase in crime rate in the region					
Social vices such as prostitution, alcoholism are on the increase as a result of flower farming in the area.					
Determination of implications to the human society distribution, demographic details and settlement patterns					

Using a Likert scale of 1-5, with **5** being ‘strongly agree’, **4** being ‘agree’, **3** being ‘neither agree nor disagree’, **2** being ‘disagree’ and **1** being ‘strongly disagree’, to what extent do you concur with the following statements related to the effects of flower farming on community facilities and services of workers in Kitengela area.

**16. Facilities and services**

<b>Effects Under Consideration</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Flower farming in the area has improved the state of physical infrastructures such as roads, bridges					
Housing sector has expanded since the introduction of flower farming in the area					
Public facilities like health centres, schools have benefited from the flower farming business in the area.					
Transport is provided by the flower farms					

17. In what ways has your life changed since you started working with flowers?

.....

.....

.....

**18 . Environmental effects**

Using a Likert scale of 1-5, with **5** being ‘**strongly agree**’, **4** being ‘**agree**’, **3** being ‘**neither agree nor disagree**’, **2** being ‘**disagree**’ and **1** being ‘**strongly disagree**’, to what extent do you concur with the following statements related to the effects of flower farming on livelihood of workers in Kitengela area.

<b>Effects Under Consideration</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The flower farm industry impacts water resources by causing a noticeable drop in the water table					
Most flowers and foliage produced by the “floriculture industry” are grown in hothouses, and are typically treated with over 30 different pesticides					
Flower growers are able to apply a wide range of chemicals classified as highly or extremely hazardous					
Some large-scale flower hothouses discharge their pesticide residues directly into natural waterways					
Flower farms let too much inorganic fertilizer into soil so that the soil develops salinity					
Even if the chemical containers are sealed and then buried, this probably only delays a huge future environmental catastrophe					

**Thank you for your participation.**

### Appendix III: Interview Schedule

**This is an interview schedule for the key informants of Kitengela area. It's expected to guide the researcher on the issues concerning the flower farms in Kitengela nad the level of corporate responsibility for education purposes only.**

**Kindly answer by indicate the most appropriate answer in the spaces provided.**

1. What are the impacts of flower farming on the workers livelihood in the community?  
.....  
.....
  
2. What is the economic value of flower farms in the community?  
.....  
.....
  
3. How do you view the working conditions of staffs in the flower farms?  
.....  
.....
  
4. What are the corporate social responsibilities provided by the flower farms?  
.....  
.....
  
5. What are the benefits of the flower farms to the community?  
.....  
.....
  
6. How has the livelihood of the community been impacted as a result of the presence of the flower farms?  
.....  
.....
  
7. What facilities and services are available in the community to assist workers in the flower farms  
.....  
.....

8. What do you think needs to be improved to ensure that the flower farms do not impact negatively on workers's livelihood?

.....  
.....

9. What are the challenges of having flower farms around the community?

.....  
.....

10. Which Affirmative action's is taken by workers and larger community among this to air their grievances

.....  
.....

11. Are there effective government policies on floriculture?

.....  
.....